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MSC Assessment Report for

**PNA Western and Central Pacific Skipjack Tuna (*Katsuwonus pelamis*)
unassociated and log set purse seine Fishery**

Client: PNA Office

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1 SUMMARY

This report provides information on the assessment for the PNA-licensed Western and Central Pacific purse seine sets on unassociated / non Fish Aggregation Device (FAD) free schools, and purse seine sets using natural log, with the target species identified as skipjack tuna (*Katsuwonus pelamis*). The assessment is by Moody Marine, against the Marine Stewardship Council Principles and Criteria for sustainable fishing. The assessment team used the default assessment tree contained within the MSC Fishery Assessment Methodology version 2 (FAM v2).

1.1 THE ASSESSMENT TEAM

Richard Banks	Lead Assessor with P 3 co-responsibility
Les Clark	Assessor with P 3 co-responsibility
Tim Huntington	Assessor with P 2 responsibility
Dr Antony Lewis	Assessor with P1 responsibility
Dr Andrew Hough	Expert Advisor

1.2 ASSESSMENT TIMELINE

Announcement of Main Assessment	29 April 2010
Site Visit and Stakeholder consultation	4 July 2010
Expected Date of Completion	22 July 2011
Completion following Objection	14 December 2011

1.3 SCORES FOR EACH PRINCIPLE

Unassociated Principle 1: 83.8
Unassociated Principle 2: 86.3
Unassociated Principle 3: 84.5

Log Set Principle 1: 84.4
Log Set Principle 2: FAIL
Log Set Principle 3: 85.5

1.4 RECOMMENDATIONS

The assessors make seven recommendations:

Recommendation 1 (PI 1.2.1):

1. PNA draw up a management strategy for PNA which integrates existing elements to apply specifically to the skipjack harvest and is linked to limit and target reference points established as per Condition 1; and
2. PNA vigorously pursue the adoption of a management strategy for WCPO skipjack in WCPFC.

Recommendation 2: Encouragement of, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.

Recommendation 3 (PI 2.1.2): PNA provide documented evidence that the partial strategy *continues* to be implemented successfully for both yellowfin and bigeye tuna. Evidence should be made available in an annual report to the PNA Office.

Recommendation: 4 (PI 2.2.1): Stock assessments of both silky shark (IATTC, under way) and blue marlin (ISC, 2012) will provide greater understanding of the status of these stocks as will planned shark assessments for WCPFC. Results of these should be reviewed and if necessary appropriate mitigation measures taken to reduce mortalities of these species. Mitigation action would have to be implemented in 2013, if required.

Recommendation 5 (PI 3.1.3): The PNAO will review the Nauru agreement and related instruments to be applied ensure that the appropriate principles including the precautionary approach are required to be applied.

Recommendation 6 (PI 3.2.3): A biennial review of MCS arrangements in the purse seine fishery should be undertaken, using the MRAG national/regional study as a benchmark.

Recommendation 7 (PI 3.2.5): The PNA should establish a system of regular internal and external reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery. The Internal review should comprise an annual administrator's report prepared **annually** (as opposed to on an *ad hoc* basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document must be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers and lessons learned.

1.5 CONDITIONS AND TIMESCALES

The assessors require five conditions to be implemented.

Reference points (1.1.2) requires that reference points are implemented

Condition 1:

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the following SG80 requirements have been met:

- Reference points are appropriate for the stock and can be estimated.
- The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.
- The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome.
- For low trophic level species, the target reference point takes into account the ecological role of the stock.

To this end:

1. PNA and/or WCPFC shall establish and adopt explicit and appropriate target and limit reference points for skipjack;
2. PNA vigorously pursue the adoption of reference points in the WCPFC.

Milestones in achieving this end are:

1. Year 1 identification and development of appropriate reference points initiated by PNA
- Year 2 explicit and appropriate target and limit reference points for skipjack adopted by PNA, and adoption of appropriate target and limit reference points for skipjack promoted by PNA within WCPFC.

Harvest strategy (1.2.2) requires that there are well-defined and effective harvest control rules in place

Condition 2:

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met:

- Well defined harvest control rules shall be in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.
- The selection of the harvest control rules shall take into account the main uncertainties.
- Evidence shall be available that indicates that tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules

Milestones in achieving this end are:

1. Plans for the development and adoption of appropriate HCRs for skipjack, including scientific analysis to assess the scope for SG80 requirements applying to the whole stock to be met by PNA actions and consideration of the main uncertainties, should be in place by the first surveillance audit.
2. If the analysis to be undertaken in Year 1 demonstrates that adoption of appropriate HCRs for the WCPO skipjack stock by PNA will be effective, proposals for adoption of appropriate HCRs by PNA should be prepared and under consideration by PNA by the second annual surveillance audit. PNA should also promote the adoption of appropriate HCRs for skipjack by the WCPFC.
3. By the third surveillance audit, PNA should either adopt appropriate HCRs for the WCPO skipjack stock or support specific proposals for adoption of appropriate HCRs by the WCPFC.
4. HCRs within PNA (and/or WCPFC) should be in place by the fourth surveillance audit.

In achieving this outcome, PNA (and/or WCPFC) may consider the following:

1. adopt defined harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy and act to reduce the exploitation rate, as limit reference points are approached).
2. assessment of the main uncertainties should include the fishing mortality in archipelagic waters and territorial waters in order to ensure that the exploitation rate is appropriately reduced as limit reference points are approached.

In demonstrating that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules, PNA (and/or WCPFC) should consider demonstrating that effort is effectively limited within overall PAE levels established in accordance with the VDS text, Implementing Arrangements and appropriate WCPFC conservation and management measures. In the event that these tools were to substantially change, then their effectiveness should be re-evaluated.

Management Strategy (Bycatch species) (2.2.2) requires that there is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.

Condition 3:

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (second and third scoring issues) have been met:

- There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or the species involved.
- There is some evidence that the partial strategy is being implemented successfully.

Milestones in achieving this are:

1. By the first annual surveillance audit, PNA should review available data (e.g. observer, logsheet) to provide the necessary level of confidence that the current management measure (CMM 2010-07) for sharks will work. The review should be initiated by the first annual surveillance audit, with a specific focus on silky sharks.
2. The review of available information should be completed by the second annual audit.
3. If the above should indicate that this fishery has a significant impact on shark populations, then implementation of those elements of the Pacific Islands RPOA for sharks that have “a high likelihood, in aggregate, of delivering improved conservation outcomes for sharks” should be instigated by the third surveillance audit, and completed by the fourth. . These may include (i) the release of all live sharks, (ii) that sharks to be landed with fins naturally attached, allowing for fins to be partially severed and folded back against the carcass for storage; and (iii) the prohibition of dumping carcasses after landing.

Status of ETP species (2.3.1) requires that (i) it is highly likely that the effects of the fishery on whale sharks are known and are highly likely to be within limits of national and international requirements for the protection of this species and (ii) the **direct effects are highly unlikely to create unacceptable impacts to whale sharks** .

Condition 4:

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements have been met for whale sharks:

- The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.
- Direct effects are highly unlikely to create unacceptable impacts to ETP species.
- Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.

Milestones in achieving this outcome are:

PNA should adopt both the RPOA for Shark’s recommended prohibition on schools associated with whale sharks as well as the subsequent PNA decision to prohibit sets on whale sharks. This should be validated by written and agreed rules to implement this by the first annual surveillance audit.

1. Reviews of the level of whale shark interactions should be begun by the second annual surveillance audit and published by the third annual audit.
2. Any necessary actions in response to the above should be initiated by the fourth surveillance audit.

Fishery Specific Objectives (3.2.1) requires that the fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.

Condition 6:

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements (third and fourth scoring issues) have been met:

Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.

Milestones in meeting this objective are:

Year 1. PNA should show identification of appropriate management vehicles (within PNA and/or WCPFC) where such objectives would be appropriate, and provide draft text for objectives.

Year 2. PNA should show tabling of proposed objectives at relevant meetings and consideration of their adoption.

Year 3. Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, should be included within the management framework of PNA and/or WCPFC.

Decision-making processes (3.2.2) requires that the fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives.

Condition 5:

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (third and fourth scoring issues) have been met:

- Decision-making processes use the precautionary approach and are based on best available information.
- Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
 1. By first annual surveillance audit, provide a description of decision making processes and their relation to scientific advice
 2. Subsequent meeting output should then explain decision making processes in relation to scientific information.

In meeting this condition, PNA may consider the following:

The link between the VDS TAEs and WCPFC requirements and the scientific advice should be clearly established by the PNA. Records of meetings should demonstrate discussion on VDS

TAEs, that scientific advice is incorporated into the decision making process, and that PNA actions are being agreed upon and implemented.

Explanation of decisions by PNA, particularly relating to the operation, monitoring and reporting of the VDS should be improved. An administrator's report could be prepared **annually** beginning by the first annual surveillance audit (as opposed to on an *ad hoc* basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document should be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers

2 INTRODUCTION

This report sets out the results of the assessment of the PNA Western and Central Pacific Fishery purse seine sets on two units of certification against the Marine Stewardship Council (MSC) Principles and Criteria for Sustainable Fishing: Unassociated / non FAD free schools with skipjack as the target species; and purse seine sets using natural logs with skipjack as the target species (log-set). Fisheries based on artificial FADs (FAD-set) are not included in this assessment.

The report aims to provide clear justification for the assessment scores that have been attributed to the fishery, and identify the sources of information that have been used to support these. In order to provide useful background and information for a wider readership, in the main part of the report is a more qualitative account of the fishery in question. However, it should be reiterated that no primary research has been undertaken by Moody Marine to inform this report and source material relies on published materials, separate support data provided by the RFMO and management organization, and outputs from stakeholder interviews. The report is not intended to comply with the standard editing norms expected for scientific journals. The following definitions are identified which support this assessment:

A purse seine net comprises a deep curtain of netting, which encircles a fish school. The bottom of the net is closed (pursed) underneath the school by hauling a wire running from the vessel through rings along the bottom of the net and then back to the vessel, preventing the fish from “sounding”, or swimming down to escape the net.

An unassociated set is defined as fishing on a free school, which may include a free school feeding on bait fish. There are no associations with objects (natural or man made), with set distances from such objects of 1 nautical mile or greater.

A log set is defined as a set on a natural log, debris or dead animal without any man-made or artificial attachment including beacons, buoys, ropes and nets

Other fishing techniques conducted by the same group of vessels include setting on drifting or anchored FADs. These set types are not included in the assessment. The MSC definition of a Unit of Certification (TAB D 003 ‘*Unit of Certification*’) allows for recognition of a group of vessels in the fishery targeting a stock (in this case skipjack), using a specific practice, setting on free schools or natural log sets. It therefore does not require assessment of all practices used on the same trip, and uses MSC certification as a reward for good practice for the users of the same fish resource. The PNA Office is seeking to define what it perceives to be its best practice fisheries and assess these against the MSC FAM as confirmation of this.

2.1 THE FISHERY PROPOSED FOR CERTIFICATION

The MSC Guidelines to Certifiers specify that the unit of certification is “The fishery or fish stock (= biologically distinct unit) combined with the fishing method/gear and practice (= vessel(s) pursuing the fish of that stock). The two units of certification proposed for certification are therefore defined as follows:

1. Species: Skipjack tuna (<i>Katsuwonus pelamis</i>) purse seine targeting free schools
Geographical Area: Western and Central Pacific covering the EEZs of the PNA parties
Method of Capture: Purse seine Setting on unassociated /non FAD free schools;
Stock: Western and Central Pacific skipjack tuna (<i>Katsuwonus pelamis</i>)
Management System: PNA Implementing arrangements, FFA Administered Minimum Terms and Conditions (MTCs), National Management Plans and WCPFC CMMs
Client Group: PNA Office on behalf of the parties covering the Governments of Papua New Guinea, Kiribati, Federal States of Micronesia, Solomon Is, Marshall Is, Nauru, Palau and Tuvalu.
2. Species: Skipjack tuna (<i>Katsuwonus pelamis</i>) purse seine using natural log sets.
Geographical Area: Western and Central Pacific covering the EEZs of the PNA parties
Method of Capture: Purse seine on naturally occurring log sets
Stock: Western and Central Pacific skipjack tuna (<i>Katsuwonus pelamis</i>)
Management System: PNA Implementing arrangements, FFA Administered Minimum Terms and Conditions (MTC), National Management Plans and WCPFC CMMs
Client Group: PNA Office on behalf of the parties covering the Governments of Papua New Guinea, Kiribati, Federal States of Micronesia, Solomon Is, Marshall Is, Nauru, Palau and Tuvalu.

In the course of the certification further companies/vessels will join the client group. This would be in accordance with the MSC’s stated desire to allow fair and equitable access to the certification.

2.2 REPORT STRUCTURE AND ASSESSMENT PROCESS

The aims of the assessment are to determine the degree of compliance of the fishery with the MSC Principles and Criteria for Sustainable Fishing, as set out in Section 8.

This report sets out:

- the background to the fishery under assessment and the context within which it operates in relation to the other areas where the target species is fished
- the qualifications and experience of the team undertaking the assessment
- the standard used (MSC Principles and Criteria)
- stakeholder consultation carried out. Stakeholders include all those parties with an interest in the management of the fishery and include fishers, management bodies, scientists and environmental Non-Governmental Organisations (ENGOS)

- the methodology used to assess ('score') the fishery against the MSC Standard.
- a scoring table with the Scoring Indicators adopted by the assessment team and Scoring Guidelines which aid the assessment team in allocating scores to the fishery. The commentary in this table then sets out the position of the fishery in relation to these Scoring Indicators.

The intention of the earlier sections of the report is to provide the reader with background information to interpret the scoring commentary in context.

Finally, as a result of the scoring, the Certification Recommendation of the assessment team is presented, together with any conditions attached to certification.

The report is generally based on information available until 30 September 2010, except that later information has been used in responding to the peer reviews, including information from the 7th WCPFC session in December 2010. At that point, the report was also updated in some other areas where appropriate, using information from WCPFC7. These updates are generally provided in footnotes.

In draft form, this report is subject to critical review by appropriate independent experts ('peer review'). The comments of these experts are appended to this report. Responses are given in the peer review texts and, where amendments are made to the report on the basis of peer review comments; these are also noted in the peer review text. Following peer review, the report is then released for public scrutiny on the MSC website.

The report, containing the recommendation of the assessment team, any further stakeholder comments and the peer review comments is then considered by the Moody Marine Governing Board (a body independent of the assessment team). The Governing Board then makes the final certification determination on behalf of Moody Marine Ltd.

It should be noted that, in response to comments by peer reviewers, stakeholders and the Moody Marine Governing Board, some points of clarification may be added to the final report.

Finally, the complete report, containing the Moody Marine Ltd Determination and all amendments, was released for further stakeholder scrutiny.

At this point, an objection was lodged by ISSF, OPAGAC and Eurothon. Following due process, the determination to certify the fishery was upheld by the Independent Adjudicator hearing this objection..

2.3 STAKEHOLDER MEETINGS ATTENDED

Information used in the main assessment has been obtained from interviews and correspondence with stakeholders in this fishery, notably:

Interview	Organisation	Persons met	Venue and date
1	International Seafood Sustainability Foundation (ISSF)	Susan Jackson, President, Dr Victor Restrepo, Chairman, Scientific Advisory Committee, Dr Bill Fox, Vice Chair, Board of Directors, ISSF (also WWF)	Brisbane, 28 June, 2010
2	National Fisheries Authority (NFA), Papua New Guinea	Sylvester Pokajam, Managing Director, Ludwig Kumoru, Manager, Grace Kaue. Attorney General's office, Augustine Mobiha, Executive Manager, Fisheries Management, Noan Pakop, Executive Manager, MCS/Observer, Philip Polon, Licensing and Data Management, Darren Saunders, VMS/VDS, David Karis.	Fishery Officer, Port Moresby and Madang, 5-6 July, 2010
3	Marshall Islands	Glen Joseph, Director, Doreen deBrum, Fisheries	Madang, 6

Interview	Organisation	Persons met	Venue and date
	Marine Resources Authority	Policy and Planning Advisor.	July
4	Forum Fisheries Agency	Wez Norris, Acting Deputy Director.	Madang, 6 July, 2010
5	Fishing Industry Association and private sector stakeholders from Papua New Guinea and Solomon Islands,	Pete C Celso, RD Tuna Ltd., MD, Chairman PNG Fishing Industry Association, Mike McCulley, President of South Seas Tuna Corporation, , Thomas Negints, South Sea Tuna Corporation, Wayne Golding, Fisheries Advisor, NFA and PNG Manufacturing Council, Adrian Wickham, General Manager, MD, NFD, Phil Roberts, Tri Marine, Roland Salangsang, Senior Vice-President RD Tuna Canners Ltd, Philip M Sanchez, RD, VP, Sales and Marketing, RD Tuna Canners Ltd, Rolly Lamparero, Operations Head, RD Fishing PNG Ltd, Andrew B Cadfit, Quality Control Supervisor, RD Fishing PNG Ltd, Alex Bernardino, General Manager, Frabelle (PNG) Ltd, Lae, Rosedean Zaily, CEO IFC, Rohel Pauden, David Voss gier, Director, ECOEz,	Madang, 7 July, 2010
6	Fisheries and Marine Resources (FMR), Solomon Islands	Dr Christian Ramofafia, Permanent Secretary.	Madang, 8 July, 2010
7	Ministry of Fisheries & Marine Resources Development. Kiribati	Taberannang Timeon, Minister, Kiribati, Ribanataake Awira, Permanent Secretary, Beero Tioti, Principal Fisheries Officer	Madang, 8 July, 2010
8	Bureau of Marine Resources.	Nannette Malsol, Director, Palau.	Madang, 8 July, 2010
9	Nauru Fisheries and Marine Resources Authority (NFMRA)	Charleston Deiye, CEO	Madang, 8 July, 2010
10	Secretariat of the Pacific Community	Dr John Hampton (OFP Manager) Dr Shelton Harley (PFS Stock Assessment), Peter Williams (PFS Data Management), Tim Lawson (PFS Fisheries Monitoring).	Noumea, 12-13 July, 2010
11	Western Central Pacific Fisheries Commission and SPC	Karl Staisch, WCPFC, Deirdre Brogan, SPC, Data Collection Coordinator, ex Observer Training advisor,	Cairns, 14 July, 2010
12	National Oceanic Resource Management Authority, Federated States of Micronesia	Eugene Pangelinan, Deputy Director, Patricia Jack, Chief, Management & Development Division, Rhea Moss, Chief, Compliance, Stats and Technical Projects.	Pohnpei, 19 July, 2010
13	Western Central Pacific Fisheries Commission	Albert Carlot, WCPFC VMS Manager, Peter Flewwelling, WCPFC Compliance Manager, Andy Richards, Fisheries Consultant / Ex WCPFC	Pohnpei, 19 July, 2010
14	PNA Office	Dr. Transform Aqorau, Maurice Brownjohn OBE, Anton Jimwereiy.	Majuro, 23 July, 2010
15	Koo's Fishing	Eugene Muller, Vice President KFC/MIFC	21 July, 2010

Interview	Organisation	Persons met	Venue and date
	Company,/Marshall Islands Fishing Company, Pan Pacific Foods, Marshall Is	Don Xu, Vice President, PPF, Majuro.	
16	MIMRA	Berry Muller, Chief Fisheries Officer, Jacob Keju, Senior Observer, Witten Jacob, Observer, Ajobi Clanny, Observer, Paul Victor, Observer, Dike Pozanski, Observer,	Majuro, 23 July, 2010
17	FMR Observer	Alick Jerry Tada, Solomon Is Observer,	Majuro, 23 July, 2010
18	Japan Seas Purse Seine Fishing Association (Kaimaki Japan)	Kazuo Shima, President	Majuro, 24 July, 2010
19	FFA	Tim Park, FFA Observer Manager	Honolulu, 27 July, 2010
20	PNA Members	Transform Aqorau (Director PNA Office), Maurice Brownjohn (Commercial Manager, PNA Office), Tion Nabau (Legal Officer, MIMRA), Simon Kofe (Legal Officer Tuvalu), Charlie Deiye (CEO, NFMRA, Nauru), Sylvester Diake (Under Sec, Ministry of Fisheries, Solomon Is), John Tuhaika (Dept of Foreign Affairs & Trade, Solomon Is), Wayne Golding, Advisor (NFA, PNG), Justin Ilakini (International Fisheries Liaison Coordinator, NFA, PNG), David Karis (Fishery Officer, NFA, PNG), Ludwig Kumoru (Manager, PNG), Nanette Malsol (Compliance Officer, Palau), Berry Muller (MIMRA, RMI), Eugene Pangelinan (Deputy Executive Director, NORMA, FSM), Ribanataake Awira (Permanent Sec, MFMRD, Kiribati), Terry Amram, (Manager, Oceanic Fisheries Dept, NFMRA, Nauru), Kintoba Tearo (Director, MFMRD), Beero Tioti (PFO, Oceanic), Wez Norris (FFA), Manu Tupou Roosen, (Legal Council, FFA), Steve Shanks (FFA), Chris Reid (Consultant to FFA),	Honolulu, 29 July, 2010
21	International Seafood Sustainability Foundation (ISSF)	Susan Jackson, President, Dr Victor Restrepo, Chairman, Scientific Advisory Committee, Dr Bill Fox, Vice Chair, Board of Directors, ISSF,	Honolulu, 30 July, 2010
22	Secretariat of the Pacific Community	Dr. Simon Nicol (Principal Fisheries Scientist); Tim Lawson (Principal Fisheries Scientist – Statistics); Peter Williams (Principal Fisheries Scientist (Data Management); Valerie Allain (Fisheries Scientist – Ecosystem Analysis); Shelley Clarke (Shark Assessment Scientist); Don Bromhead (Fishery Scientist); Peter Sharples (Observer & Port Sampler Manager); Dr. John Hampton (Oceanic Fisheries Programme Manager)	Noumea, 3-5 August, 2010
23	World Wildlife Fund (WWF)	Peter Trott,	Cairns, 10 August,

Interview	Organisation	Persons met	Venue and date
			2010
24	PNA	Dr. Transform Aqorau, Director, PNA Office, Maurice Brownjohn, Commercial Adviser, PNA Office, Anton Jimwereiy, PNA Coordinator, PNA Office, Eugene Pangelinan, Deputy Executive Director, NORMA, FSM, Patricia Jack, Economist, NORMA, FSM, Kintoba Tearo, Director, MFMRD, Kiribati, Beero Tioti, Principal fisheries Officer (Offshore), MFMRD, Kiribati, Ruria Iteraera, Legal Officer, Attorney General's Office, Glen Joseph, Director, MIMRA, Marshall Islands, Tion Nabau, Legal Officer, MIMRA, Marshall Islands, Charleston Deiyee, Chief Executive Officer, NFMRA, Nauru, Dr. Tim Adams, Fisheries Adviser, NFMRA, Nauru, Terry Amram, Manager Oceanic Fisheries, NFMRA, Nauru, Nannette Malsol, Bureau of Marine Resources, Ministry of Natural Resources, Environment & Tourism, Palau, Justin Ilakini, International Fisheries Liaison Coordinator, NFA, Stanley Arua, Foreign Service Officer, Department of Foreign Affairs and Trade, Philip Lens, Observer Coordinator, NFA, Papua New Guinea, Sylvester Diake, Under Secretary, MFMR, Solomon Islands, Ferral Lasi, Deputy Director Offshore Management Unit, MFMR, Solomon Islands, Nollen Leni, National Fisheries Development, Solomon Islands Tuvalu, Seve Lausaveve, Permanent Secretary, MNR&E, Tuvalu, Wez Norris, Director Fisheries Management, FFA Secretariat	Nauru, 10 September, 2010
25	Noan Pakop	NFA Manager MCS/Observer	Port Moresby, 22 September, 2010
26	Sam Finikaso	Fishery Manager, Director of Fisheries, MNR&E, Tuvalu	Telephone interview, 22 September 2010

2.4 OTHER INFORMATION SOURCES

Published information and unpublished reports used during the assessment are listed below:

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<p>Gillett, R. (2007). A short history of industrial fishing in the Pacific Islands, Rap Publication 2007/22</p> <p>Gillett, R and Lewis, A. (2003). A Survey of Purse Seine Fishing Capacity in the Western and Central Pacific Ocean, 1988 to 2003, Gillett, Preston and Associates</p> <p>FFA (2010). Vessels of Good Standing, September 2010. Available from: http://www.ffa.int/node/42.</p> <p>WCPFC (2005). Conservation And Management Measures for Bigeye and Yellowfin Tuna in the Western and Central Pacific Ocean (CMM 2005-01). Available from http://www.wcpfc.int/doc/cmm-2005-01/conservation-and-management-measures-bigeye-and-yellowfin-tuna-western-and-central-p.</p> <p>Williams, P. (2010). Tuna catch statistics by country and set type, 2005-2009 (Data provided by SPC)</p> <p>Williams, P. and Terawasi, P. (2010). Overview of Tuna Fisheries in the Western and Central Pacific Ocean, including Economic Conditions, 2009. Available from www.wcpfc.int/.../WCPFC-SC6-2010-GN-WP-01_WCPO_Overview_2009.pdf.</p> <p>PNAO (2010). Administrator's Report on the VDS</p>
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<p>Department of Agriculture, Bureau of Fisheries and Aquatic Resources (1998), The Philippine Fisheries Code of 1998 (Republic Act No. 8550)</p> <p>Department of Agriculture, Bureau of Fisheries and Aquatic Resources (2004), The Philippine National Tuna Management Plan</p> <p>Department of Agriculture, Bureau of Fisheries and Aquatic Resources (Undated), FAO 223. Moratorium on the issuance of new Commercial Fishing Vessel and Gear License (CFVGL) as part of a precautionary approach to fisheries management</p> <p>Departemen Kelautan Dan Perikanan (2005a), Law of the Republic of Indonesia concerning fisheries, No 31, 2004, Direktorat Jenderal Perikanan Teangap,</p> <p>Departemen Kelautan Dan Perikanan (2005b), Presidential regulation No. 7/2005 concerning the National Development Plan for medium phase (RPJMN)</p> <p>Departemen Kelautan Dan Perikanan (2010), Law of the Republic of Indonesia concerning Fisheries, No. 45/2010</p> <p>Government of Papua New Guinea (1999), The National Tuna Fishery Management Plan</p> <p>Hampton, J., and Harley, S. J. (2009a). Assessment of the potential implications of CMM-2008-01 for bigeye and yellowfin tuna. WCPFC-SC5-2009/GN-WP-17. Port Vila, Vanuatu, 10-21 August 2009.</p> <p>Hampton, J. (2000) Natural mortality rates in tropical tunas: size really does matter. <i>Can.J.Fish.Aquat.Sci.</i> 57: 1002-1010.</p> <p>Harley,S., Williams, P., Nicol, S. and Hampton, J. (2010), The western and central Pacific tuna fishery: 2007-2008 overview and status of stocks. Tuna Fisheries Assessment Report 9, 34pp. OFP, Secretariat of the Pacific Community, Noumea, New Caledonia</p> <p>Hoyle, S., Kleiber, P., Davies, N., Harley,S. and Hampton, J. (2010). Stock assessment of skipjack tuna in the WCPO. WCPFC-SC6-2010/SA-WP-10. Nuku'alofa, Tonga, 10-19 August 2010.</p> <p>Langley, A. D. and Hampton, J. (2008). Stock assessment of skipjack tuna in the Western and Central Pacific Ocean. Western and Central Pacific Fisheries Commission. WCPFC-SC4-2008/SA-WP-4. Port Moresby, Papua New Guinea, 11-22 August 2008.</p> <p>Lehodey, P., Bertignac, M., Hampton, J., Lewis, A., and Picaut, J. (1997). El Nino Southern Oscillation and tuna in the western Pacific. <i>Nature</i> 389: 715-718. Available from http://www.spc.int/oceanfish/Docs/Research/index.asp</p> <p>Reid, C., Sauni, S., and Clark, L., (2007). Economic And Management Implications Of Stock Assessments On Key Tuna Stocks In The WCPO, WCPFC-SC3-SA SWG/WP-8. Available from http://www.wcpfc.int/doc/sa-ip-3/economic-and-management-implications-stock-assessments-key-tuna-stocks-wcpo</p> <p>Reid, C. (2008) A Cost-Benefit Analysis Of Selected Management Packages Within The WCPFC Tuna Fisheries, Paper prepared for the FFA Management Options Consultation, November 2008..</p> <p>SPC (2002), Technical Issues Associated with Estimation of Total Allowable Effort and Allocation, Oceanic Fisheries Programme, Secretariat of the Pacific Community</p>

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² Should be 2009

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3 GLOSSARY OF ACRONYMS USED IN THE REPORT

ADB.....	Asian Development Bank
AFAD.....	Anchored Fish Aggregating Device
BET.....	Bigeye tuna
B_{current}	Average total biomass for recent years
B_{MSY}	Equilibrium total biomass at MSY
CCMs.....	Commission Members, Cooperating non-Members, and participating Territories
CRGA.....	Committee of Representative Governments and Administrations
CITES.....	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMM.....	Commission Management Measure
CMS.....	Convention on Migratory Species
CNMs.....	Cooperating Non-Members
CoC.....	Chain of Custody
COFISH.....	Pacific Regional Coastal Fisheries Development Programme
CPUE.....	Catch per Unit Effort
CSIRO.....	Commonwealth Scientific and Industrial Research Organisation
DEVFISH.....	Development of Tuna Fisheries in Pacific ACP Countries
DFAD.....	Drifting Fish Aggregating Device
DWFN.....	Distant Water Fishing Nation
EEZ.....	Exclusive Economic Zone
EPO.....	Eastern Pacific Ocean
ERA.....	Ecological Risk Assessment
ETP.....	Endangered, threatened or protected species
EU.....	European Union
F_{current}	Average fishing mortality-at-age for recent years
F_{MSY}	Fishing mortality-at-age producing the maximum sustainable yield (MSY)
FAD.....	Fish Aggregating Device
FAM.....	Fisheries Assessment Methodology
FAO.....	Food and Agricultural Organisation
FFA.....	Pacific Islands Forum Fisheries Agency
FFC.....	Forum Fisheries Committee
FIA.....	Fishing Industry Association (Papua New Guinea)
FL.....	Fork Length
FSM.....	Federated States of Micronesia
FSMA.....	FSM Arrangement
GEF.....	Global Environment Facility
HBF.....	Hooks between floats
IATTC.....	Inter American Tropical Tuna Commission
IPCC.....	International Panel on Climate Change
ISC.....	International Scientific Committee for Tuna and Tuna like Species in the N. Pacific Ocean
ISSF.....	International Seafood Sustainability Foundation

IUCN..... International Union for the Conservation of Nature
 LOALength Overall
 M.....Natural Mortality
 MCSMonitoring, Control and Surveillance
 MRAG.....Marine Resources Assessment Group
 MSCMarine Stewardship Council
 MTCsMinimum Terms & Conditions
 NOAA.....National Oceanographic and Atmospheric Administration
 NPOA.....National Plan of Action
 OFP.....Oceanic Fisheries Programme
 PICs.....Pacific Island Countries
 PNAParties to the Nauru Agreement
 PNAO.....Parties to the Nauru Agreement Office
 PNG.....Papua New Guinea
 PTTP.....Pacific Tuna Tagging Project
 RFMO.....Regional Fisheries Management Organization
 RPOARegional Plan of Action
 SB.....Spawning Biomass
 SCScientific Committee
 SKJSkipjack Tuna
 SECCSouth Equatorial Counter-Current
 SECN.....South Equatorial Current (northern branch)
 SECS.....South Equatorial Current (southern branch)
 SEAPODYM..Spatial Ecosystem and Population Dynamics Model
 SPC.....Secretariat of the Pacific Community (formerly South Pacific Commission)
 SPR TRAMP ..South Pacific Regional Tuna Resource Assessment and Monitoring Programme
 SPREPSouth Pacific Regional Environment Programme
 SSGShark Specialist Group (of IUCN)
 TAC.....Total Allowable Catch
 TAETotal Allowable Effort
 TDMTrophic Diet Matrix
 TMPTuna Management Plan
 UNFSA.....United Nations Fish Stocks Agreement
 UNCLOSUN Convention on the Law of the Sea
 USMLT.....Treaty on Fisheries between the Governments of Certain Pacific Islands
 States and the Government of the United States of America
 VDSVessel Day Scheme
 VMSVessel Monitoring System
 WCPFCWestern and Central Pacific Fisheries Commission
 WCPOWestern and Central Pacific Ocean
 WPFMCWestern Pacific Fishery Management Council
 WWF.....World Wildlife Fund
 YFT.....Yellowfin tuna

4 BACKGROUND TO THE FISHERY

4.1 INTRODUCTION

This assessment covers two fisheries using purse seine fishing vessels licensed to fish by PNA parties, Papua New Guinea, Kiribati, Federated States of Micronesia, Solomon Is, Nauru, Marshall Islands, Tuvalu and Palau, in their respective EEZs. The two types of fishing methods assessed, or in this case sets are free school, and natural log sets. These two set types account for 42% and 18% of the total catch, including target and retained species. There are presently 221 licensed fishing vessels in this fishery (excluding USMLT), and catches amounted to 730,991t in 2009. Fishing by these vessels takes place along the equator between 20°N and 20°S, with a combined EEZ area extending over 14.3 million square kms. The target species for this assessment is skipjack tuna, with other retained species including yellowfin tuna and bigeye tuna, and with very low catches of other species including blue marlin and silky shark.

Map 1: The PNA geographical area.



4.2 DEFINITION OF A PURSE SEINE

A purse seiner circles the school with a deep curtain of netting. Then the bottom of the net is pursed (closed) underneath the fish school by hauling a wire running from the vessel through rings along the bottom of the net and then back to the vessel, preventing the fish from "sounding", or swimming down to escape the net.

Searching for the fish schools and assessing their size and direction of movement is an important part of the fishing operation. Sophisticated electronics, such as echo sounders, sonar, and track plotters, may be used to search for and track schools, assessing their size and movement and keeping in touch with the school while it is surrounded with the seine net. Crows nests may be built on the masts for further visual support. Large vessels can have observation towers and helicopter landing decks. Helicopters and spotter planes are used for detecting fish schools. A very heavy boom, which carries the power block, is fitted at the mast. On the deck are three drum purse seine winches and a power block, with other specific winches to handle the heavy boom and net. Vessels are usually equipped with a skiff. Fishing for tuna schools may occur by setting the purse seine around schools, or on natural objects referred to as log sets. These techniques are opportunistic. Vessels may also deploy to aggregation devices (FADs), which are

either anchored to the seabed, or drifting in the prevailing currents. FADs are constructed with an array of materials, including ropes, palm tree fronds and nets.

The nets are nylon mesh, of approximately 1,500 metres long and 200 metres depth. Mesh size range from 90 mm in the centre (bunt), and 200 mm in the wings. The net lengths are divided into separate panels, which can be replaced when the nets are damaged. The first sets of the day usually commences at around 3/4 am and is usually completed at around 9/10 am. Depending on opportunities, there may be up to 3 sets in a day. Trip lengths may last from 3 weeks to 3 months.

Fish is stowed in wells, each holding approximately 50 tonnes, but the number of wells and their capacity will vary according to vessel size. Fish are generally frozen in a brine mix once in the wells and offloaded to carriers or directly into marketing or processing facilities when in port. Some seiners may also have small blast freezers. There are no permissible high seas transfers.

4.3 HISTORY OF PURSE SEINE FISHING IN THE PACIFIC

The purse seine fishery of the Western Central Pacific evolved from a series of trials largely sponsored by the Japanese during the late 1960s and early 1970s (Gillett, 2007). The purse seine technique evolved from other regional fisheries, namely eastern Pacific and off Japan, but faced particular development problems in the Pacific because of characteristically clear water and deep thermocline in the equatorial Pacific which created unfavorable conditions for purse-seining – the tuna schools tended to be smaller, faster-moving, and diving deeper than those in the Eastern Pacific Ocean. By the late 1970s there were several fully commercial Japanese and American purse seine operations in the western equatorial area of the Pacific Islands. The number of purse seine vessels operating in the Pacific Islands increased rapidly during the early 1980s. The USA purse seine fleet moved in quickly from the eastern Pacific due to the very strong El Niño event of 1982–83 and pressure to reduce dolphin mortality in their traditional fishing grounds. In 1983, 62 USA seiners caught 179 000 t of tuna in the Pacific Islands area. During the period from the mid-1980s to 2003, the regional purse seine fleet expanded, albeit at a slower rate, and the national composition of the fleet became more diverse (Table 1), with an expansion to include other Asian fishing nations, Taiwan, Korea, Philippines, followed by China and New Zealand. A more recent group of entrants to the fishery include the Latin fleets of Spain, El Salvador and Ecuador. Access for these groups of vessels is under regional or bilateral fisheries partnership arrangements or agreements, including:

- Bilateral intergovernmental agreements between individual fishing states and individual PNA Parties);
- European Union Fishery Partnership Agreements (between the EU, and Solomon Is, Kiribati and FSM).
- An assortment of commercial agreements between associations or companies and individual PNA Parties
- The US Treaty (between the Governments of certain Pacific States and the USA),

Pacific Island countries have also sought to promote investment in their countries by encouraging reflagging, chartering, joint ventures or similar arrangements between Island states and foreign investors. This has led to growth in Pacific Island fishing capacity, with agreed access to PNA EEZs through the FSM Agreement. Table 1 below highlights the evolution of the different purse seine fleet groupings.

Table 1: Breakdown of Purse seine distant water vessels (EEZ and high seas) fishing in the Western Pacific, 31 June 2010 and at three prior times in the fishery

Country grouping	1988	1995	2003	2010
Korea	23	30	27	28
Taiwan	1	42	38	39
Japan	39	35	34	36
New Zealand	0	0	4	4
Vanuatu	0	2	15	13
China	0	0	4	12
Philippines	9	13	22	22
Spain (EU)	0	0	1	4
Ecuador	0	0	0	7
El Salvador	0	0	0	2
Indonesia	3	0	0	0
Other (now non active)	8	0	2	0
Total DWFN	83	122	147	167
FSMA	4	12	24	33
Domestic				21
Total DWFN FSMA and Domestic	119	177	191	221
USLMT ³	32	43	20	36

Source: **Gillett and Lewis (2003)** and updated from PNAO (2010).

It is noteworthy that the assessors found some ambiguity in vessel records kept by the different organizations. This is in part explained by the fact that there are movements in and out of the fleet. However, there are three principal records kept: the PNA Parties national licensing records³, FFA Regional Register), and the PNA VDS Register. None of these fully reconcile. For example in 2010, the PNAO records 227 vessels (**PNAO, 2010**), FFA's 'Vessels of good standing' (**FFA, 2010**), 178 vessels, and national registers, 207 vessels. These numbers exclude the USMLT fleet.

Table 2 below summarizes the historic levels of purse seine effort in PNA waters.

The table shows estimated effort in two forms:

- i. from logsheets in actual days as estimated by SPC;
- ii. from PNAO VMS monitoring, including adjustments for vessel size.

³ Gillett (2010) has most recently undertaken a comprehensive review of national records, sourced from the national licensing records and this information is used, not least because the author has used the same methodology as before.

Table 2: PNA Party annual effort in days

	Log sheets						VMS	
	2004	2005	2006	2007	2008	2009	2008	2009
Pacific Is	3,995	4,998	4,631	4,803	4,308	4,308	3,833	3,338
DWFN	19,843	21,123	21,560	20,911	19,486	17,984	22,774	22,814
FSMA	4,003	3,880	3,585	3,114	2,837	3,087	3,122	3,435
Total VDS	27,841	30,001	29,776	28,828	26,631	25,379	29,729	29,587
USMLT	2,775	2,116	1,850	1,879	5,461	6,224	5,839	7,447
Arch Waters	3,094	4,561	3,891	5,452	5,682	6,120	6,465	5,529
Total PNA waters	33,710	36,677	35,518	36,159	37,775	37,723	42,032	40,562

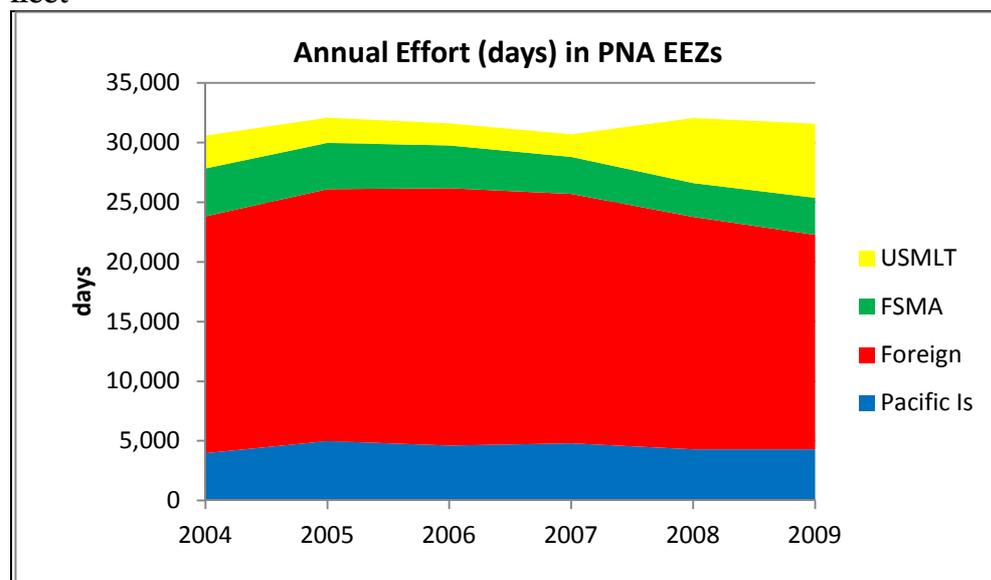
Source: **PNAO**

The table shows that:

- a) based on logsheet data, the level of effort covered by the VDS has been relatively stable but has declined from 30,001 days in 2005 to 25,379 days in 2009 and is below the 2004 level. The VMS, as compared with the logsheet data, shows a lower level of days for the Pacific Is. fleets, a higher level of effort for the FSMA fleet and a higher level of effort for the foreign. This is possibly (PNAO, 2010) the result of:
 - length adjustment in the VMS data (with smaller vessels in the domestic fleets and larger vessels in the foreign fleets);
 - the counting of transit days in the VMS data; and
 - issues associated with reporting of some PNG domestic vessels;
- b) The FSMA, which are capped at 3,907 days, declined after 2004 but started to pick up again in 2009.
- c) The USMLT days have increased greatly since 2008.

The recent trends in effort in PNA EEZs (i.e. excluding archipelagic waters) are shown in Figure 1.

Figure 1: DWFN / FSMA and Domestic Purse seine effort by PNA licensed purse seine fleet



Source: PNAO

A summary of catch per unit (CPUE) effort in terms of total catch per fishing day for PNA licensed vessels in recent years is shown below (Table 3)

Table 3: DWFN / FSMA and Domestic Purse seine CPUE trends 2005-2009

	2005	2006	2007	2008	2009
Skipjack	21.3	25.5	25.7	22.1	26.6
Yellowfin	4.6	4.2	4.6	6.8	4.0
Bigeye	0.4	0.5	0.6	0.8	0.8
<i>Total</i>	<i>26.3</i>	<i>30.2</i>	<i>30.9</i>	<i>29.7</i>	<i>31.4</i>

Source: P. Williams, SPC, 2010 (Note: Excludes USMLT)

4.4 CATCHES BY SPECIES (ALL SET TYPES)

The provisional WCPO 2009 purse-seine catch of 1,894,500t (Williams & Terawasi (2010)) was the sixth consecutive record catch for this fishery and 70,000t higher than the previous record in 2008. The PNA catch (DWFN, Domestic and FSMA), accounted for 730,991 (Williams, SPC, 2010), 39% of the total purse seine catch in the WCPO (Table 4). Other significant catch amounts (2009) were derived from the High Seas, 368,000t (19%), USMLT, 269,000t (14%), Archipelagic Waters, 97,000t (5%) and territorial waters (Indonesia and Philippines), 355,000t (19%).

The 2009 PNA purse seine catch amounts to 39%-41% across the range of species, skipjack, yellowfin and bigeye tuna⁴. The long line catch, the other significant group targeting bigeye tuna, was 65,600t in 2009. Other significant catch (2009) amounts were derived from the High Seas, 7,200t (21%), USMLT, 4547t (13%) and territorial waters (PNG (AW), Solomon Is, Indonesia and Philippines), 3,692t, 11%. Hampton *et al* (SPC, 2011)⁵ identifies a significant shift in catch

⁴ The transfer of effort from High Seas to PNA waters (2010) is likely to have significantly increased the importance of catches of the three stocks taken in PNA waters to approximately 59% (all tunas), or 59% for skipjack, 49% yellowfin, and 57%, bigeye tuna.

⁵ Hampton J, Williams P and Clarke S (Email of 20 June, 2010 (Appendix F 15.8 (ii))

dependency on PNA waters, following the High Seas Closures. One million tonnes, or 70% of the total skipjack catch were reported as caught in PNA waters (excluding Archipelagic).

Catches by the licensed PNA purse seine fleet are shown in Figure 3. These show a catch of between 800,000 to 900,000 tonnes for the licensed PNA purse seine fleet. Catch volumes show some decline in 2008 and 2009.

Table 4: Purse seine catches in the WCPO by the various groupings, 2009

Notes on Area/Flag	SKJ	YFT	BET	TOTAL	% of total	% of SKJ total	% of YFT total	% of BET total
WCPFC Statistical Area - All flags (excludes small amount of ALB)	1,585,307	264,787	43,580	1,893,674				
PNA minus AWs and minus USMLT	616,432	96,819	17,740	730,991	39%	39%	37%	41%
PNA EEZs, including AWs	923,930	145,439	27,363	1,096,732	58%	58%	55%	63%
PNA EEZs - AW only	65,582	27,678	3,692	96,953	5%	4%	10%	8%
PNA minus AWs	858,348	117,761	23,671	999,780	53%	54%	44%	54%
USMLT	241,916	20,942	5,931	268,789	14%	15%	8%	14%
Philippines and Indonesia EEZ	269,047	78,097	8,104	355,248	19%	17%	29%	19%
PNA EEZs (incl. AWs) minus USMLT	682,014	124,497	21,432	827,943	44%	43%	47%	49%
High seas catch within 20°N and 20°S	325,706	35,176	7,224	368,106	19%	21%	13%	17%
Catch outside 20°N-20°S	56,302	4,944	613	61,859	3%	4%	2%	1%

Source: Williams, SPC, 2010

The figures in Table 4 were questioned during the objection, following further enquiry, these were confirmed as follows. On the distribution of catches, SPC have advised as follows

The percentages of total skipjack catch in the WCPFC Convention Area that that were caught by all gears in PNA EEZs, including archipelagic waters, in 2009 and 2010 were as follows:

2009	55.2%
2010	68.0%

These percentages were computed for retained catches by all gears. The catch estimates are based on fishery data submitted to SPC and subsequent statistical analyses of catch species composition conducted by SPC scientists. The total catches for the WCPFC Convention Area are as per the WCPFC Tuna Fishery Yearbook 2010 Table 74. Catches for PNA EEZs, including archipelagic waters, were taken from databases maintained by SPC on behalf of the WCPFC.

If we include estimates of skipjack discarded by purse seiners (2.7% and 1.8% of the catch for 2009 and 2010, respectively, as per Table 18 of WCPFC-SC7-2011-ST-IP-01) in purse seine catches in both PNA and non-PNA waters, and assume zero discarding of skipjack by non-purse seine gears, the percentages change very little and are:

2009	55.4%
2010	68.1%

The actual catch estimates used are shown below.

PNA RETAINED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	926,986 t
2010	1,094,431 t

WCPFC CONVENTION AREA RETAINED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	1,679,165 t
2010	1,610,431 t

PNA RETAINED AND DISCARDED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	951,977 t
2010	1,113,988 t

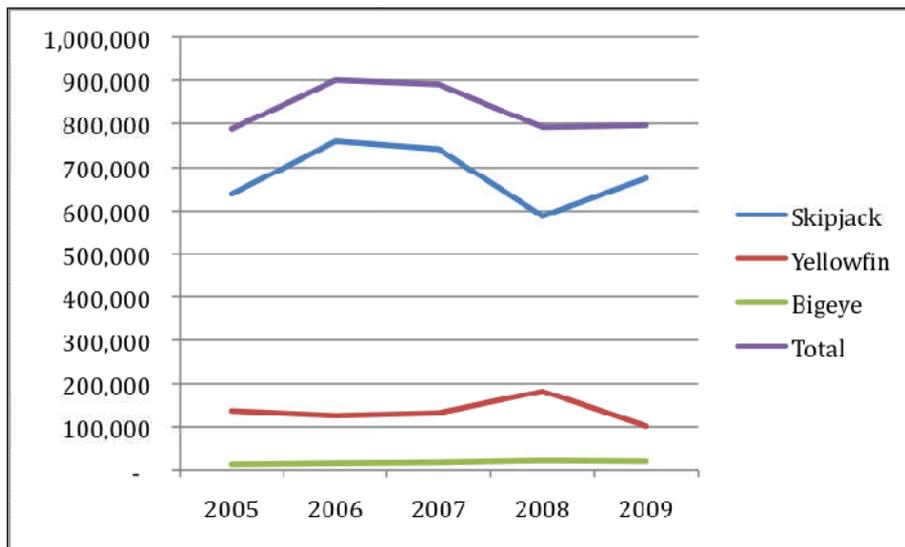
WCPFC CONVENTION AREA RETAINED AND DISCARDED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	1,718,709 t
2010	1,635,437 t

These officially estimated PNA shares of the WCPO skipjack catch of 55% for 2009 and 68% for 2010 compare with the estimates of the PNA share of the WCPO purse seine only skipjack catch of 58% for 2009 and 70% for 2010 (based on preliminary data) that were discussed at the hearing.

On the related issue of the Indonesia, Philippines and Vietnam share of the catch referred to in para 29 of the Decision, noting that the estimate of 11% was referred to wrongly in one response to a stakeholder comment on the PCDR and was not used in the analysis or the scoring, SPC advise that *“Catches of skipjack in the waters of Indonesia and Philippines are estimated to have been 418,162 tonnes in 2009 and 388,699 tonnes in 2010. These catches represent 24.9% and 24.1%, respectively, of the total retained skipjack catches in the WCPFC Convention Area in those years. Including purse seine discards in the WCPFC Convention Area catches and assuming no discards in Philippines and Indonesia, the percentages are 24.3% in 2009 and 23.8% in 2010”*.

Figure 2: DWFN / FSMA and Domestic Purse seine catch by PNA licensed purse seine fleet

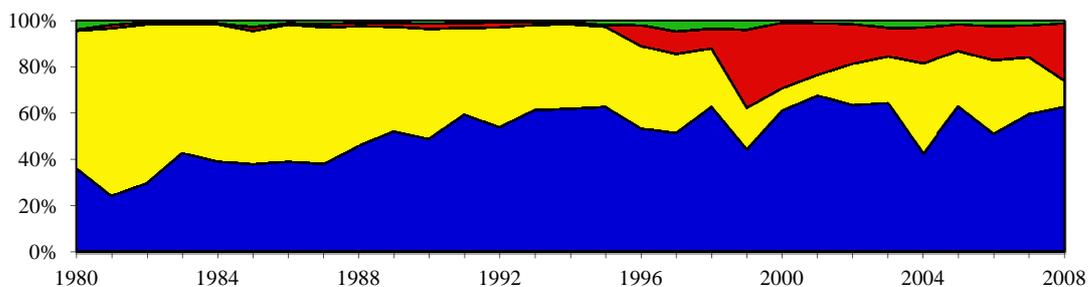


Source: P. Williams, SPC, 2010 (Note: Excludes USMLT and Archipelagic catches)

4.5 PNA SET DEPENDENCIES

PNA licensed fleets demonstrate different dependencies on set types. The overall dependency on free school fishing has increased over the years. Fishing on drifting FADs evolved from traditional dependency on log sets in the mid 1990s. The current distribution (2009) between set types (Figure 2) represents 42% free school, 18% log set, 36 % drifting FADs, and 4% anchored FAD (Williams (data set), SPC, 2010).

Figure 3: Distribution of purse seine sets for the main fleets operating in the Western Pacific (1980-2008) (Source: SPC)



Source: Williams *et al* (2010)

A summary of set dependency by flag state is illustrated overleaf.

These figures were primarily determined from log sheet data. These are adjusted based on SPC estimates for scientific purposes which use observer grab samples to differentiate between species, most especially small yellowfin and bigeye tuna, which are not easily distinguishable (Lawson (I10), SPC 2010). However, additional failings are identified in sampling techniques. Initial spill samples have generated different distributions, with adjustments reducing skipjack by a quarter, bigeye doubling (in associated sets), with an increase in yellowfin dependency. These estimates are being refined as more data become available.

Table 5: PNA catch by set type (average 2005-2009)

	Free school	Log	DFAD	AFAD	Other	Total
Korea	63%	18%	19%	0%	1%	100%
Taiwan	42%	40%	18%	0%	0%	100%
Japan	41%	42%	16%	0%	0%	100%
New Zealand	27%	4%	69%	0%	0%	100%
Vanuatu	50%	20%	22%	9%	0%	100%
China	58%	8%	33%	1%	0%	100%
Philippines	28%	30%	9%	32%	0%	100%
Spain (EU)	11%	0%	89%	0%	0%	100%
Ecuador	11%	1%	88%	0%	0%	100%
El Salvador	13%	0%	87%	0%	0%	100%
Total DWFN	48%	28%	22%	2%	0%	100%
Papua New Guinea	55%	23%	15%	5%	1%	100%
Marshall Is	10%	29%	60%	0%	0%	100%
Solomon Is	27%	40%	34%	0%	0%	100%
Fed States						
Micronesia	17%	10%	8%	65%	0%	100%
Kiribati	47%	45%	7%	0%	2%	100%
Total FSMA (incl Domestic)	43%	25%	24%	7%	1%	100%

Source: P. Williams, SPC 2010

Table 6: PNA tuna catch distribution by Unit of certification

	2005	2006	2007	2008	2009	% avge
<i>Free school</i>						
Target species						
Skipjack	319,107	263,151	325,579	259,981	267,087	75%
Retained species						
Yellowfin	87,215	82,301	93,146	134,422	59,054	24%
Bigeye	3,649	5,362	4,059	5,754	3,525	1%
	<i>411977</i>	<i>352820</i>	<i>424792</i>	<i>402165</i>	<i>331675</i>	
<i>Log set</i>						
Target species						
Skipjack	215,232	356,053	256,576	108,194	124,702	89%
Retained species						
Yellowfin	32,063	28,723	22,489	13,642	13,477	9%
Bigeye	5,102	5,216	5,090	2,546	2,916	2%

Source: P. Williams, SPC 2010

4.6 BIOLOGY OF THE TARGET SPECIES

Skipjack are the smallest of the primary market species of tuna, generally not exceeding 20 kgs in size. They are widely distributed in the Pacific Ocean and are fished as surface schooling adults typically at 2-5 kgs in size. Whilst the majority of the stock biomass is believed to occur in tropical areas, warm poleward-flowing currents extend skipjack distribution to approximately 40°N and 40°S.

Skipjack in the western Pacific are believed to comprise a single stock for management purposes, based on the extensive available tagging data, with the spatial extent of that stock approximating the WCPFC Convention Area (**Wild and Hampton, 1994**).

A substantial amount of information on skipjack movement is available from tagging programmes. In general, skipjack movement is highly variable (**Sibert *et al.* 1999**) but is thought to be influenced by large-scale oceanographic variability (**Lehodey *et al.*, 1997**).

Growth and attainment of maturity are rapid relative to other tuna species. In the Pacific, approximate age estimates from tagging and otolith readings indicate fork lengths (FLs) of 48, 65, 75, and 80 cm for ages 1 to 4 years respectively (**Tanabe *et al.*, 2003**), though significant differences occur amongst individuals. The fishery primarily operates on just several age classes, and annual recruitment to the stock forms a large portion of the total biomass.

Maturity may be attained within the first year (40cm), and skipjack are serial opportunistic spawners, under favourable conditions, with high fecundity.

Estimates of natural mortality rate have been obtained using a size-structured tag attrition model (**Hampton, 2000**), which indicated that natural mortality was substantially larger for small skipjack (21–30 cm FL, $M = 0.8$ mo⁻¹) than larger skipjack (51–70 cm FL, $M = 0.12$ – 0.15 mo⁻¹).

Given these life history parameters, the skipjack stock is considered to be highly productive, with high natural mortality, especially for small fish, rapid growth and high population turnover, and with considerable variability in year-class strength and annual production, at least by fishery.

For the purposes of stock assessment, a range of these biological parameters is also estimated independently in the stock assessment model MULTIFAN-CL, including natural mortality, recruitment, growth, and movement.

5 STOCK ASSESSMENT

Stock assessments are currently conducted by the Oceanic Fisheries Programme of the Secretariat of the Pacific Community (SPC), as science provider to the Western and Central Pacific Fisheries Commission (WCPFC), the RFMO for the tuna and tuna-like species in the region. Fishery overviews and summary information on the status of stocks are published periodically (**Harley *et al.*, 2010**), but most information is initially available on the WCPFC website (wcpfc.int/meetings).

The assessments are being continually improved as more data become available and model structure is enhanced. Procedures and methodology for the assessments are now fine tuned amongst members and cooperating non-members of the Commission, at a Stock Assessment Preparatory Workshop in the first quarter of the year, and on completion, are presented to the annual WCPFC Scientific Committee (SC) meeting in August. The SC reviews the assessment and issues an agreed statement on the current status of the stock, management advice and implications, which is forwarded to the WCPFC annual session for consideration and endorsement of any recommended management action to be taken. The SC determines a schedule for assessments by species, with priorities tending to reflect current concerns with status of the stocks or uncertainty in the assessments.

SPC, as data provider and manager to the WCPFC, also maintains a central database for the catch, effort, size frequency, tagging, biological data, observer, sampling and other data from the fishery. This allows the SC to utilize these data in undertaking and subsequently evaluating the impact of stock assessments as directed.

5.1 SKIPJACK ASSESSMENT AND INFORMATION

Skipjack in the WCPO are considered a single stock for management purposes, based on tagging data and the somewhat discontinuous distribution of skipjack catch across the Pacific Ocean. The WCPFC Convention Area (and statistical area), with an undefined western boundary, corresponds to the spatial extent of this single stock.

Skipjack stock assessments have been carried out roughly biennially, most recently in 2008 (**Langley *et al.*, 2008**) and 2010 (**Hoyle *et al.*, 2010**). The skipjack assessment, as with other tuna assessments, uses the well-established MULTIFAN-CL stock assessment model (and associated computer software), which has a long and successful history of application to tuna stock assessment. MULTIFAN-CL models the population dynamics of the stock and the fisheries operating on it, using maximum likelihood estimates to fit a range of parameters, then is used to evaluate stock status relevant to default reference points in a probabilistic way and examine stock performance in response to fishing. Catch, effort, length frequency and tagging datasets are incorporated. The catch and effort data, standardized as necessary, are grouped by fishery (defined as relatively homogeneous fishing units, with selectivity and catchability characteristics that do not vary greatly over time and space), and quarterly time periods.

The model is age and spatially structured, in the case of skipjack with 16 quarterly age-classes, and three spatial regions in the current assessment. It uses catch, effort, size composition, and tagging data in the model, grouped into 17 fisheries (a change from the 24 fisheries used in the previous (2008) assessment) and quarterly time periods from 1972 through 2009.

These fisheries, or fleets, are modelled with respect to their selectivity by size, areas fished and standardized catch per effort where possible. Parameters are estimated in a probabilistic way, using maximum likelihood estimates. A base case model is developed as the most plausible fit to the data, and uncertainties in the base case model are explored via various sensitivity analyses.

Data supporting the assessment are generally comprehensive and sound. Some fisheries have not been consistently sampled for length frequency, in particular, at the same levels over time, but the consistency continues to improve and coverage would be regarded as good. Purse seine catch composition estimates have been an issue, with species composition not accurately recorded on logsheets, especially for bigeye and yellowfin, and having to be estimated by observer sampling. Apart from the nominal logsheet data, two types of estimates – S_BEST estimates (utilizing grab sample data), and the more recent (2009/2010) spill sample estimates from paired grab and spill samples are now routinely used in the stock assessments. At the advice of the Scientific Committee, the spill sample estimates are used in the base case as the more reliable, despite their somewhat preliminary nature, with grab sample estimates incorporated in sensitivity analyses. Although the use of spill sample estimates has led to decreased estimates of the skipjack catch (see Table SKJ 2 in WCPFC7-2010-14), increased estimates of yellowfin catch from associated sets (Langley et al. 2009, Figure 7), and a slight increase in bigeye catch estimates (Harley et al., 2010 - Figures 2 and 3), impacts on the assessments have been relatively minor e.g. Figure 27 in Hoyle et al., 2010) for skipjack, Table BET2 in WCPFC7-2010-14 for bigeye. The spill samples have so far been used to adjust catch estimates, but in future will be used to adjust size data as well, which may have a greater impact on future assessments (S. Hoyle, pers. comm, 26th January, in Appendix F).

Tagging data are particularly important to skipjack assessments, being informative regarding stock size, exploitation rate and estimates of abundance, which may be difficult to otherwise estimate for skipjack. The assessments have been well served by a series of large tagging datasets, including that from recent tagging experiments (2006-2010). Tagging data from the early years of the recent PTP (Pacific Tuna Tagging Project) experiments (2006-2008) were included in early runs of the model but could not be fully integrated due to some technical difficulties with the data. Analysis outside the model however produced results consistent with the conclusions of this assessment. This large tagging dataset will be included in the next assessment (2011) as a priority, once these issues are resolved.

The 2010 assessment for skipjack was developed collaboratively at a preparatory meeting (Noumea, April 2010),⁶ where a range of model changes and sensitivity analyses were considered and agreed for the assessment, and several critical new analyses included e.g. standardized effort series for the Japanese pole-and-line fleets. The more robust assessment included some significant changes to the previous assessment, including updated catch and effort data, revised size data (with some revision to the Indonesia and Philippines catch estimates), incorporation of Japanese tagging data, inclusion of the standardized Japanese effort series, adoption of a simplified spatial structure (3 areas, two equatorial and one north of 20°N, compared to 6 in the 2008 assessment), the definition of 17 fisheries (cf. 24 in 2008) and the incorporation in the model of how tag reporting rates are estimated. The most plausible base model was developed using a range of development models, and sensitivity to key assumptions in the model tested. Incorporation of the Japanese data, the new spatial structure and improvements to how tag reporting rates are used appear to have had the biggest impact on the assessment. The base case adopted a steepness value of 0.75 for the provision of advice on stock status. The entire stock was modelled in the current assessment, whereas only equatorial areas were included in the spatial domain of the 2008 assessment.

It is acknowledged that the assessment, whilst robust, can be further improved. Future work will continue to address sources of continuing uncertainty, which include the estimate of steepness employed, estimates of growth (faster in the model than external estimates), natural mortality

⁶ Terms of reference for the meeting can be found at WCPFC -SC6-2010/GN-WP-04, and outcomes in various papers presented to SC6.

estimates for juvenile fish, development of CPUE indices for the purse seine catch (to reduce reliance on abundance indices from a relatively small component of the fishery, the Japanese distant water pole-and-line fishery), movement parameterization but most notably full inclusion of the most recent tagging (PTTP) data.

5.2 STOCK STATUS AND MANAGEMENT ADVICE

With the changes to the assessment model described above, the major conclusions of the 2010 skipjack assessment remain largely unchanged from previous estimates i.e. ***the stock is neither overfished nor in an overfished state*** and the assessment continues to provide a very high level of confidence that the skipjack stock remains highly productive. There is a very low probability of recruitment overfishing occurring, with a high degree of certainty that the stock is above the point where recruitment would be impaired. These conclusions are considered robust, within the statistical uncertainty of the current estimates. The Kobe plot below summarizes the trends in annual stock status over the period 1972-2009, and clearly demonstrates that the stock remains well within MSY reference point limits.

However, there are some substantial changes from the 2008 assessment in the MSY-based reference points. $F_{\text{current}}^7 / F_{\text{MSY}}$ is estimated at 0.34 using the base case compared to 0.12 in the 2008 assessment, and has been steadily rising with recent and continuing increases in effort and catch. The 2009 value of F/F_{MSY} has risen to above 0.6, but the likelihood profile (probability density function) indicates there is zero probability that F/F_{MSY} is close to 1.0.

$B_{\text{current}} / B_{\text{MSY}}$ is estimated at 2.42 using the base case, and has been above 2.0 for nearly all years in the past two decades. The 2009 value of B/B_{MSY} has however fallen below 2.0, to around 1.6. The assessment report concludes that “there is zero probability that $B_{\text{MSY}} / B_{\text{current}}$ is anywhere close to 1.0”. B_{current} is estimated at 0.75 B_0 , B_{MSY}/B_0 as 0.31, and B_{current} as 0.63 of the average current total biomass in the absence of fishing.

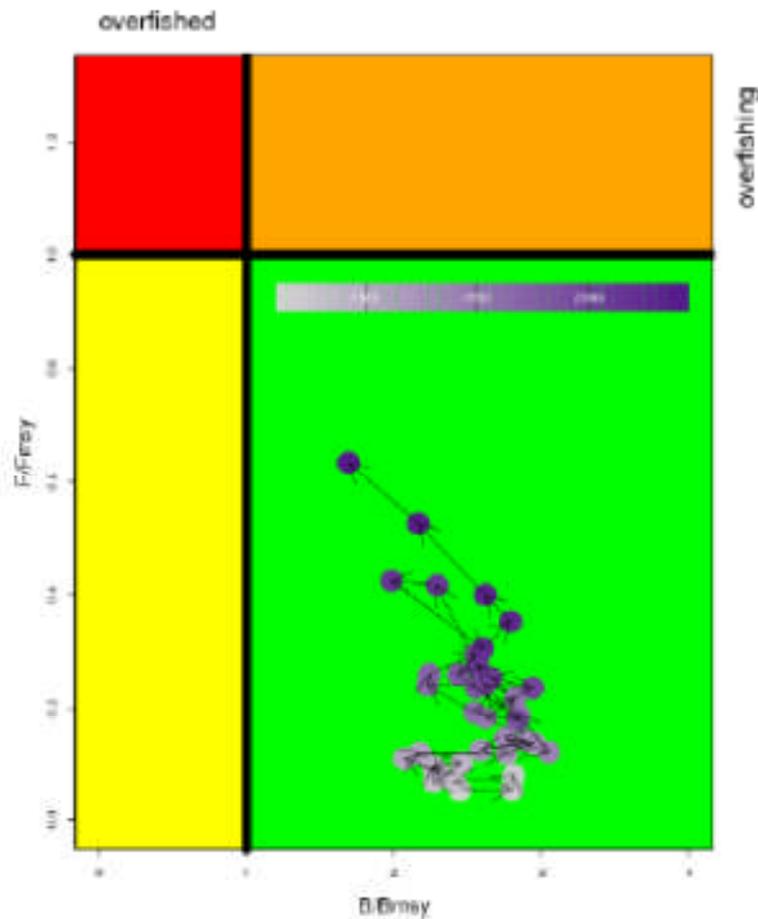
However, MSY is now estimated at 1.375 million tonnes, compared to 2.264 million tonnes in the 2008 assessment. This is slightly less than the current catch level. Fishing is now seen to be impacting stock size to a significant degree, especially in region 2 (50% biomass reduction), and it appears likely that significant increases in effort would result in only minor increases in catch and would have considerable implications for yellowfin and bigeye stocks. The skipjack population biomass, as noted, has been lower in recent years than previously observed, despite recent high levels of recruitment.

⁷ F_{current} is the average fishing mortality at age for 2005-2008; similarly for B_{current}

Figure 4: Kobe (phase) plot showing temporal trends in annual stock status of WCPO skipjack, relative to B_{MSY} (x axis) and F_{MSY} (y axis) for the model period (1972-2009).

The colour of the points is graduated from white (1972) to dark purple (2009).

(Source: Hoyle *et al.*, 2010).



The SC6 (2010) management advice to the Commission⁸ for skipjack recognized that skipjack continue to be only moderately exploited, that current fishing levels are well below F_{MSY} levels ($F_{current} / F_{MSY} = 0.34$) and that these levels are clearly sustainable. It was noted however that fishing is having a significant impact on stock size, especially in the western part of the region (Region 2), and that additional purse seine effort will yield only moderate gains in skipjack catches as the most recent estimate of MSY (~ 1.375 million t) has been exceeded. The 2009 catch was an historical high of ~ 1.8 million t⁹, and there are some concerns that skipjack availability at higher latitudes is being reduced.

The advice also recognized that skipjack are not in an overfished state, with current biomass well above B_{MSY} levels ($B_{current} / B_{MSY} = 2.42$), with a high degree of certainty, and that with $B_{current}$ estimated at $0.75 B_0$, the biomass level is also well above an appropriate LRP where recruitment

⁸ Report to the 7th Regular Session of the Commission, to be presented by the SC chair, in association with the Science Provider, Honolulu, Hawai'i, December 6-10, 2010; drawn from the Summary Report of the 6th Regular Session of the Scientific Committee

⁹ 1,575,000t based on spill sampling data

might be impaired ($0.20B_0$). Total biomass estimates have fallen somewhat in recent years but are still well above sustainable levels.

Informed by the robust scientific advice provided, it has not been necessary to this point for the Commission to adopt conservation and management measures for skipjack, as neither default TRPs or LRPs have been approached. This is however likely to happen in the near future, with the replacement of CMM 2008-01 with one for tropical tunas which will specifically include skipjack (see 5.4.1). Such measures adopted for yellowfin and bigeye however have had collateral benefits for skipjack, and the impact of these is regularly reviewed (see 5.4.1).

5.3 REFERENCE POINTS

Article 6 of the WCPF Convention (**WCPFC 2000**) requires that the guidelines of Annex II of the UNFSA be applied, and ultimately that stock-specific reference points be determined, as well as action to be taken if they are exceeded. Under point 7, the Annex requires that

“the fishing mortality rate which generates the maximum sustainable yield should be regarded as the minimum standard for limit reference points. For stocks which are not overfished, fishery management strategies shall ensure that fishing mortality does not exceed that which corresponds to maximum sustainable yield, and that the biomass does not fall below a predetermined threshold”.

The Commission has not formally adopted target or limit reference points, but has endorsed work designed to enable the Scientific Committee to recommend provisional limit reference points to the Commission for target species. In the absence of formally adopted reference points, the UNFSA Annex II provisions, incorporated in the Convention, are taken as constituting implicit target and limit reference points,

As noted above, the current WCPFC practice is that the Scientific Committee issues an agreed statement on the current status of the stock, management advice and implications, which is forwarded to the WCPFC annual session for consideration of any management measures recommended.

Management advice (and the implications of that advice) is regularly provided with respect to indicators of fishing mortality and biomass relative to MSY levels i.e. $F_{\text{current}} / F_{\text{MSY}}$, $B_{\text{current}} / B_{\text{MSY}}$ and $SB_{\text{current}} / SB_{\text{MSY}}$. These currently serve as proxy or default target reference points for the WCPFC, which has yet to develop formal reference points for the management of WCPO stocks.

A formal limit reference point has not been determined, but given FAM guidelines for a species with an estimated B_{MSY}/B_0 of 0.31, a default LRP of $0.2B_0$ would be appropriate as a limit below which recruitment might be impaired. The current assessment assumes a Beverton-Holt stock recruitment relationship, with a steepness of 0.75. The advice currently does not provide advice on stock performance relative to this LRP, but appropriate parameters e.g. B_{curr}/B_0 have been estimated and are available.

Notwithstanding the current healthy condition of the skipjack stock relative to MSY-related reference points, and some evidence available (from the bigeye example) that management actions would be undertaken to reduce the exploitation rate if F was to exceed F_{MSY} , limit reference points have not been adopted for skipjack by PNA or the WCPFC to guard against impairment of the reproductive capacity of the stock, and this is a substantial weakness in the arrangements for skipjack management.

5.4 HARVEST STRATEGY AND CONTROL RULES

5.4.1 Harvest Strategy

The FAM defines a harvest strategy as “The combination of monitoring, stock assessment, harvest control rules and management actions, which may include an MP or an MP (implicit) and be tested by MSE”.

The harvest strategy for WCPO skipjack has several components, with WCPFC, PNA and national and archipelagic management actions, supported by a robust stock assessment and extensive monitoring frameworks.

The monitoring frameworks include the collection of operational catch and effort data, the provision of a range of scientific, monitoring and compliance information by observers (**WCPFC, 2008b, Attachment C**), VMS data, and port sampling data. The monitoring frameworks provide the key databases for the skipjack stock assessments (see Section 5.1 above). Some of the key management actions, including the FAD closure and catch retention, depend on, and are enabled by, the 100% onboard observer coverage. The design and implementation of the purse seine fishery effort limits are heavily based on the implementation of VMS, initially the implementation of the FFA VMS in PNA EEZs (**Geen, 2000**), and subsequently the implementation of the Commission VMS in the high seas.

The skipjack assessments have been used to develop and assess the effectiveness of the major elements of the measures in place for the purse seine fishery targeting skipjack. The skipjack assessment, with the assessments for bigeye and yellowfin tuna was used by FFA Members, including PNA Members, to analyse management options in the preparation of the packages of measures adopted initially by the PNA in the 3rd Implementing Arrangement and then by the WCPFC in CMM 2008-01 (**Reid et al, 2007**) (**Reid, 2008**).

The skipjack assessment was also used, with the bigeye and yellowfin assessments, in an updated review of the effectiveness of CMM 2008-01 presented to WCPFC7 at the request of the Scientific Committee, (**SPC-OFP, 2010b**). Results of these ten-year projections¹⁰, under varying scenarios, indicate that the CMM 2008-01 measures applied as an element of the harvest strategy for skipjack are likely to be effective in maintaining skipjack stocks at above MSY-related management objectives. Under the relevant scenario¹¹, B_{2021}/B_{MSY} and SB_{2021}/SB_{MSY} are estimated at 2.135 and 2.281 respectively¹², with F_{2021}/F_{MSY} of 0.438, all based on the mix of gears operating in 2021.

Until 2010, the WCPO skipjack management strategy has been aimed at optimizing the value of the purse seine fishery and reducing the impact of purse seine fishing on bigeye tuna. The measures in place are seen as working towards limiting the major skipjack fisheries to lower levels of skipjack fishing mortality than indicated by MSY-based skipjack stock reference points in order to meet objectives related to bigeye and yellowfin conservation ((**WCPFC (2008a)**, (**SPC, I10**)). Those measures include the following.

- (1) At the WCPFC level there is a mix of catch, effort and capacity limits in CMM 2008-01 (**WCPFC (2008a)**) applying to the major fleets harvesting skipjack as part of a package of measures designed to conserve bigeye and yellowfin tuna. These include:

¹⁰ Projections results for WCPFC-2010/15 (for the three species (yellowfin, bigeye and skipjack) are posted on the WCPFC7 webpage as: <http://wcpfc.int/doc/wcpfc7-2010-15a/projection-results-wcpfc-201015>

¹¹ Scenario 145 in the projections assumes relative effort levels of $PS_{ASS}=1$, $LL=1$ and $PH/ID=0.9$

¹² Result of analyses for B and SB supplied by S, Harley, since not explicit in the the projections to be posted.

- Between 20°N and 20°S, limits on purse seine effort in PNA EEZs to 2004 level, and compatible measures in non-PNA EEZs; high seas effort by flag not to exceed 2004 levels or the average of 2001-2004 levels (paras 17 & 18)
- no transfer of purse seine to north of 20°N; any transfer of effort south of 20°S not to undermine the effectiveness of the measures for the purse seine fishery (paras 9 & 10)
- FAD closure in EEZs and high seas (paras 11, 13, 15 and 17)
- A 10% reduction in bigeye purse seine bycatch as an alternative to the high seas FAD closure
- closure of two high seas pockets (para 22)
- no discards from purse seine vessels of skipjack tuna (as well as bigeye and yellowfin) (para 27)
- capacity of other commercial tuna fisheries taking more than 2,000 tonnes of bigeye and yellowfin tuna annually limited to 2004 levels or the average of 2001-2004 levels (para 39). This limit applies to the Japanese and Indonesian pole and line fisheries (WCPFC, 2009c) (Tables 4 & 5).

The WCPFC elements of the harvest strategy apply throughout the WCPO except for archipelagic and territorial waters, thus covering >75% of the WCPO skipjack catch over the period 2005 – 2008.

- (2) At the PNA level, there is a set of management actions in respect of the purse seine fisheries, including the VDS and the FAD closure, high seas closure and the no discards /catch retention provisions of the Third Implementing Arrangement (PNA, 2008a), which have also been the basis for the major WCPFC measures applying to the purse seine fishery. The PNA objective for the VDS is focused on optimizing the value of the purse seine fishery, which implies maintaining stock size for skipjack as the principal target species significantly above that associated with MSY.
- (3) At the national level, the PNA Members apply to purse seine fisheries in their EEZs the PNA Implementing Arrangements, the FFA MTCs and a range of additional measures summarised in the table below:

Table 7: Summary of additional national conservation measures adopted by PNA Parties, 2010

	National Measures
FSM	No fishing around submerged reefs or anchored FADs
Kiribati	Phoenix Island Protected Area (400,000+ sq. Kms) (11% of the EEZ)
Marshall Islands	50 miles zone around 3 islands (sportfishing and security), no fishing around submerged reef.
Nauru	Nil
Palau	EEZ is a Shark sanctuary no retention of sharks, live release where possible No fishing within 24 miles and 50 miles of Malakal Harbour
Papua New Guinea	EEZ: TACs, limit on anchored FAD numbers (total no. and by vessel), limit on no. of drifting FADs, skipjack spawning area closure, western corridor closure, Torres Strait Protected Area; FAD closure – Solomon Sea, no anchored FADs south of 4° closed area. See also Archipelagic restrictions below
Solomon Islands	30 or in some cases 60 mile closed areas around the Main Group Archipelago (MGA). Limits to nos. of vessels and a substantial closed area to purse seine fishing within the MGA.
Tuvalu	Nil

Source: PNA, I24

(4) The purse seine management measures of CMM 2008-01 do however not apply in archipelagic waters. There are four major archipelagic states (PNG, Solomon Islands, Philippines and Indonesia) with significant purse seine fishing in their archipelagic waters. These states have a range of management actions of varying effectiveness applying to their archipelagic waters. Papua New Guinea, Philippines and Indonesia collectively account for 25% of the WCPO skipjack catch. Each country has in place a National Fisheries Act. These are:

1. The (PNG) Fisheries Management Act, 1998, with supporting and legally binding National Tuna Management and FAD Management Plan (**Government of Papua New Guinea (1999)**), currently under review (NFA, I2). The Plan contains reference to restricted entry licensing, a TAC covering all key tuna species and restriction on the number of FADs that can be deployed (Table 6, as above). These measures are strictly controlled (NFA, I1);
2. The Philippine Fisheries Code of 1998 (**Department of Agriculture, Republic Act No. 8550**), with Administrative Orders used to implement policy changes, most notably incorporating references to international conventions; and the introduction of the Fisheries restrictions following the CMMs. A National Tuna Management Plan was introduced in 2004 covering all forms of tuna fishing within the Coastal and Archipelagic Waters and the EEZ for all tuna species. A range of management options including limited entry licensing, controls on fishing effort, TAC and minimum mesh size/landing size and depth of net. Of these, the only restriction applying is restricted entry licensing, for all vessels over 3 GT (**FAO 223. Moratorium on the issuance of new Commercial Fishing Vessel and Gear License (CFVGL) as part of a precautionary approach to fisheries management**). A National Fish Aggregation Device (FAD) order is also in process, limiting the number of anchored FADs to 25 for each licensed purse seine and ring net vessel (Jose Ingles, WWF, pers com August, 2010).
3. Indonesian fisheries legislation comprises several core laws:
 - UU No. 31/2004 concerning Fisheries (**Departemen Kelautan Dan Perikanan (2005a)**)
 - Presidential regulation No. 7/2005 concerning the National Development Plan for medium phase (RPJMN) during year of 2004-2009 (**DKP 2005b**), and modified by Act No. 45/2010 (**DKP, 2010**), laying down restrictions on the deployment of FADs (now prohibited for all vessels over 30GTs), and revised penalty processes.

Indonesian Fisheries Law 31 refers to a Management Plan, but there is no tuna management plan in place, albeit that one is in the process of development (Pak Purwito, Indonesian Tuna Commission, pers com, August, 2010).

Within the overall strategy, the PNA and national components of the strategy are largely directed towards management of the purse seine fishery and skipjack as the major target stock of that fishery.

However, the WCPFC component is primarily directed at management of the bigeye and yellowfin tuna stocks, with the understanding, supported by the analysis noted above, that this has been sufficient to address the status of the skipjack stock.

The WCPFC response to the change in the most recent skipjack assessment (see 5.2) indicates that the harvest strategy is responsive to the state of the stock. At WCPFC7, the Commission decided on a process to replace the current CMM 2008-01 for Bigeye and Yellowfin Tuna in the WCPO with a CMM for Tropical Tuna (bigeye, skipjack and yellowfin) in the WCPO. The objectives of the new CMM include promoting the conservation and management of skipjack. A

new assessment for skipjack will be part of the preparation for the development of the new CMM.

There is also evidence in the analysis above that key elements of the monitoring framework, assessments, and management actions of the WCPFC, PNA and PNA and WCPFC Members work together towards achieving management objectives.

With skipjack exploitation apparently entering into a new phase where greater caution is required, there is a need for a more coherent harvest strategy for skipjack with more explicit objectives, more integrated management actions applying throughout the range of the stock, and harvest control rules based on linked to target and limit reference points for skipjack.

5.4.2 Harvest control rules and tools

There has been no formal development of harvest control rules for skipjack in PNA waters or the WCPO that ensure that the exploitation rate is reduced as limit reference points are approached because there has been a general view that they are not necessary given the positive state of the stock¹³. As noted above, this may change with the results of the most recent assessment and continuing increases in catch and effort throughout the range of the stock.

Management mechanisms and information systems are in place if needed to reduce the skipjack exploitation rate. All significant participants in the fisheries for WCPO skipjack have agreed as Parties to the WCPFC Convention to adopt measures to apply the precautionary approach to conservation of tuna stocks, or have agreed in the case of Indonesia as a CNM, to cooperate fully in the implementation of conservation and management measures adopted by the Commission.

PNA and the Commission have demonstrated a capability of applying measures to reduce the exploitation rate for bigeye tuna on the basis of scientific advice that fishing mortality exceeded F_{MSY} , although the response has fallen short of that estimated to be necessary to maintain the bigeye tuna stock at a level consistent with MSY in future. These actions support an expectation that measures would be adopted to reduce the exploitation rate for skipjack if fishing mortality exceeded F_{MSY} , with such measures aimed at maintaining the stock at or above B_{MSY} and ensuring that the stock will remain well above the level that would be associated with an appreciable risk of impaired recruitment. With the current catch now in excess of MSY as noted ($C_{current}/C_{MSY} = 1.02$, $C_{latest}/C_{MSY} = 1.15$, based on spill sample estimates), and overall effort throughout the range of the stock continuing to increase, it is becoming increasingly necessary to have such a mechanism specifically for skipjack in place.

The absence of formally adopted harvest control rules setting out *pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points* (**FAM Glossary**) represents a potential risk to the effectiveness of management of the skipjack stock in future. In this situation, PNA would need to agree to the adoption of appropriate harvest control rules as a condition of certification.

The range of tools in place includes effort limits in major skipjack fisheries, and FAD closures, high seas closures and a discard ban in purse seine fisheries at the WCPFC and PNA levels, with additional tools at national level including area closures, net restrictions and limits on FAD deployment. The strategy has been based around effort limits since the adoption of CMM 2005-01 in 2005, reflecting an apparent general agreement that effort limits are for now appropriate

¹³ Hampton, SPC (I.10) states that in fact there is still some potential to increase effort for unassociated sets, since BET interactions are minimal. However, there is no potential to increase effort on associated sets, because of BET interactions.

for the purse seine fishery. In the preparation of CMM 2008-01, discussion on the appropriateness of different tools focused on the relative merits of a FAD closure and a total purse seine fishery closure for bigeye conservation and management (**WCPFC, 2007**), (**WCPFC, 2008**). Other proposals include purse seine bigeye catch limits and capacity limits. In practice, there is likely to be a wide range of tools, and combinations of tools that would be appropriate for the WCPFC, and its Members, including the PNA, to apply, provided they are applied effectively.

6 ECOSYSTEM CHARACTERISTICS

6.1 INTRODUCTION

In this assessment two gear type / target species combination are considered, these being the (i) free (unassociated) school and (ii) log set purse seine fisheries for skipjack tuna, both conducted by vessels licensed to fish in the PNA country EEZs. This section considers the potential ecosystem elements that may be impacted by these two fisheries. This is divided into five categories, (i) retained species, (ii) discarded species, (iii) ETP species, (iv) habitat impacts and (v) ecosystem impacts.

The main source of data used to estimate the retained, discarded and ETP catches and discards are the SPC/FFA observer records. Prior to the requirement for 100% observer coverage as of 1 January 2010, an average 340 purse seine trips were observed each year. The historic geographic coverage of purse seine fishing by observers was reasonably representative of the distribution of fishing effort, with coverage exceeding 20% in Papua New Guinea but generally less than 10% in most other areas (**Hampton 2009**).

Figure 5: Observed species composition of purse seine catches in PNA licensed fisheries in the PNA EEZs

A. All set types (tunas and other species)

Species	Unassociated	Log	dFAD	aFAD
Skipjack tuna	59.8%	61.5%	73.3%	58.7%
Yellowfin tuna	33.6%	32.1%	18.3%	34.2%
Bigeye tuna	0.8%	4.7%	6.9%	5.4%
Unidentified tunas ¹⁴	5.3%	0.2%	0.6%	0.9%
Other species	0.4%	1.5%	1.6%	1.7%
TOTAL	100%	100%	100%	100%

¹⁴ Unidentified tunas here comprise exclusively skipjack, yellowfin and bigeye, which were not identified to species during the visual observation process, and are redistributed proportionally across the three species.

B. Species composition details of (i) unassociated catches and (ii) log sets

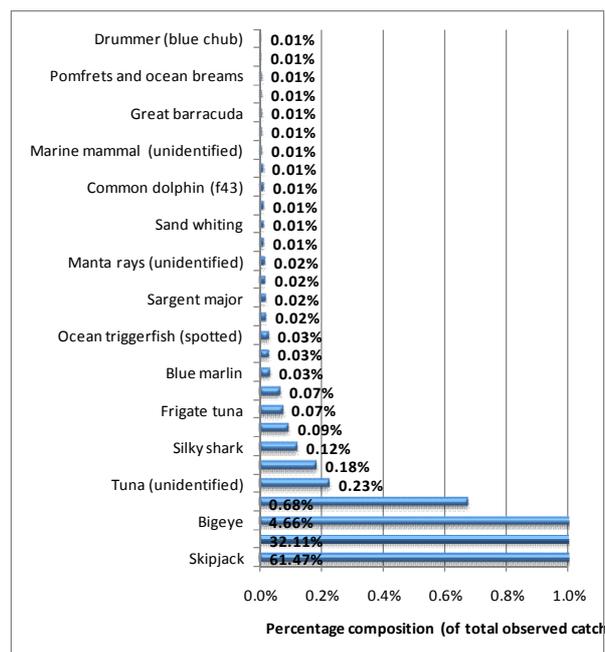
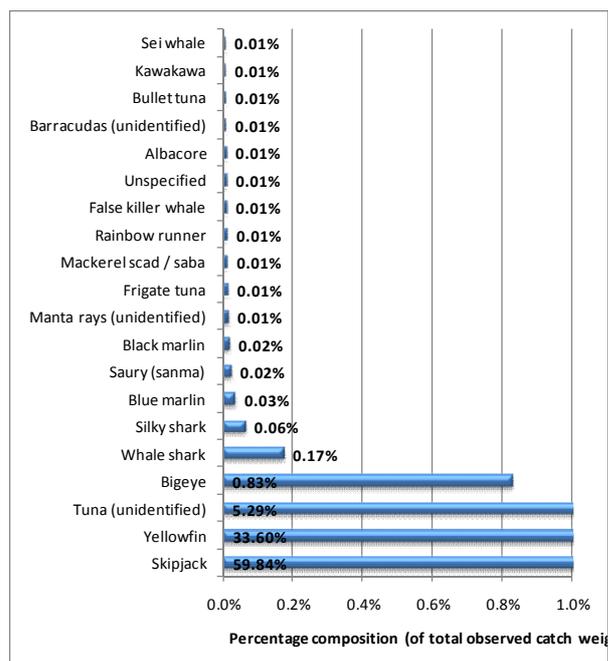


Table 8: Observed species composition of the fisheries under assessment

Unassociated (tonnes and percentage composition)

Species	2005	%	2006	%	2007	%	2008	%	Avg 2005 - 2008	%
Skipjack	31,804.7	67.3%	27,221.8	63.2%	42,525.9	62.2%	38,140.5	51.0%	34,923.2	59.84%
Yellowfin	14,315.6	30.3%	12,126.0	28.1%	21,415.5	31.3%	30,579.5	40.9%	19,609.2	33.60%
Tuna (unidentified)	146.0	0.3%	3,053.4	7.1%	3,835.3	5.6%	5,308.0	7.1%	3,085.7	5.29%
Bigeye	635.2	1.3%	484.4	1.1%	314.5	0.5%	495.8	0.7%	482.5	0.83%
Whale shark	168.2	0.4%	61.5	0.1%	67.4	0.1%	106.7	0.1%	101.0	0.17%
Silky shark	47.0	0.1%	18.0	0.0%	57.8	0.1%	21.9	0.0%	36.2	0.06%
Blue marlin	17.7	0.0%	21.9	0.1%	23.5	0.0%	18.2	0.0%	20.3	0.03%
Saury (sanma)	51.8	0.1%	-	0.0%	-	0.0%	-	0.0%	13.0	0.02%
Black marlin	10.2	0.0%	9.9	0.0%	12.3	0.0%	8.2	0.0%	10.1	0.02%
Manta rays	10.5	0.0%	10.2	0.0%	7.2	0.0%	5.5	0.0%	8.3	0.01%
Frigate tuna	2.8	0.0%	11.0	0.0%	17.4	0.0%	0.9	0.0%	8.0	0.01%
Mackerel scad / saba	1.1	0.0%	26.8	0.1%	0.7	0.0%	0.1	0.0%	7.2	0.01%
Rainbow runner	4.0	0.0%	9.3	0.0%	11.9	0.0%	2.7	0.0%	7.0	0.01%
False killer whale	-	0.0%	1.5	0.0%	5.7	0.0%	15.4	0.0%	5.6	0.01%
All other species	39.2	0.1%	30.2	0.1%	67.8	0.1%	43.5	0.1%	45.1	0.08%
TOTAL	47,253.9	100.0%	43,085.9	100.0%	68,363.0	100.0%	74,746.7	100.0%	58,362.4	100.00%

Log-associated (tonnes and percentage composition)

Species	2005	%	2006	%	2007	%	2008	%	Avg 2005 - 2008	%
Skipjack	17,538.7	49.8%	36,533.7	69.9%	14,102.5	64.8%	5,170.2	51.3%	18,336.3	61.47%
Yellowfin	15,076.1	42.8%	12,246.8	23.4%	6,431.7	29.5%	4,558.1	45.3%	9,578.2	32.11%
Bigeye	1,971.3	5.6%	2,727.2	5.2%	664.1	3.1%	202.2	2.0%	1,391.2	4.66%
Rainbow runner	283.8	0.8%	289.4	0.6%	192.2	0.9%	40.8	0.4%	201.5	0.68%
Tuna (unidentified)	9.2	0.0%	60.1	0.1%	150.2	0.7%	50.3	0.5%	67.5	0.23%
Mackerel scad / saba	87.7	0.2%	67.4	0.1%	55.2	0.3%	6.8	0.1%	54.3	0.18%
Silky shark	48.5	0.1%	55.0	0.1%	31.6	0.1%	8.7	0.1%	36.0	0.12%
Oceanic triggerfish	38.5	0.1%	43.4	0.1%	26.7	0.1%	2.6	0.0%	27.8	0.09%
Frigate tuna	40.6	0.1%	6.6	0.0%	32.0	0.1%	8.1	0.1%	21.8	0.07%
Mahi mahi	17.6	0.0%	40.2	0.1%	18.8	0.1%	2.4	0.0%	19.7	0.07%
Blue marlin	10.4	0.0%	20.0	0.0%	6.1	0.0%	1.8	0.0%	9.6	0.03%
Black triggerfish	14.3	0.0%	13.8	0.0%	3.6	0.0%	1.7	0.0%	8.3	0.03%
Ocean triggerfish (spotted)	13.1	0.0%	13.3	0.0%	4.7	0.0%	1.9	0.0%	8.2	0.03%
Black marlin	10.1	0.0%	8.2	0.0%	2.7	0.0%	3.7	0.0%	6.1	0.02%
All other species	91.6	0.3%	110.2	0.2%	44.4	0.2%	12.6	0.1%	64.7	0.22%
TOTAL	35,251.5	100%	52,235.2	100%	21,766.5	100%	10,071.6	100%	29,831.2	100.00%

'Main' species in terms of both retained and discarded bycatch are considered under the MSC FAM methodology as those species that comprise more than five percent of the total catch weight. 'Main' species in terms of both retained and discarded bycatch are considered under the MSC FAM methodology as those species that comprise more than five percent of the total catch weight, or which has a high value to the fishery or particular vulnerability.

In addition to the target species (skipjack) considered under P1, this fishery also catches other tuna species that are retained and thus are considered under P2.1 (retained species). As the majority (i.e. >50%) of all other non-tuna species caught are consequently discarded, they are treated as bycatch under P2.2, unless they are endangered, threatened or protected, in which case they are considered under P2.3 as ETP species.

On this basis, the following species are listed for special consideration under the following P2 assessment:

Table 9: Allocation of species for assessment under Principle 2

A. Free school sets

Assessment area	Species	Justification for inclusion
P2.1: Retained bycatch	Yellowfin tuna Bigeye tuna	Over 5% of retained catch Although well under 5% of retained catch (0.83% plus proportional adjustment for unidentified tunas), is of some economic significance
P2.2: Discarded bycatch	Silky shark Blue marlin	0.06% of observed catch with a low productivity index (0.61) 0.03% of observed catch with a low productivity index (0.65)
P2.3: ETP species	False killer whale Whale shark	0.01% of the observed catch, this species is CITES listed by the Solomon Islands. 0.17% of the observed catch, this species is CITES listed by the Solomon Islands, PNG and Palau

B. Log sets

Assessment area	Species	Justification for inclusion
P2.1: Retained bycatch	Yellowfin tuna Bigeye tuna	Over 5% of retained catch Although just under 5% of retained catch (4.46% plus proportional adjustment for the small % of unidentified tuans), is of some economic significance
P2.2: Discarded bycatch	Silky shark Blue marlin	0.12% of observed catch with a low productivity index (0.61) 0.03% of observed catch with a low productivity index (0.65)
P2.3: ETP species	None	None

A number of other minor bycatch species were also considered for detailed analysis but were excluded for the following reasons:

Black marlin (unassociated and log sets): a species of medium productivity (0.47, **Nicol et al. 2009**) black marlin represent only around 0.017% and 0.021% of unassociated and log sets respectively.

Rainbow runner (mainly log sets): although rainbow runner account for 0.68% of log set catches (unassociated catches are 0.012%), Nicol et al (2009) consider this species to having high biological productivity (score of 0.28) and [FishBase](#) (accessed 10 Aug 2010) consider it to have medium resilience with a minimum population doubling time of 1.4 – 4.4 years. On the basis of the low catches, high productivity and medium resilience it has been excluded.

Mahi mahi (log sets only): a species of very high productivity (0.02, **Nicol et al. 2009**), mahi mahi represent only around 0.002% and 0.07% of unassociated and log sets respectively.

Oceanic whitetip shark (unassociated and log sets): although a species of medium to low productivity (0.55), the catches of this species in the fisheries under assessment (0.0008% & 0.0017% of total catch volume for unassociated and log sets respectively) are so low that it has been excluded.

6.2 RETAINED NON TARGET SPECIES

As noted in Table 9, both yellowfin tuna and bigeye tuna are regarded as retained by-catch species for the purposes of the assessment. The contribution of yellowfin tuna to the retained catch is over 20% in most set types, and over 18% in all set types (Figure 5), and it clearly is regarded as a main retained species.

Bigeye tuna contributes 5% or more to the retained catch on most associated set types, but under that level (4.7%) on log sets, and < 1% in unassociated sets (Table 9). It is however included here as a retained by-catch species on the basis of its vulnerability, and the significant impact of the log set fishery on the bigeye stock spawning potential.

This subsection evaluates the status, management and information available on these two species retained by the fishery but not included in the unit of certification.

6.2.1 Stock Status

Yellowfin tuna

Yellowfin are taken by a variety of gears - purse seine (>50% of the WCPO catch by weight, with a wide size range of fish), longline (16%, mostly adults), pole-and-line (4%), plus a range of gears in the domestic fisheries in Indonesia and Philippines, taking mostly smaller fish (25-30%). The total WCPO yellowfin catch has been mostly between 380,000 and 440,000t since 2000, but

reached a record 543,000t in 2008 before falling back to 434,000t in 2009 (**Williams & Terawasi, 2010**).

Yellowfin tuna stock assessments, using the MULTIFAN-CL assessment model and associated computer software, have been carried out by SPC since 1999, with the most recent assessments in 2007 (**Langley *et al.*, 2007**) and 2009 (**Langley *et al.*, 2009**). There was no assessment this year.

The preparation of the assessments, methodology employed and reporting of the outcomes is described in section 5.2 for the principal target species. The model is a size-based, age- and spatially-structured population model, which estimates key population parameters and summarizes stock status in terms of MSY-based reference points, such as ratios of current biomass, current spawning biomass and current fishing mortality to MSY levels. The 2009 assessment uses 28 age classes, 6 spatial regions, and data by quarterly time periods for 24 fisheries for 1952 through 2008. Despite some changes to model assumptions and improvements to model structure, outcomes of the most recent assessment (2009) are generally comparable with the 2007 assessment

As for skipjack, management advice is framed with respect to indicators of fishing mortality and biomass relative to MSY levels i.e. $F_{\text{current}} / F_{\text{MSY}}$, and $B_{\text{current}} / B_{\text{MSY}}$. These currently serve as proxy or default reference points for the WCPFC, which has yet to develop formal reference points for the management of stocks under its care.

The current yellowfin assessment concludes that, for the four principal model versions used¹⁵, $F_{\text{current}} / F_{\text{MSY}}$ is estimated at 0.58 – 0.68, and both $B_{\text{current}} / B_{\text{MSY}}$ and $SB_{\text{current}} / SB_{\text{MSY}}$ are well above 1.0 (1.41-1.67, and 1.46-1.88 respectively), indicating with a high degree of certainty¹⁶ that the WCPO yellowfin stock is neither overfished or in an overfished state. B_{current} is estimated at 0.48-0.63 B_0 , B_{MSY}/B_0 as 0.37-0.38, and B_{current} as 0.57-0.59 of the average current total biomass in the absence of fishing. Applying FAM 6.2.19, an LRP (B_{lim}) of 0.2 B_0 is appropriate, with current biomass levels well above this, obviating any risk of reproductive impairment.

Model outcomes were slightly more optimistic than those for 2007, notably with respect to the MSY-based indicators, but primarily as result of steepness assumptions. Assumptions re steepness are the major source of uncertainty in the assessment.

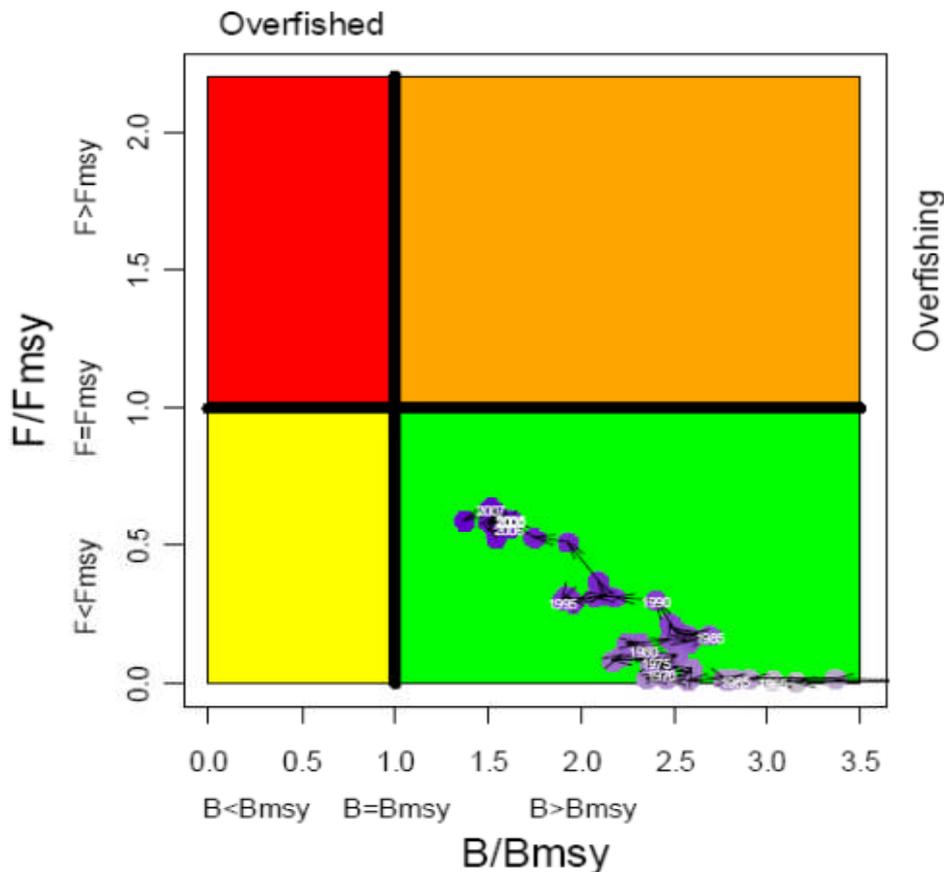
Biomass has declined and current levels of recruitment are low. Depletion has increased steadily over time especially in region 3 (equatorial WCPO west of 170°W), including much of the PNA area) where there are now 65 and 70% reductions from B_0 and SB_0 respectively. Stocks in this region 3 are regarded as fully exploited. Estimates of MSY are higher than recent catches, but recent levels of recruitment are lower than the long term average, and yield from the fishery will be lower than MSY if recruitment levels remain at that level.

The figure below summarizes the trend in stock status over time, confirming the generally optimistic view of its condition.

¹⁵ Table 9a in Hoyle *et al.*, 2010

¹⁶ Likelihood profiles in the 2009 assessment suggest that B/B_{MSY} has virtually zero probability of being below 1.2, for an assumed steepness of 0.75

Figure 6: Temporal trend in annual stock status, relative to B_{MSY} (x-axis) and F_{MSY} (y-axis) reference points, for the model period (1952–2008).



The color of the points is graduated from mauve (1952) to dark purple (2008) and the points are labeled at 5-year intervals (from Langley *et al.*, 2009)

In conclusion, it is noted that biomass is currently well above $0.2 B_0$ as an indicator for the point at which the yellowfin tuna stock would be considered to be at risk of serious recruitment overfishing or of serious or irreversible harm. It is therefore concluded that there is high degree of certainty that yellowfin tuna stocks in the WCPO are currently within biologically-based limits.

Bigeye tuna

Like yellowfin, bigeye are taken by a variety of surface gears as juveniles and by longline gear as adults. The total bigeye catch for the WCPO in 2009 was estimated at 118,657t, the lowest since 2003, mainly due to a drop in provisional catch estimates for the longline fishery (65,000t) (Williams and Terawasi, 2010). The longline fishery typically accounts for around 60-70% of the catch, the purse seine fishery 20-25%, and pole-and-line and other fisheries the remainder.

Bigeye tuna stock assessments using MULTIFAN-CL have been conducted almost annually since 1999, with recent assessments in 2008 (Langley *et al.*, 2008), 2009 (Harley *et al.*, 2009) and this year (Harley *et al.*, 2010). The assessment covers 6 spatial regions in the WCPO, with data for the period 1952-2009 grouped by quarters, for 25 defined fisheries.

There were considerable changes to the current assessment, including improved estimates of bigeye catch and effort data, especially from Indonesia and the Philippines, revised spill sample estimate for purse seine catch, new standardized CPUE time series for the longline fishery, and

changes to some structural assumptions. The assessment also included catch estimates for all fleets for the last year of the assessment (2009), i.e. the previous fishery year), for the first time. A new base model was developed, with an SRR steepness of 0.98 chosen as most plausible for the base model.

Fishing mortality for adult and juvenile bigeye tuna is estimated to have increased continuously since the beginning of industrial tuna fishing. For the base model, $F_{\text{current}} / F_{\text{MSY}}$ is considerably greater than 1 (1.41), indicating that overfishing is occurring, and that a 29% reduction in fishing mortality is required from the 2005-08 level to reduce fishing mortality to sustainable levels. If historical levels of fishing mortality are taken into account, a 31% reduction in fishing mortality from 2004 levels is required (consistent with the aim of CMM 2008-01), and only a 20% reduction from average 2001-04 levels. The results are far worse with lower values of steepness or when a higher weight is given to the size data.

Based on these results, the assessment concludes that overfishing is occurring on the bigeye tuna stock, but possibly at a lower level than previously estimated.

Reference points used in the assessments that predict the status of the stock under equilibrium conditions are $B_{F_{\text{current}}} / B_{\text{MSY}}$ and $SB_{F_{\text{current}}} / SB_{\text{MSY}}$. Current stock status compared to these reference points indicate the current total and spawning biomass are higher than the associated MSY levels ($B_{\text{current}} / B_{\text{MSY}} = 1.39$, and $SB_{\text{current}} / SB_{\text{MSY}} = 1.34$). The likelihood profile analysis indicates a 0.5% probability, which increases to 60%, if a lower value of steepness is assumed, that $SB_{\text{current}} / SB_{\text{MSY}}$ falls below 1.0. No likelihood profile is available for $B_{\text{current}} / B_{\text{MSY}}$, but it is reasonably assumed it would be similar to that for SB. Some of the more plausible alternative models are more pessimistic as are the conclusions of the structural uncertainty analysis based on the grid.

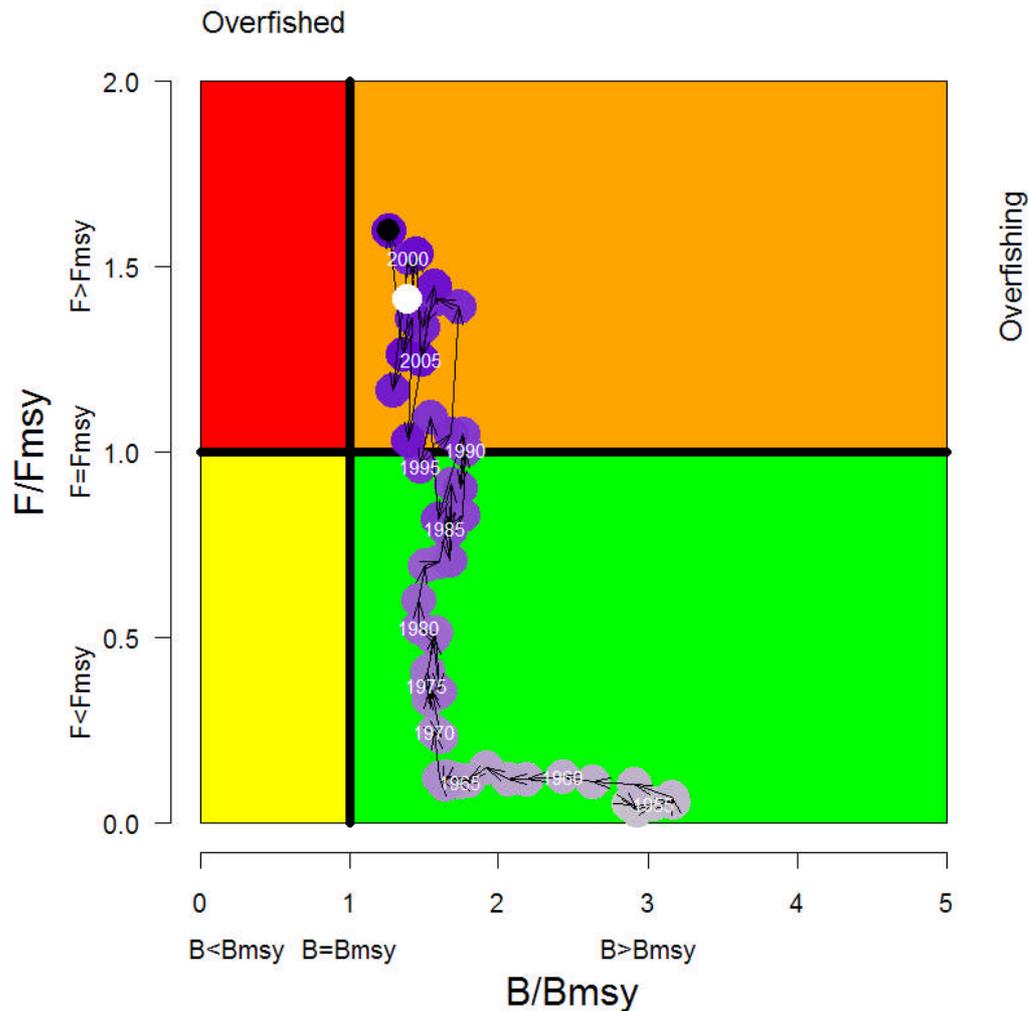
Based on these results above, and the recent trend in spawning biomass, the assessment concludes that bigeye tuna is approaching an overfished state, if it is not already slightly overfished. MSY has been reduced to less than half its levels prior to 1970 through increased harvest of juveniles. Because of that and overfishing, considerable potential yield from the bigeye tuna stock is being lost. Based on these results, the assessment concludes that MSY levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.

SC6 endorsed these outcomes, noting that the 2010 assessment was slightly more optimistic, at least with respect to $F_{\text{curr}} / F_{\text{MSY}}$ (1.25 cf. 1.53 in the 2009 assessment). SC supported the recommendation that a minimum 29% reduction in fishing mortality from the average levels of 2005-2008 be considered by WCPFC.

The figure below tracks the time series trend in stock status, moving to overfishing since the early 1990s and to possibly an overfished state in recent years.

The colour of the points is graduated from mauve (1952) to dark purple (2008) and the points are labelled at 5-year intervals. The white circle represents the average for the period 2005-08 and the black circle the 2008 values. (From **Harley *et al.*, 2010**)

Figure 7: Temporal trend in annual stock status, relative to B_{MSY} (x-axis) and F_{MSY} (y-axis) reference points, for the period 1952–2008 from run 3d



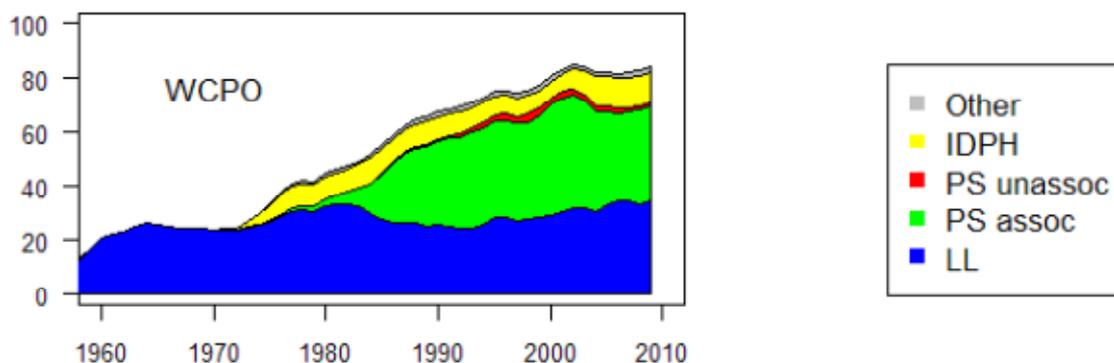
$B_{current}$ is estimated at $0.42B_0$, B_{MSY}/B_0 as 0.30, and $B_{current}$ as 0.23 of the average current total biomass in the absence of fishing. Assuming an LRP (B_{lim}) of $0.2B_0$ is appropriate, the current biomass is therefore well above $B_{lim} = 0.20B_0$ as an indicator for the point at which a bigeye tuna stock would be considered to be at risk of serious recruitment overfishing or of serious or irreversible harm, and it is therefore concluded that there is high degree of certainty¹⁷ that bigeye tuna stocks in the WCPO are **currently** within biomass-based limits.

The assessments also provide estimates of the impact of fishing attributed to various fishery groups as shown below, which is consistent with the “marginal contribution” approach in para 7.1.14 of the FAM. From this analysis, the impact of unassociated sets is estimated as reducing spawning potential by around 1%, which is not significant. The impact of purse seine associated sets (log and FAD sets) is assessed at 40-50%. It is not possible to directly partition these components in the impact, but, using catch as a proxy for impact, with 20% of the associated catch on log sets and size composition similar amongst set types, 8-10% is regarded as a good estimate of the impact of bigeye log sets on spawning potential. This is significant, and the assessors consider that this level of impact from log sets would hinder recovery and rebuilding of

¹⁷ For the base case model, the likelihood profile for $SB_{current}/SB_{MSY}$ (Figure 51) shows that there is only a 5% probability that the ratio is below 1.0.

the bigeye stock if the stock was not within biologically based limits. In addition, while the current measures aim at reducing associated sets overall through the FAD closures, they do not restrict a transfer of effort from drifting FAD to log sets which could be triggered were log sets exempted or to be promoted in any form.

Figure 8: Estimates of reduction in spawning potential due to fishing (fishery impact) by region and for the WCPO attributed to various fishery groups (base case model).



LL = all longline fisheries; PH/ID = Philippines and Indonesian domestic fisheries; PS assoc = purse seine log and FAD sets; PS unassoc = purse seine school sets; Other = pole and line fisheries and coastal Japan purse-seine (From **Harley et al., 2010**)

As noted, the assessments are subject to quite rigorous internal review within the SC, but have not yet been subject to external review, even though the assessments are internationally regarded as being of high quality (**Allen, 2010** (pp.24)). There are plans for the first external review of an assessment in 2011, with bigeye scheduled as the first species assessment for review. Details of the review process have yet to be developed.

6.2.2 Management Strategy

The main management measure applying to yellowfin and bigeye is the Commission's Conservation and Management Measure (CMM) 2008-01, which was adopted in December 2008, and replaces earlier measures in 2005 and 2006. CMM 2008-01 was described in detail in Section 5.4.1 earlier. It was developed to "mitigate the overfishing of bigeye and yellowfin tuna and to limit the growth of fishing capacity in the WCPO", to "ensure through compatible measures for the high seas and EEZs that bigeye and yellowfin stocks are maintained at levels capable of producing their MSY", in accordance with Article 5 of the Convention. The process of development of these measures from the 2nd WCPFC session in 2005 through to CMM 2008-01 in response to the need to improve the effectiveness of the 2005 measure is described in Section 7.1.1.

In addition to the management measures in CMM 2008-01, the CMM commits CCMs to explore and evaluate mitigation measures for juvenile bigeye and yellowfin taken around FADs. Examples of work in this direction discussed at SC6 include use of acoustic methods, underwater video, behavioural studies of tuna around FADs, and the need to incentives for industry to implement such measures.

6.2.3 Effectiveness of measures

CMM 2008-01

In accordance with para. 46 of CMM 2008-01, SPC carried out a technical evaluation of the measure to see if the objectives were being met during the first year of application of the measure (**Hampton & Harley, 2009**), with subsequent analyses since that time (**SPC, 2009; Hampton & Harley, 2010**). Stock projections were carried forward for a ten-year period to

2018, with two alternative assessment models used, with different assumptions regarding purse seine catch of both yellowfin and bigeye¹⁸. Levels of longline bigeye catch, purse seine effort, and effort for other fisheries were specified to reflect the CMM 2008-01 provisions, and the levels of catch and effort in 2011 were assumed to continue through 2018.

The default indicators (F/F_{MSY} and SB/SB_{MSY}) were used in the evaluation, for measuring performance in relation to fishing mortality objectives, and the objective of maintaining stocks at MSY levels respectively. A range of projections was undertaken to estimate the effect of individual measures, and various combinations of measures.

For yellowfin, currently estimated to be not subject to overfishing nor in an overfished state (see earlier), projections “suggest that levels of F in 2018 ranging from 8% below to 15% above the average 2001-2004 level could result under CMM 2008-01. Yellowfin SB in 2018 is predicted to be similar to the 2001-2004 average or decline slightly from that level, and to remain above or close to the MSY level”, depending on the assumptions applied.

These projections indicate that the measures will maintain the stock within biologically-based limits over time, in that the stock will not fall below the below the default B_{LIM} in the MSC FAM ie $B_{LIM} = 0.2B_0$ (or $0.5B_{MSY}$), assuming SB is a suitable proxy for B given that the evaluation only used SB .

For bigeye, on the other hand, the projections showed that “CMM 2008-01 is highly unlikely to meet its objectives of a 30% reduction in bigeye tuna fishing mortality from the 2001-2004 level, or maintenance of the bigeye tuna stock at a level capable of producing MSY over the long term. The measures are predicted to result in little if any reduction in bigeye tuna F/F_{MSY} from the high levels in excess of 2.0 estimated for 2007-2008, and accordingly, SB is predicted to fall to around 0.4-0.6 of SB_{MSY} . The main reasons for the lack of effectiveness of the measure are (i) the reductions in longline catch do not result in the required reduction in fishing mortality on adult bigeye tuna; (ii) the increase in purse seine effort allowed under the measure, and the increase in purse seine catchability (fishing mortality per unit effort) that has occurred since 2001-2004, is not sufficiently offset by the FAD and HSP (high seas pockets) closures to reduce purse seine fishing mortality below 2001-2004 average levels; and (iii) the exclusion of archipelagic waters, which encompasses most of the fishing activity of the Indonesian and Philippines domestic fleets and significant amounts of purse seine effort in Papua New Guinea and Solomon Islands, from the measure effectively quarantines an important source of fishing mortality on juvenile bigeye tuna”.

On the basis of the projections, the paper concluded that: “It is again demonstrated that measures need to be implemented across all fishery sectors with significant bigeye catches if meaningful reductions of fishing mortality are to be achieved.”

The figure below shows that estimates of bigeye spawning biomass under the projections for both assumptions regarding purse seine catches rapidly fall below SB_{MSY} to levels generally below 0.6 and in many cases below 0.4. On this basis, as illustrated below, there is a significant probability that the bigeye stock will not be within biologically based limits within 10 years (using $0.5SB_{MSY}$ as SB_{LIM}) and in fact it is likely that the bigeye stock may fall below this limit if the observer spill sample-corrected estimates of purse seine catch are used. This is a critical conclusion for the assessment because it means that, acknowledging the uncertainty in these estimates, the log fishery must fail the assessment because it has been determined to have a significant effect on the bigeye stock and therefore to be likely to hinder its recovery. For the fishery on unassociated schools, the low proportion of bigeye in the catch 0.8%, and the low level of contribution of the fishery to depletion of the bigeye stock (possibly <1%) indicates that

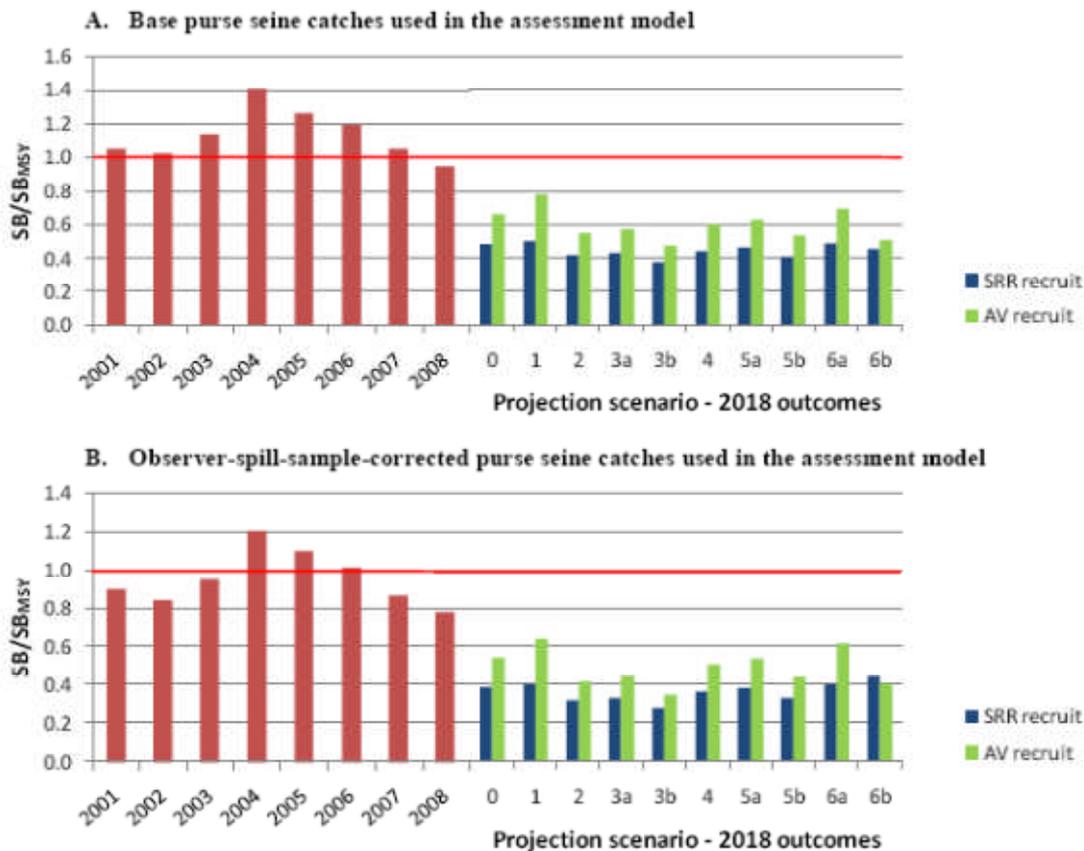
¹⁸ see following section on sources of information; estimation of species composition of the purse seine catch remains a major uncertainty in assessments, essentially relating to the accuracy of sampling methods

the current measures can be expected to ensure that the fishery does not hinder the recovery of the bigeye stock.

Figure 9: Estimates of bigeye tuna SB/SB_{MSY} 2001-2008

From assessment model runs (red bars) and the terminal values from a 10 year projection (2009-2018) under different projection scenarios for two assumptions regarding future recruitment.

The horizontal red line indicates the spawning biomass providing MSY (**Hampton & Harley, 2009**).



The evaluation will be repeated with updated 2010 assessment and incorporating the latest available data, according guidelines laid down by SC6. ¹⁹

FAD closures

Harley et al. (2010) looked at the effectiveness of the FAD closure during the first year of the measure (1st August – 30th September 2009), by a simple comparison of fishing activity during the closure and fishing activity during the same period in previous years. This preliminary analysis found that effort was the highest on record during the closure, that most effort was transferred to unassociated sets, and bigeye catches were much reduced during the period. This was felt to offer some encouragement for the likely success of the measure, but this remains to

¹⁹ In the updated analysis presented to WCPFC7 (**SPC-OFP, 2010b**), SPC-OFP estimated that the implementation of the CMM *as written*, would reduce bigeye tuna overfishing by only 14%, which would not change the conclusion failing the log fishery in this assessment.

be confirmed by more rigorous analysis and performance during the longer closures (3 months) during 2010-2011.

Supplementary information on the 2009 FAD closures (WCPFC TCC 6 2010) revealed that there was some evidence of FAD involvement and the use of lights to aggregate fish to the vessel during the 2009 FAD closure, along with a greater proportion of unassociated sets beginning in the 0400-0600 hrs time period. There was also some evidence of a higher than normal percentage of bigeye in unassociated sets during the FAD closure, perhaps as a result of the use of lights, drifting overnight with FADs and subsequent early morning sets. Some note of caution needs to be applied to this information as it bases the findings on limited data (W.Norris, pers com, September 2010).²⁰

It should also be noted that PNA pressed for (TCC4, 2008) a series of technical rules and specifications, *to ensure consistent and robust application of FAD closures and catch retention in the high seas between 20° S and 20°N through the specification of minimum standards (CMM 2009-02); and to apply high standards to the application of the FAD closure and catch retention in order to remove any possibility for the targeting of aggregated fish, or the discard of small fish.*

Box 1: Rules for FAD closures

The definition of a FAD in footnote 1 to CMM 2008-01 shall be interpreted as including: *“any object or group of objects, of any size, that has or has not been deployed, that is living or non-living, including but not limited to buoys, floats, netting, webbing, plastics, bamboo, logs and whale sharks floating on or near the surface of the water that fish may associate with”*

During the FAD closure period specified in CMM 2008-01, no purse seine vessel shall conduct any part of a set within one nautical mile of a FAD. That is, at no time may the vessel or any of its fishing gear or tenders be located within one nautical mile of a FAD while a set is being conducted.

The operator of a vessel shall not allow the vessel to be used to aggregate fish, or to move aggregated fish including using underwater lights and chumming.

A FAD and/or associated electronic equipment shall not be retrieved by a vessel during the period of a FAD closure unless:

- a. the FAD and/or associated electronic equipment are retrieved and kept on board the vessel until landed or until the end of the closure; and
- b. the vessel does not conduct any set either for a period of seven (7) days after retrieval or within a fifty (50) mile radius of the point of retrieval of any FAD.

In addition to paragraph 6, vessels shall not be used to operate in cooperation with each other in order to catch aggregated fish. No vessel shall conduct any set during the prohibition period within one nautical mile of a point where a FAD has been retrieved by another vessel within twenty four (24) hours immediately preceding the set.

Source: WCPFC, 2009-04

High Seas Pocket Closures

The high seas pocket closures are described in Section 7.1.1. ²¹

Catch retention

Catch retention and landing/transshipment of all bigeye, yellowfin and skipjack, except under specified exceptions²² was required from 1st January 2010, to create a disincentive to the capture

²⁰ Updated analysis presented to WCPFC7 (**SPC-OFP, 2010b**) based on greater coverage of observer reports, indicated less difference in the percentage of bigeye in unassociated sets during the FAD closure than the report to TCC6.

²¹ Analysis presented to WCPFC7 (**SPC-OFP, 2010b**) indicated the HSP closure in 2010 has largely been respected, but the closure has not resulted in a removal of effort from the fishery because the effort appears to have transferred to PNA waters, with the eastern high seas not subject to an unusual increase in effort in 2010.

²² CMM 2008-01, para 27 – insufficient well space on final set of a trip, fish unfit for human consumption, or when serious malfunction of equipment occurs

of small fish and encourage development of technologies to avoid the capture of small tunas, and such action to be monitored through 100% observer coverage. It is too early to say how effective the measure has been to date in achieving these objectives. As per the FAD closures, a set of technical rules and specifications are also laid out in WCPFC CMM 2009-02.

6.2.4 Information

Science

The science supporting research and assessment of the two retained by-catch species draws on a comprehensive range of data, including detailed historical and current operational catch and effort data²³, aggregate catch and effort data, port sampling, unloading and transshipment data, size composition data, a large tagging dataset²⁴, oceanographic data, data from biological research undertaken by CCMs and SPC, and observer data, with most recent coverage increasing to 100% for most of the industrial purse seine fleet. These data are supplied to SPC under agreed conditions and maintained in an accessible database maintained by SPC/OFP as data manager and science provider. Williams (2010) provides the most recent summary of scientific data available to the WCPFC, and also identifies gaps and uncertainties in the data, as well as estimates of coverage. The data currently available to the WCPFC are probably the most comprehensive available to any tuna RFMO and underpin what are generally regarded as high quality stock assessments and associated analyses.

There are two key areas where available data are incomplete and represent sources uncertainty in current assessments and analyses, especially with respect to yellowfin and bigeye.

“The breakdown of catch estimates by gear type and the lack of operational logsheet data for the Philippines (and Indonesia) domestic fisheries are amongst the most significant gaps in the provision of data to the WCPFC” (Williams, 2010). Considerable progress has been made in recent years in addressing this gap, though the Indonesia Philippines Data Collection Project supported by WCPFC through extra-budgetary funding, and most recently by the successor GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM), involving Indonesia, Philippines and Vietnam. The 2010 bigeye assessment includes improved catch estimates. Box 2 below summarises the current status (June, 2011) of the information available from these three countries.

Box 2: The status of information from Indonesia, Philippines and Vietnam.

Indonesia

Since 2010, Indonesia has initiated a nation-wide logbook data collection programme, which is backed by national legislation. The data collected on the logbooks satisfy the data collection requirements of the Tuna RFMOs (i.e. IOTC and WCPFC). Preliminary reviews of the data by WCPFC/SPC shows that there are the inevitable problems in the data provided by fishers who have not previously provided this information, so future work will be required to educate fishers in how to correctly fill in the logbook. The other aspect with respect to logbook will be to ensure the coverage is adequate and at this stage, the coverage of logbook data provision is low. The logbook will eventually cater for the provision of EFFORT data once the quality of data is adequate.

Size data are now being collected and provided to the WCPFC by Indonesia and a preliminary audit of the data by WCPFC/SPC shows that there are generally no problems. The challenges in the future will be (i) to ensure this is a permanent activity and (ii) size data collection can be expanded to other important ports in Indonesia (WCPFC Area).

Annual catch estimates by gear type are now provided to the WCPFC as a result of the annual catch estimates workshops. There is still some work to do in this area to verify the catch estimates from some gears, but at least a process to review estimates has been established.

²³ According to standards adopted at the 2nd session of the WCPFC in December 2005

²⁴ More so in the case of skipjack and yellowfin; modest amount of information available for bigeye.

One problem with the provision of data officially to WCPFC is that Indonesia (through their Dept of Foreign Affairs) is interpreting their obligation to provide only data for the EEZ, and not for archipelagic waters. However, SPC is working with the Dept of Capture Fisheries to ensure that AW data is provided to SPC for use in the assessments.

Philippines

Catch and effort data collected through logbooks in the purse seine fishery have been provided to the WCPFC. Logbook data collection is not implemented in the other (artisanal) fisheries. The recently-established observer programme (in the purse seine fishery) collects catch/effort and size data, but since these are not ROP data, they are not obliged to provide these to the WCPFC (although the data are provided to the SPC for scientific purposes only).

Size data continue to be collected and provided to the WCPFC (since 1997). These data are reviewed by WCPFC/SPC on an annual basis and are used in the assessments.

Annual catch estimates by gear type are now provided to the WCPFC as a result of the Philippines annual catch estimates workshops. There is still some work to do in this area to verify the catch estimates from some gears (i.e. the artisanal hook-and-line gear), but at least a process to review estimates has been established.

Vietnam

Vietnam has implemented a logbook system recently (2010), backed with national legislation. However, as in Indonesia, there are the inevitable problems with the data provided with a new system and future work should concentrate educating the fishers on how to correctly fill in the forms. The logbook will eventually cater for the provision of EFFORT data once the quality of data is adequate.

Size data are now being collected in the longline fishery in Vietnam (since 2010) and a preliminary audit of the data by SPC shows that the data appear to be generally acceptable; the data have yet to be provided to WCPFC.

Unofficial annual catch estimates by gear type have been produced and are likely to be provided to the WCPFC (for the first time) in the coming month. It is acknowledged that these estimates are very approximate but that future estimates will be more reliable with the recent establishment of logbook and landings data collection.

Source: Hampton et al, email submission of 20 June, 2011

The catch and size data by gear for Indonesia and Philippines are routinely incorporated into WCPO assessments of skipjack, yellowfin and bigeye tuna conducted by SPC. To date, the definition of fisheries has been restricted to ‘miscellaneous small fish’ fisheries in both countries and a ‘large fish handline’ fishery in Philippines. Recent improvements in the estimation of catch by gear including the construction of historical data will allow a more detailed fishery breakdown, including purse seine fisheries in both countries. This more detailed structure will be included in the 2011 assessments currently being conducted.

Vietnamese fisheries data have not yet been included in any assessments conducted by SPC. This will be done when the data are judged to be of sufficient quality and historical estimates can be derived.

The second area is the estimation of species and size composition of the purse seine catch, given that bigeye, yellowfin (and skipjack) are typically not separated in the catch and in the case of most fleets, where routine sampling go landed catch is not undertaken, need to be estimated. Historically, this has been estimated for several fleets based on sampling landed catch and applied to other fleets by set type and area and season fished. Increasing observer coverage provides an opportunity to better estimate size and species composition across the fleets.

The collection of paired “spill” and “grab” samples by observers is an important WCPFC project which is fundamental for the estimation of size selectivity bias in grab samples of the purse-seine species and size composition. This project has progressed in the past year with the addition of data collected and processed from thirteen trips. A description of the recently-provided data and an update on the estimation of selectivity bias can be found in **Lawson (2010)**.

Industry

Industry and fishers supply most fishery information as a condition of access or fishing within the WCPO. However there are numerous examples of information voluntarily supplied by

industry to assist research and management. Some fish processors and canners either allow access to plants to enable species composition to be reliably estimated e.g. Thailand, or provide information on cannery receipts, by species (where possible) and source. Industry cooperation in onboard observer activity is vital, as is cooperation in the tagging experiments (returning tags with complete and accurate information), which remains critical for stock assessments. Landings and transshipments are monitored through industry cooperation and/or information supplied, and biological sampling facilitated by provision of samples or access to the catch.

6.3 BYCATCH – DISCARDED SPECIES

The observed discards from unassociated and log-associated set types are provided in Table 12 and Table 13 respectively (overleaf) and summarised in the table below.

Table 10: Summary of observed discards from the two set types

<i>A. Discard rates of individual species / groups</i>				<i>B. Discards % of total catch</i>		
Discard rate		Unass'	Log sets		Unass'	Log
Key tuna species	Skipjack tuna	1.9%	4.6%	All species	2.23%	4.85%
	Yellowfin tuna	1.6%	2.4%	Tuna spp.	1.87%	3.81%
	Bigeye tuna	1.4%	2.8%	Non-tuna spp.	0.37%	1.04%
	Other tunas	14.3%	27.4%			
Other non-tunas		83.9%	71.0%			
Key non-tuna species (see	Silky shark	80.4%	93.4%			
	Oceanic white-tip	94.1%	99.6%			
	Blue marlin	62.2%	41.6%			
	Rainbow runner	70.6%	71.8%			

Source: **SPC catch & discard data sets (Williams, I22)**

As can be seen from the table above, the discard rates for tunas²⁵ tend to be low, mostly because “fish too small for canning”, with “vessel fully loaded” and “gear damage” listed as other reasons for discard (in order of frequency of occurrence) (SPC, 2009). The tuna discard rates are higher for log sets, presumably because there is a greater proportion of undersize fish (vessel fully loaded and gear damage being set type independent). The discard of other tuna species (e.g. frigate mackerel, bullet tuna) tends to be higher, with 14.3% (unassociated) and 27.4% (log sets) being discarded. As a whole, around 84% (unassociated) and 71% (log) of non-tuna species are discarded. The volumes concerned are very low, with retained fish probably being used for consumption by the crew. As noted in Section 6.2.2, tuna discards are generally banned from January 2010.

The status, interaction and management, and information on the discarding of key non-tuna species is discussed below. It should be stressed that the discard rates of the two species examined (silky shark and blue marlin) are all **substantially below** the 5% threshold guidance given in the MSC FAM.

²⁵ Note since 1 January 2010 the discard of YFT, BET & SKJ is prohibited i.e. full retention (CMM 2008-01)

6.3.1 Status

Silky shark (*Carcharinus falciformis*)

Table 11: Catch and discard rates of Silky shark

Proportion of catch	Unassoc. 0.06%	Log 0.12%	Proportion discarded	Unassoc. 80.4%	Log 93.4%
Post-discard survival	Unassoc. <30%	Log <30%	Raised 2008 PNA catch	Unassoc. 112 t	Log 45 t

Source: SPC

Very little is known about the population sizes or trends in abundance of silky sharks (**Bonfil, 2008**). A number of studies, however, have suggested overfishing and declining catch rates for the silky shark, including in the Eastern Pacific. Although it is included in Annex I of the UN Law of the Sea (UNCLOS), there is no international protection currently in place for silky sharks. Prohibitions on finning in most high-seas waters, if enforced, could help stem mortality of this Near Threatened species. Based on its wide-ranging, oceanic and transboundary movements, the CMS Scientific Council concluded that it qualifies for listing under the Convention on Migratory Species (**CMS; Camhi et al, 2007**). Whilst the silky shark is not currently CITES or CMS listed, IUCN consider it to be near threatened but vulnerable in the eastern-central and south-east Pacific. IATTC are currently undertaking preliminary stock assessment in the Eastern Pacific.

Catch rate data (**Molony, 2005**) suggest that there are considerable fluctuations in local abundances. Median sizes of silky sharks captured by the purse-seine fisheries of the WCPO have been relatively stable since at least the late 1990s, at 140 cm FL and less than 100 cm FL, respectively. However, declines in median size of silky sharks have been observed in sub-equatorial areas of the western WCPO (Areas 7 and 8) and Area 14 (10–20°N, east of 170°E). This suggests that some degree of local depletion may be occurring. Preliminary stock assessment work is underway by IATTC for the Eastern Pacific Ocean (EPO).

Synopsis: The silky shark represents the main shark bycatch from these two fisheries, especially with unassociated sets. However catch rates are very low (0.06% and 0.12% for unassociated and log sets respectively). At least 80% is discarded²⁶, and observer reports indicate that there is some level of post-discard survival (c. 30%). It appears that, based upon length-frequency information that the majority of the population is relatively stable, although there may be areas of local depletion. As such it appears highly likely that this species is within biologically-based limits, although there is an evident need to reduce fishing pressure on these potentially vulnerable species, and a number of measures have been adopted at regional level to do so (see Section 6.3.2).

²⁶ Tada (FMR), stated that crews retained fins for human consumption (I.17)

Table 12: Unassociated catch - observed catch, discards and proportions of total catch (TC) & discarded catch (DC) in tonnes

Species	2005				2006				2007				2008				Average 2005 - 2008			
	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC
Skipjack	31,805	968	2.05%	3%	27,222	369	0.86%	1.4%	42,526	1,002	1.47%	2.4%	38,140	264	0.35%	0.7%	34,923	651	1.11%	1.9%
Yellowfin	14,316	250	0.53%	2%	12,126	295	0.69%	2.4%	21,416	489	0.72%	2.3%	30,579	192	0.26%	0.6%	19,609	307	0.53%	1.6%
Tuna (unidentified)	146	6	0.01%	4%	3,053	458	1.06%	15.0%	3,835	9	0.01%	0.2%	5,308	10	0.01%	0.2%	3,086	121	0.21%	3.9%
Whale shark	168	168	0.36%	100%	62	62	0.14%	100.0%	67	67	0.10%	100.0%	107	107	0.14%	100.0%	101	101	0.17%	100.0%
Silky shark	47	39	0.08%	83%	18	17	0.04%	96.6%	58	46	0.07%	79.6%	22	14	0.02%	62.5%	36	29	0.05%	80.4%
Blue marlin	18	11	0.02%	61%	22	13	0.03%	59.6%	24	15	0.02%	65.1%	18	12	0.02%	63.4%	20	13	0.02%	62.2%
Saury (sanma)	52	50	0.11%	97%	-	-	-	-	-	-	-	-	-	-	-	-	13	13	0.02%	96.5%
Manta rays (unidentified)	10	10	0.02%	98%	10	10	0.02%	98.8%	7	6	0.01%	85.3%	5	5	0.01%	94.9%	8	8	0.01%	95.0%
Mackerel scad / saba	1	1	0.00%	91%	27	27	0.06%	99.4%	1	1	0.00%	89.6%	0	0	0.00%	87.5%	7	7	0.01%	98.8%
Black marlin	10	8	0.02%	80%	10	6	0.01%	57.1%	12	10	0.01%	80.3%	8	4	0.01%	47.1%	10	7	0.01%	67.8%
Bigeye	635	10	0.02%	2%	484	8	0.02%	1.6%	315	4	0.01%	1.2%	496	5	0.01%	1.0%	482	7	0.01%	1.4%
False killer whale	-	-	-	-	2	2	0.00%	100.0%	6	6	0.01%	100.0%	15	15	0.02%	100.0%	6	6	0.01%	100.0%
Unspecified	6	6	0.01%	96%	3	3	0.01%	96.1%	1	1	0.00%	95.1%	12	12	0.02%	99.7%	6	5	0.01%	98.0%
Rainbow runner	4	2	0.00%	42%	9	8	0.02%	83.1%	12	10	0.01%	81.9%	3	1	0.00%	19.8%	7	5	0.01%	70.6%
All other species	36	16	0.03%	45%	38	24	0.06%	61.8%	84	38	0.06%	45.9%	32	27	0.04%	84.0%	48	26	0.05%	55.4%
Grand Total	47,254	1,545	3.27%		43,086	1,301	3.02%		68,363	1,704	2.49%		74,747	667	0.9%		58,362	1,304	2.23%	

Table 13: Log associated catch - observed catch, discards and proportions of total catch (TC) & discarded catch (DC)

Species	2005				2006				2007				2008				Average 2005 - 2008			
	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC	Catch	Discard	% TC	% DC
Skipjack	17,539	682	1.93%	3.9%	36,534	1,938	3.71%	5.3%	14,103	626	2.88%	4.4%	5,170	120	1.19%	2.3%	18,336	842	2.82%	4.6%
Yellowfin	15,076	360	1.02%	2.4%	12,247	387	0.74%	3.2%	6,432	73	0.33%	1.1%	4,558	90	0.89%	2.0%	9,578	227	0.76%	2.4%
Rainbow Runner	284	211	0.60%	74.5%	289	200	0.38%	69.1%	192	150	0.69%	77.9%	41	18	0.18%	43.9%	202	145	0.49%	71.8%
Mackerel Scad / Saba	88	68	0.19%	77.5%	67	55	0.10%	81.3%	55	45	0.21%	82.2%	7	3	0.03%	47.6%	54	43	0.14%	79.0%
Bigeye	1,971	76	0.22%	3.9%	2,727	61	0.12%	2.2%	664	14	0.07%	2.2%	202	4	0.03%	1.7%	1,391	39	0.13%	2.8%
Silky Shark	48	47	0.13%	96.6%	55	53	0.10%	96.9%	32	28	0.13%	88.7%	9	6	0.06%	70.3%	36	34	0.11%	93.4%
Oceanic Triggerfish (Unidentified)	39	33	0.09%	85.9%	43	35	0.07%	80.1%	27	23	0.11%	85.7%	3	1	0.01%	55.8%	28	23	0.08%	82.9%
Tuna (Unidentified)	9	8	0.02%	89.2%	60	60	0.12%	100.0%	150	8	0.04%	5.4%	50	-	0.00%	-	67	19	0.06%	28.3%
Mahi Mahi / Dolphin / Dorado	18	12	0.03%	69.3%	40	30	0.06%	73.8%	19	16	0.07%	82.8%	2	1	0.01%	44.2%	20	15	0.05%	74.1%
Ocean Triggerfish (Spotted)	13	11	0.03%	84.3%	13	11	0.02%	85.3%	5	4	0.02%	78.5%	2	1	0.01%	68.8%	8	7	0.02%	83.0%
Black Triggerfish	14	12	0.04%	86.6%	14	11	0.02%	78.3%	4	2	0.01%	57.0%	2	1	0.01%	61.6%	8	7	0.02%	78.7%
Frigate Tuna	41	12	0.03%	29.2%	7	4	0.01%	53.4%	32	4	0.02%	12.5%	8	4	0.04%	52.6%	22	6	0.02%	27.1%
Manta Rays (Unidentified)	12	11	0.03%	94.3%	5	5	0.01%	92.0%	2	2	0.01%	84.9%	1	1	0.01%	100.0%	5	5	0.02%	93.0%
Blue Marlin	10	3	0.01%	28.8%	20	9	0.02%	44.8%	6	4	0.02%	62.0%	2	0	0.00%	11.2%	10	4	0.01%	41.6%
Common Dolphin	16	16	0.04%	100.0%	12	12	0.02%	100.0%	-	-	0.00%	0.0%	-	-	0.00%	0.0%	7	7	0.02%	100.0%
All other species	61	30	0.08%	49.0%	98	36	0.07%	36.8%	44	17	0.08%	39.2%	15	5	0.05%	31.4%	55	22	0.07%	40.3%
Grand Total	35,252	1,603	4.55%		52,235	2,907	5.57%		21,766	1,016	4.67%		10,072	256	2.54%		29,831	1,446	4.85%	

Source: SPC catch & discard data set (Williams, I22)

Blue marlin (*Makaira mazara*)

Table 14: Catch and discard rates of Blue marlin

Proportion of catch	Unassoc. 0.03%	Log 0.03%	Proportion discarded	Unassoc. 62.2%	Log 41.6%
Post-discard survival	Unassoc. n/a	Log n/a	Raised 2008 PNA catch	Unassoc. 93t	Log 9t

Blue marlin are a large surface species of tropical waters, reaching up to 500 cm in total length and 906 kg although most blue marlin encountered in the Pacific Ocean are much smaller. It is assumed that the blue marlin form a single stock in the Pacific Ocean. Blue marlin are serial spawners and very fecund. Spawning is believed to occur year-round in equatorial waters (10°S–10°N) and during summer periods in the southern (10°S–30°S) and northern (20°N–30°N) hemispheres.

Due to the limited data on biology, ecology and catches of blue marlin in the Pacific Ocean, many early stock assessments produced conflicting reports, partially due to uncertainty in some parameters of the various models (e.g. size at age, catchability). Conclusions on the status of Pacific blue marlin stocks ranged from the stock being overfished to the stock being at maximum sustainable yield (IATTC 2004). Kleiber *et al* (2003), using MULTIFAN-CL, concluded that the most pessimistic status of Pacific blue marlin is that the stock is close to being fully exploited. An ISC stock assessment for blue marlin is scheduled for 2012 (ISC, 2009).

Synopsis: Catch rates of blue marlin are very low (c. 0.03% of total catch volume for both set types), with total annual catches likely to be less than 100t for unassociated sets and 10t for log sets. Discard levels in the unassociated catches are high (c. 60%); post-discard survival is unknown, but likely to be low. Although the stock is likely to be fully exploited, it is likely to be within biological limits and these fisheries contribute a very small part of overall fishing mortality.

6.3.2 Management

The discarded bycatch from both these fisheries is very low in relative terms, the overall rates being 2.23% of unassociated sets and 4.85% of logs sets, with the majority of these discards being tuna species. The observed discards for non-tuna are 0.37% and 1.04% of total catch for unassociated and log sets respectively. However given the large size of the fishery, the management of bycatch remains important.

WCPFC-2 (Resolution of non-target bycatch species) states that CCMs' should "encourage their vessels operating in fisheries managed under the WCPFC Convention to avoid to the extent practicable, the capture of all non-target fish species that are not retained" and that "any such non-target fish species that are not to be retained, shall, to the extent practicable, be promptly released to the water unharmed".

The following assessment is conducted in terms of (i) shark species and (ii) non-shark species

Shark species

Due to the inherent vulnerability of sharks to over-fishing and their important role at the top of the marine ecosystem, the conservation and management of sharks has become an increasingly important priority to the Commission.

The WCPFC first adopted a Conservation and Management Measure (CMM) specific to sharks in 2006 (CMM 2006-05). This CMM was subsequently amended in 2008 (CMM 2008-06), 2009

(**CMM 2009-04**) and most recently in 2010 (**CMM 2010-07**). This current version now requires that Commission Members, Cooperating non-Members, and participating Territories (CCMs) shall adopt the following action for key shark species²⁷:

- Implement the FAO International Plan of Action for the Conservation and Management of Sharks (non-binding).
- define key shark species / shark catch & discard reporting requirements for WCPFC CCMs (non-binding);
- CCMs should support research and development of strategies for the avoidance of unwanted shark captures (e.g. chemical, magnetic and rare earth metal shark deterrents) (non-binding).
- CCMs need to take measures necessary to require that their fishers fully utilize any retained catches of sharks. This includes restrictions on the fin / shark ratio as well as other measures to reduce the incidence of finning (binding)
- CCMs shall take measures necessary to prohibit their fishing vessels from retaining on board, trans-shipping, landing, or trading any fins harvested in contravention of this CMM (binding).
- CCMs are bound to encourage the release of live sharks (binding).

As discussed further below, proposals for a shark research plan in the WCFPO will be tabled at the August 2010 WCPFC SC meeting. If implemented, this may lead to further, more targeted actions focused on key sharks species considered vulnerable to fishing in this ocean area.

The PNA has also raised the issue of finning through WP9 – Application of Management Arrangements for Sharks, submitted to the PNA 29th Special Meeting in February 2010 (**PNAa, 2010**). At this meeting it was agreed to discuss the issue of shark finning at their Annual Meeting. It was suggested in WP9 that a prohibition on shark finning should be considered in a package of management arrangements for a fourth implementing arrangement. This is considered the appropriate place for these arrangements as they will be applied consistently across the waters of all PNA members, which will result in all DWFNs being subject to the same arrangements.

The silky shark is recognised as a ‘medium risk’ species in the **RMI EAFM** report (RMI, 2010). If ranked as a ‘high risk species, it would trigger a ‘Full Performance Report’.

Non-shark species

The key non-shark species being discarded by the fisheries under assessment is the blue marlin (0.03% of total catch for both fisheries). At present this species is not considered to be outside of biologically-based limits and thus, considering the low levels of bycatch from these two fisheries, no bycatch strategy is currently considered necessary.

However it is noted that blue marlin is a high risk species in terms of its susceptibility to fishing (**Kirby & Hobday, 2007**) and thus it is recommended that the results of the proposed ISC stock assessment for blue marlin in 2012 are reviewed and the species kept under surveillance.

²⁷ The key shark species are blue shark, silky shark, oceanic whitetip shark, mako sharks, and thresher sharks, porbeagle shark (south of 20° S, until biological data shows this or another geographic limit to be appropriate) and hammerhead sharks (winghead, scalloped, great, and smooth).

6.3.3 Information

Shark species

Science: Current knowledge on sharks in the WCPO region was recently surveyed in the development of the Pacific Islands Regional Plan of Action (RPOA) for Sharks (**Lack & Meere 2009**). Some steps have already been taken toward assessment of shark species through a multi-year project on ecological risk assessment (ERA) conducted by SPC in collaboration with the Forum Fisheries Agency (FFA), CCMs and non-governmental organizations (NGOs), and presented to the SC in 2006 (**Kirby & Molony 2006**).

In preparing to provide preliminary advice on the stock status of key shark species in 2010 as required by CMM 2008-06 (and subsequently CMM 2010-07), in 2010 the SC considered the feasibility of quantitative stock assessments for sharks given the currently available data (**Manning et al. 2009**). It was recommended that preliminary assessments should proceed, on the understanding that this exercise would identify gaps in essential data that would need to be filled under a shark research plan. In December 2009, the Commission endorsed the recommendations by the SC regarding sharks but also requested SC6 consider whether several other sharks should be added to the list of key shark species (**WCPFC, 2010**). In 2010 the WCPFC SC drafted a research plan for the assessment of the status of these stocks (**Clarke & Harley, 2010**), which was presented to the SC's 6th Regular Session in mid-August 2010. The three-phase plan was accepted and forwarded to the Commission's Regular Session for approval.

Industry: Species-specific shark catch records are historically sparse in the purse seine logsheet data held by SPC OFP (**Clarke & Harley, 2010**). In the period from 2000-2006, just over 19,000 sharks were recorded but only 6% of these were recorded in a species-specific category (blue, silky, oceanic whitetip, 'mako', or 'thresher', although these sharks may also have been reported in a non species-specific category). Of those identified, 88% were silky sharks. The Table 13 below shows the history of species-specific shark reporting in the purse seine logsheet data held by SPC OFP. These data illustrate species-specific reporting of the silky shark and oceanic whitetip shark has largely only been in place since 2009.

It should be noted that under the rules for Scientific Data to be provided to the Commission there are requirements for CCMs to provide data on catch and effort of key shark species, amended in 2010 to include porbeagles and the four hammerhead species. The quantity and quality of shark data submitted to the Commission appear to be increasing over the past few years, but it will take time to build an adequate database for shark species assessments.

Table 15: Reporting of species-specific shark catches by purse seine logsheet data

Country	Silky	Oceanic Whitetip
China	No	No
FSM	Yes (2010)	Yes (1996)
Japan	Yes (2009)	No
Korea	Yes (2009)	Yes (2009)
Marshall Is.	Yes (2009)	No
New Zealand	Yes (2009)	Yes (2008)
Papua New Guinea	Yes (2002)	Yes (2004)
Philippines	Yes (1997)	No
Solomon Is.	No	No
Chinese Taipei	Yes (2004)	Yes (2007)
United States	Yes (2004)	Yes (2006)
Vanuatu	Yes (2004)	No
Total number of sharks recorded	2,990	200

Source: **Shelley & Harley, 2010**

Information on the current level of shark finning is low. CMM 2010-07 requires that CCMs shall advise the Commission on their implementation of the IPOA Sharks, including results of their assessment of the need for a National Plan of Action and/or the status of their National Plans of Action for the Conservation and Management of Sharks. The progress of CCMs in implementing CMM 2010-07 should be reported annually in Part 2 of their annual reports, but it is understood that very little has been reported to date. CMM 2010-07 also requires that each CCM include both catches and discards of silky shark and oceanic whitetip²⁸ to species level in their annual reports. This has been a focus in recent observer training but misidentification is still likely to be occurring (Shelley Clarke, I22).

Non-shark species

Both quantitative and considerable qualitative information is available on the catches of non-target species, although there may be the occasional mis-identification between marlin species. As discussed earlier, observer coverage has been high (at least 20% of the PNG EEZ catches).

Stock assessments, as well as CPUE, length frequency and other data on blue marlin catches suggest that it is likely that this species is well within biological limits. This species was included in a risk assessment conducted by **Kirby & Hobday, 2007**.

Given the low catches of blue marlin in both the fisheries under assessment, it is considered that current information provision is sufficient to support strategies to manage their catch. However, as stated above, given the susceptibility of blue marlin to fishing (**Kirby & Hobday, 2007**), it is recommended that the results of the proposed ISC stock assessment for blue marlin in 2012 is reviewed during surveillance.

The increase in observer coverage should ensure that the risk assessment can be updated and any conservation strategies formulated if considered necessary.

6.4 ETP SPECIES

ETP (endangered, threatened or protected) species are those recognised by national legislation and / or binding international agreements. In this assessment we have considered those species classified as being extirpated, endangered, threatened, or a special concern.

6.4.1 Status

Protected species present

This assessment has focused on those species which may be regularly affected by fishing activities (i.e. not including occasional interactions) ETP species that represent more than 0.01% of the observed catch. Three species (false killer whale, sei whale and common dolphin) fall into this category, of which only one, the false killer whale, is included as CITES Appendix II species in one or more of the PNA countries (see Table 13) and is examined further below. In addition, the whale shark is CITES listed and accounts for about 0.17% of the observed catch by weight and is included in this ETP assessment.

²⁸ As well as blue shark, mako sharks and thresher sharks

Table 16: CITES listed species which may be regularly affected by the fishery

Species	Observed proportion of catch (05-08)		CITES listed?		
	<i>Un-ass</i>	<i>Log</i>	<i>PNG</i>	<i>Solomon Islands</i>	<i>Palau</i>
Whale shark (<i>Rhincodon typus</i>)	0.17	<0.01	✓	✓	✓
False killer whale (<i>Pseudorca crassidens</i>)	0.01	<0.01	✗	✓	✗
Sei whale (<i>Balaenoptera borealis</i>)	0.01	-	✗	✗	✗
Common dolphin (<i>Delphinus delphus</i>)	<0.01	0.02	✗	✗	✗

False killer whale (*Pseudorca crassidens*)

Table 17: Catch and discard rates of False killer whales

Proportion of catch	Unassoc.	Log	Proportion discarded	Unassoc.	Log
	0.01%	<0.01%		100%	100%
Post-discard survival	Unassoc.	Log	Raised 2008 PNA catch	Unassoc.	Log
	92%	n/a		79 t	-

False killer whales (*Pseudorca crassidens*) are found in tropical to warm temperate zones, generally in relatively deep, offshore waters of all three major oceans. They do not generally range into latitudes higher than 50° in either hemisphere. Global trend or abundance data for this species are unavailable (IUCN Red List website, accessed 04 August 2010). Threats that could cause widespread declines include high levels of anthropogenic sound and bycatch. The relative rarity of this species implied from the existing records makes it potentially vulnerable to low-level threats. The combination of possible declines driven by vulnerability to high-level anthropogenic sound sources and bycatch is believed sufficient that a 30% global reduction over three generations cannot be ruled out. Although false killer whales eat primarily fish and cephalopods, they also have been known to attack small cetaceans, humpback whales, and sperm whales. They eat some large fish, such as mahi-mahi, tunas (Alonso *et al* 1999) and sailfish. In Hawaiian waters observational studies suggest that large game fish (mahi-mahi, tunas, and billfish) may form the majority of their diet (Baird *et al* 2008).

Synopsis: This CITES listed species associates with schools of tuna and other large pelagic species that form its prey. It is not caught with log associated sets and like the whale shark above, may represent the focus of mis-reported animal sets within the observer-recorded unassociated purse seine fishery. However the incidence is very low and with over 90% recorded survival from 100% discarding, the actual mortality caused to this species by the unassociated unit of certification is very low, possibly limited to 2-3 animals annually. As a result, it is not considered that either fishery causes unacceptable impacts to this species.

Whale sharks (*Rhincodon typus*)

Table 18: Catch and discard rates of Whale sharks

Proportion of catch	Unassoc.	Log	Proportion discarded	Unassoc.	Log
	0.17%	<0.01%		100%	100%
Post-discard survival	Unassoc.	Log	Raised 2008 PNA catch	Unassoc.	Log
	55%	67%		546 t	-

The whale shark (*Rhincodon typus*) is a cosmopolitan tropical and warm temperate species and is the world's largest living chondrichthyan. Its life history is poorly understood, but it is known to

be highly fecund and to migrate extremely large distances. Populations appear to have been depleted by harpoon fisheries in Southeast Asia and perhaps incidental capture in other fisheries. The Fishbase (www.fishbase.org) default life history tool for this species is set at a maximum length of 20 m. This yields an estimated age at maturity of nine years at 560 cm total length, a generation time of 21 years and longevity of 59 years. However these figures are recognised to be likely under-estimates (IUCN Red List website, accessed 04 August 2010).

The whale shark is CITES listed in PNG, the Solomon Islands and Palau. Whilst highly fecund, it has a very low productivity (1.00, **Nicol et al., 2009**) and is extremely vulnerable to fishing pressure. Observer records received from SPC indicate relatively high bycatches of this species in unassociated sets. According to observer data around 0.17% of unassociated sets included the capture of a whale shark, whilst log sets have a negligible whale shark catch. According to **Nicol et al., (2009)** on average around 22t of whale sharks are caught by unassociated sets per year in PNG waters (none were recorded for log sets). Almost all whale sharks are released - they are relatively slow-moving animals and rarely escape unassisted before the net is closed and typically require crew intervention to be released. The mortality rate of interactions is estimated (based on SPC observer data) at 12%. The fate of released animals is not certain, although observer records suggest around 88% survival. The common practice of hauling animals out of the net by their tail is probably responsible for most of the dead or moribund releases. A recent paper (SPF-OFP, 2010) estimates that there was a total whale shark mortality in the purse seine fishery in 2009 of approximately 60 animals, translating into about 36 animals in the unassociated sets, none in the log sets and 24 in other set types.

From discussions with SPC²⁹ it became evident that whale sharks observed to be captured in unassociated sets are usually associated with the tuna school and are thus technically ‘whale shark’ sets, not unassociated sets. It is normal practise for SPC observers to note the set type upon initial contact (when the whale shark might not be visible), so if it subsequently becomes apparent that this is in fact a ‘whale shark’ set, it is still recorded as ‘unassociated’.

Synopsis: whale shark stocks are undoubtedly highly vulnerable to fishing pressure and their deliberate capture unacceptable. Whale sharks are not deliberately targeted by this fishery and are only caught due to their natural association with tuna. Efforts are made to remove whale sharks from the nets but there is inevitably a degree of mortality associated with the fishing and removal process. There are no national or international limits established for whale shark mortality levels, but it is unlikely that the unassociated fishery will impact the overall whale shark populations in the Pacific Ocean. However it is accepted by PNA that any whale shark removal is unwelcome and efforts should be made to reduce this to as low as practically possible (see Management Strategies section overleaf).

Other ETP species encountered in observed catches

ETP species that are present in observed catches but at very low levels (e.g. <0.01% of total catch weight) include various turtle, whale and cetacean species.

Turtles: The observed catches of marine turtles by these fleets are very low (<0.001% of total catch volume). In most cases, turtles are encountered alive in the net and are subsequently scooped up and released over the side. Turtle mortalities in the purse seine fishery, when they occur, are due to drowning as a result of entanglement in the net or, in rare instances, to being crushed during the process of loading the net on-board. However the current level of coverage provided by observer data, while spatially representative and much higher than for longline, and is not sufficient to provide statistically robust estimates of total marine turtle encounters in

²⁹ It is likely that in these cases the school appeared unassociated (and the observer form marked as such) at the beginning of the set but it only became apparent there was a whale shark involved later in the set (Sharpley I.21).

WCPO purse seine fisheries (see Lawson 2006). This situation is expected to change as the purse seine fleet moves towards 100% coverage. Given the low incidence of capture and low mortality of marine turtles in these fisheries they are not considered further.

Marine mammals: the observed catches of dolphins and other marine mammals in these fisheries are very low e.g. around 0.0009% for six different dolphin species). Compared to the EPO, the interactions between mammals and the purse-seine fishery of the WCPFC were very low (**Molony, 2005**). The discard rate is very high (over 99%) and post-release survival likely to be high.

ETP species interactions with the fishery

False killer whales: unassociated sets have a low (0.0097% of total observed catch volume) bycatch of this species (log sets have a negligible catch) which suggests there may be some degree of association between this species and tuna. It was also noted previously that this species predated on tuna and other large pelagic species. All false killer whales are released with over 90% being observed as alive on release. There is a possibility of some mis-identification with the true killer whale, *Orcinus orca* (**Sharples, I22**).

6.4.2 Management strategies

There are a number of specific management actions taken by the CCMs to protect iconic and vulnerable species, which are briefly described below.

As mentioned above the **false killer whale** is a CITES Appendix II species in the Solomon Islands, thus restricting (but not stopping) trade of this species³⁰ in this country. At present, given the low interaction of these fisheries with false killer whales, there are no specific management measures in place to protect these species.

Guidance to PICs on shark conservation as part of the Regional Plan of Action (RPOA) for sharks (**Lack & Meere, 2009**) suggests that a prohibition of the use of purse seine sets on schools associated with **whale sharks** would provide a “a high likelihood, in aggregate, of delivering improved conservation outcomes for sharks”³¹. Furthermore the PNA has recently agreed (to be introduced as an amendment to 4th Implementing Agreement, effective from 1 January 2011) a ban on the setting on whale sharks and is in the process of setting the rule parameters to control this (**PNA, 2010b**). The successful implementation of these measures forms the basis for **Condition 3** (see appendices).

6.4.3 Information

Both quantitative and considerable qualitative information is available on the catches of these ETP species, although there may be the occasional mis-identification between false killer whale and killer whale, *Orcinus orca*. As discussed earlier, observer coverage has been high (at least 20% of the PNG EEZ catches which account for around 2/3 of the total catches and from the beginning of 2010, full coverage of all purse seine fishing).

P. crassidens is classified as "Data Deficient" by the IUCN (**Taylor et al 2008**).

³⁰ Appendix H, about 32,500 species, are species that are not necessarily threatened with extinction, but may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival. In addition, International trade in specimens of Appendix H species may be authorized by the granting of an export permit or re-export certificate.

³¹ Other elements of the RPOA measures are covered by CMM 2010-04

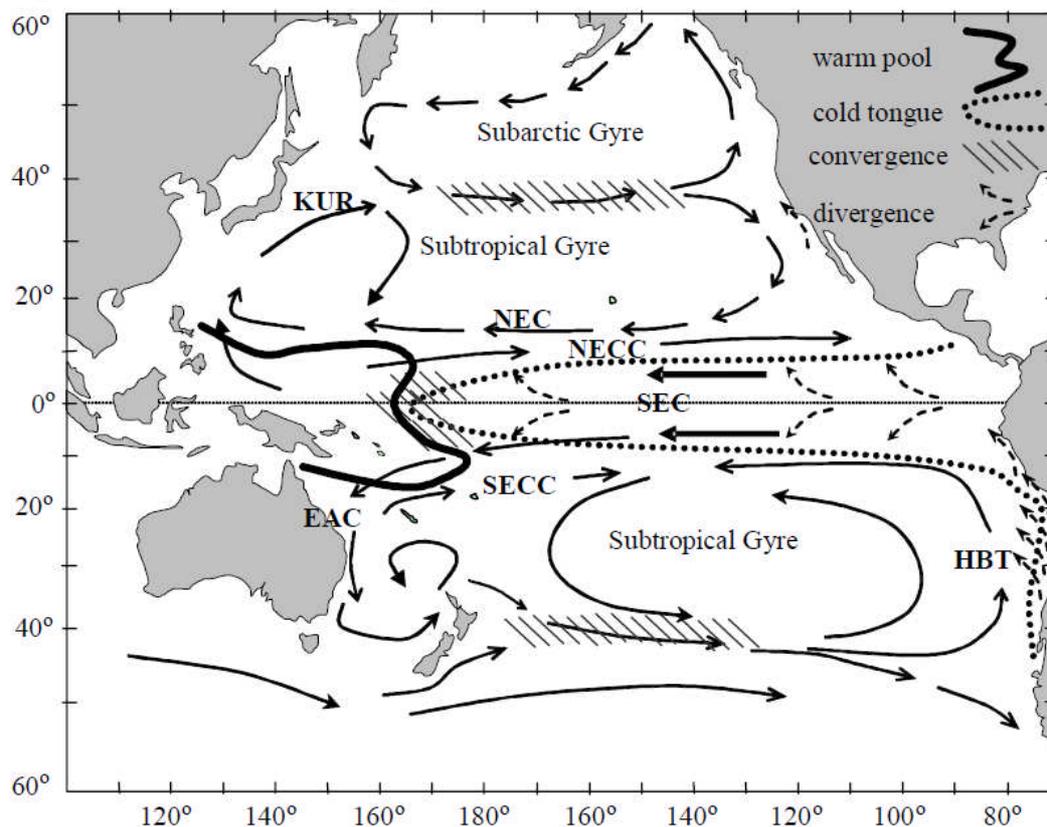
6.5 HABITATS

These purse seine fisheries are undertaken in deep oceanic waters and do not physically impact the seafloor during their operation. Therefore the focus of this part of this assessment is mainly upon the possible impact of fishing the communities associated with floating logs (log sets only).

6.5.1 Status

Nature and distribution of habitats, particularly critical habitats: Longhurst's (1998) biogeochemical classification of the World's oceans and seas defines the Western tropical Pacific Ocean as a 'warm pool' (WP). This region is characterized by a primary production regulated by the input of macronutrients (Le Borgne *et al* 2002) which has boundaries in continuous motion that can be approximated by the sea surface 29°C isotherm (McPhaden and Picaut, 1990; Lehodey *et al* 1997). The marine environment in this region is strongly influenced by the major equatorial current systems, particularly the westward-flowing South Equatorial Current (SECN) and the eastward-flowing equatorial undercurrent. The equatorial upwelling, a result of the interaction of the equatorial current and easterly trade winds, brings to the surface nutrient-rich water, which provides suitable conditions for high primary and secondary production. These conditions are thought to provide the forage base for the large stocks of tuna that occur throughout the western tropical Pacific.

Figure 10: The main oceanographic features of the Pacific Ocean



Source: SPC, 2005

Key: SEC: South Equatorial Current; NEC: North Equatorial Current; SECC: South Equatorial Counter-Current; NECC: North Equatorial Counter-Current; KUR: Kuroshio Current; EAC: East-Australian Current; HBT: Humboldt Current.

The westward flowing northern branch of the SECN is the strongest current in the south Pacific, and mainly affects the fishing zones north of 7°S from January to June. The westward flowing southern branch of the South Equatorial Current (SECS) is evident to the north of 20°S in each

month and appears strongest from May to October. The South Equatorial Counter-current (SECC) shares a northern boundary with the SECN and a southern boundary with the SECS. The SECC is evident to the south of 10°S during November to April.

The subsurface thermal structure indicates that longline catchability may vary from area to area. From 5° to 15°S the 15°C isotherm is within 220m of the surface and the thermocline gradient is strong. At these low latitudes there is less oxygen at a given depth than at southern latitudes, with yellowfin and bigeye catchability greater compared to southern areas, due mainly to a shallower and steeper thermocline and low oxygen concentrations at depth. Subsurface isotherms were ~50-100m shallower after the strong El Niño – Southern oscillation (ENSO) event in 1982. However, recent ENSO or La Niña events did not alter the subsurface thermal structure (or the data were possibly inadequate for the detection of such changes).

The interrelationship between oceanic environment and tuna is summarised in **Lehodey et al 1997**.

Effects of gear use on habitat: there is no impact of the gear on the bottom habitat (FIA, I5)

Use of natural logs as a fish aggregating device: Around 18% of the PNA sets are on floating logs. These logs are naturally occurring, having been washed into the ocean and typically accumulate in convergence zones (**Fréon and Dagorn, 2000**), which are known to be very rich and productive areas. Tuna, as well as other species, tend to associate with floating objects that may act as an indicator of productive areas, as a meeting point, or as a reference point for local and large scale movements/migrations. It is worth mentioning that tuna tend to forage *away* from FADs and re-aggregate under them in order to rest and digest food caught during previous foraging period (**Bromhead et al 2003**).

In terms of this assessment, the main question is whether fishing and depleting the communities associated with these natural FADs causes “cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function” (P2.4.1 scoring criterion). A number of factors suggest that depopulation of natural log populations are neither serious nor irreversible impacts, including:

- 1 The short residency times under FADs which varies between days and a few weeks at most (**Dagorn et al 2007**)³² and that tuna school associations with individual FADs may be short-term and transient in nature (**Leroy et al 2010**).
- 2 Whilst FADs capture most of the circumnatant³³ species, it seems that some extranatant species might escape and most intranatant species are not captured. Fishers make an effort to re-establish communities under logs e.g. by pulling logs out of the purse seine and encouraging the smaller juvenile reef species to ‘recolonise’ the logs immediately upon release. The presence of small fish is likely to accelerate the process. It has been hypothesised that the escape and recolonisation of log and drifting FADs is also accelerated by soniferous (e.g. drumming) species, possibly including the spotted oceanic triggerfish *Canthidermis maculate* that forms massive schools of many thousands individuals around drifting FADs (**Taquet et al 2007**).
- 3 For intra- and circum-natant species, it seems that the time needed to aggregate around FADs is quite short. By extracting the empirical knowledge of skippers of European purse

³² FADIO monitored the behaviour of 140 satellite-linked acoustic-tagged fish from 7 species, revealing that fish can stay several days around drifting FADs, as maximum stays of 3 days (bigeye tuna), 7 days (skipjack tuna), 8 days (wahoo), 10 days (silky sharks) and 15 days (yellowfin tuna, dolphin fish, and rough triggerfish).

³³ “Intranatant species” (In) remain within 0.5 m of the floating object; “Extranatant species” (Ex), within 0.5–2m; “Circumnatant species” (Circum) are loosely associated with the object (after **Fréon and Dagorn 2000**).

seiners in the Western Indian Ocean, **Moreno *et al* (2007)** determined that intra- and extrantant species usually need between 1 week and 2–3 weeks to colonise a FAD.

4 Logs eventually become waterlogged and sink.

6.5.2 Management

Gear impacts: given that this gear has no physical impact with the seabed, no management strategy is required or in place

FAD impacts: the management of FAD-related catches, including those on natural logs, is mainly conducted through restrictions on the spatial and temporal extent of FAD fishing, as well as the catch retention rules discussed in Section 6.2.

6.5.3 Information

The availability of information (to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types) is considered at two levels:

1. Pelagic environment in the ‘warm pool’ Western tropical Pacific Ocean
2. Natural log fish and associated communities

Pelagic environment in the ‘warm pool’ Western tropical Pacific Ocean:

The physical, chemical and biological properties of the WCPO are regularly monitored through oceanographic buoys and by satellite remote sensing. Variables such as sea-surface temperature (SST), sea-surface height (SSH), surface wind stress and ocean currents are important physical oceanographic properties; their large-scale distribution may be measured by satellite remote sensing or derived from numerical ocean models. It is possible to derive chlorophyll concentration, a measure of phytoplankton abundance, using satellite-based ocean colour sensors. Phytoplankton is a good indicator of environmental variability, integrating vertical and horizontal forcing (i.e. upwelling and advection) and can be used to delineate water masses and features where SST gradients are small.

The physical habitats of the Pacific Ocean, especially the more vulnerable components e.g. sea mounts, coral reefs and coastal areas, are well studied throughout the Pacific. However they are not relevant to the pelagic ecosystems in which the fisheries under assessment operate.

The PNA licensed vessels all operate under a VMS scheme and thus there is accurate, near real-time monitoring of the spatial extent of interaction, and the timing and location of use of the fishing gear.

There is regular qualitative and quantitative monitoring of key species composition in the Pacific Ocean. Much of this is available from fisheries-dependent information (logbook information on catches, landings and observer information), as well as regular scientific investigations into the biodiversity and relative abundance of pelagic habitat constituents (e.g. at planktonic and higher life form levels).

Natural log communities: although the distribution of natural logs is not directly monitored, their distribution is well known through a combination of vessel interaction records, information on terrestrial sources (e.g. location of main watersheds), current systems and oceanic gyres. Likewise the changes in log distribution over time can be measured via vessel interaction records (inc. observer records). As such there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear, esp. VMS.

Fish communities around natural logs have been studied, (**Taquet *et al* 2007**), although less intensively than drifting FADs and other known or fixed locations, such as oil platforms. However qualitative and quantitative data on species composition of overwhelming biomass of

drifting FADs can be regularly assessed via the catch composition and volumes, thus enabling any changes to be detected.

6.6 ECOSYSTEM IMPACTS

6.6.1 Status

The ecosystem impacts of this fishery are limited to two issues:

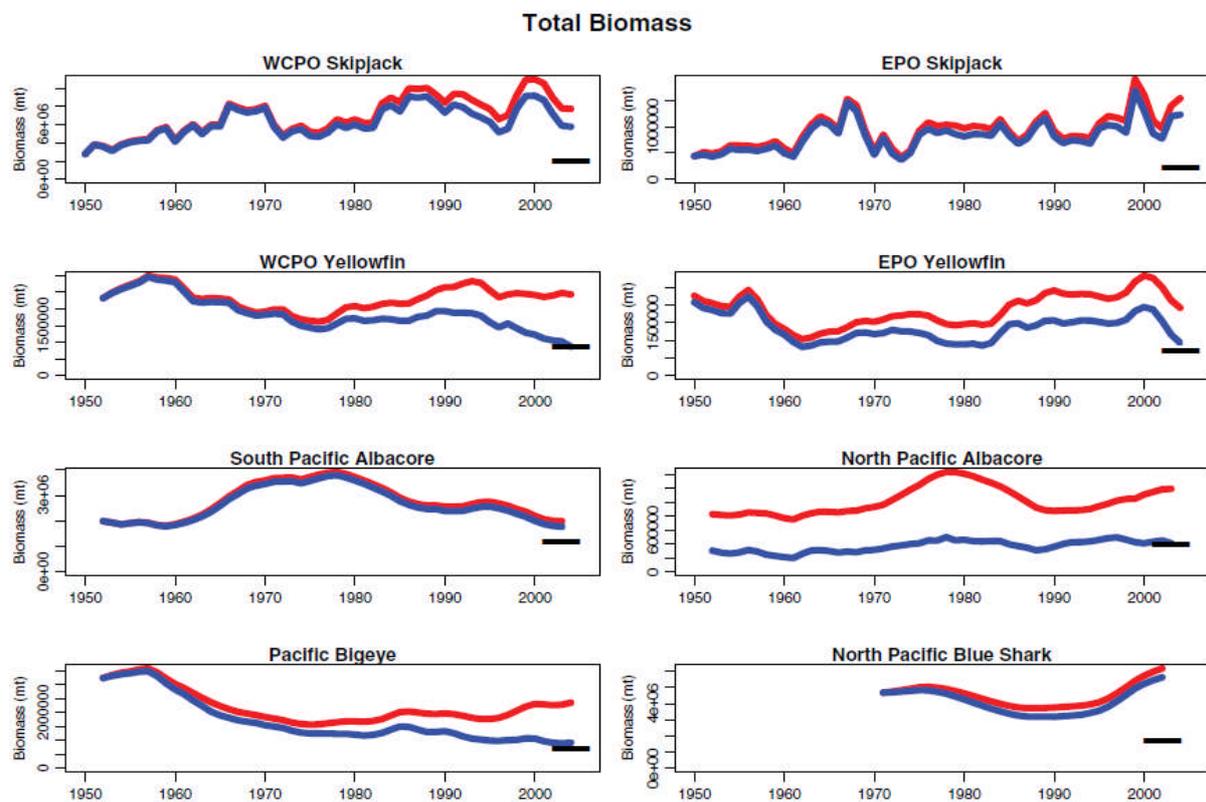
(i) the removal of a high level predator (e.g. the target species, skipjack) on the underlying ecosystem and (ii) the potential impact of climate change on tuna populations in the Pacific Ocean. Both issues are examined below:

Removal of large volumes of skipjack tuna: fisheries have removed at least 50 million tons of tuna and other top-level predators from the Pacific Ocean pelagic ecosystem since 1950, leading to concerns about a catastrophic reduction in population biomass and the collapse of oceanic food chains. **Sibert *et al* (2006)** analysed available data³⁴ from Pacific tuna fisheries for 1950–2004 to provide comprehensive estimates of fishery impacts on population biomass and size structure. Exploited western Pacific yellowfin and bigeye have declined steadily to levels near the equilibrium biomass that would produce the maximum sustainable yield (MSY) in the fishery. Skipjack tuna and blue shark appear to have increased slightly, whereas albacore have fluctuated in both directions.

³⁴ **Sibert *et al*** used stock assessment methods to provide estimates of fishery impacts on population biomass, size structure, and trophic status of major top-level predator stocks in the Pacific Ocean: bigeye tuna, yellowfin tuna, skipjack tuna, albacore tuna, and blue shark

Figure 11: Trends in total biomass for eight stocks of large predators in the Pacific Ocean

Blue lines indicate the biomass estimated from the observed fishing history (the exploited population), and red lines indicate the biomass estimated in the absence of all fishing (the unexploited population). The single black dash indicates the equilibrium biomass corresponding to MSY conditions, assuming current levels of recruitment and distribution of fishing mortality among fisheries. WCPO, western central Pacific Ocean; EPO, eastern Pacific Ocean.



Source: **Sibert *et al* (2006)**

At that point, current biomass ranges among species from 36 to 91% of the biomass predicted in the absence of fishing, a level consistent with or higher than standard fisheries management targets. Fish larger than 175 cm FL had decreased from 5% to approximately 1% of the total population. The trophic level of the catch had decreased slightly, but the authors concluded that there was no detectable decrease in the trophic level of the population. These results indicated substantial, though not irreversible, impacts of fisheries on these top-level predators and minor impacts on the ecosystem in the Pacific Ocean.

Climate change: International Panel on Climate Change’s (IPCC) recent 4th assessment concluded that the “Impacts of large-scale and persistent changesare likely to include changes in marine ecosystem productivity, fisheries, ocean CO₂ uptake, oceanic oxygen concentrations and terrestrial vegetation. Changes in terrestrial and ocean CO₂ uptake may feedback on the climate system” (**IPCC 2007**).

Past fishery research (reported in **SPC, 2005**) shows how the spatial pattern of skipjack tuna purse seine catch per unit effort changed over the years 1999 to 2005. When the warm water front to the north east of PNG moves east under La Niña conditions (see Figure 10), there is a corresponding shift in the surface skipjack tuna fishery distribution. The west to east movement is related to La Niña years and an increase in the frequency and intensity of El Niño conditions (**Lehodey *et al* 1997**). The observation that movement of the surface purse seine tuna fishery coincides with movement of the warm water front, strongly suggests that there will be changes to the fishery as ocean temperatures rise. If ocean temperatures rise, these ocean effects might be

exacerbated, the warm water front moving further (McIlgorm, 2008). A general rise in water temperatures might disperse the fishery over a wider area.

Bell³⁵ cites VDS as providing an important means of accommodating the effects of El Niño-Southern Oscillation (ENSO) events on redistribution of tuna, both now and in the future. The VDS holds total fishing effort for PNA members constant, but allows them to trade fishing days when the fish are concentrated either in the west or east due to ENSO events. The VDS is designed to operate in a similar way to the 'cap and trade' systems proposed to limit emissions of carbon dioxide and ensures that all PNA members continue to receive some level of benefits, regardless of where tuna are concentrated. Allocation of effort among members will also need to be adjusted periodically, as provided for under the VDS, as tuna stocks move progressively east under the projected effects of climate change (Bell et al. 2011). Periodic adjustment will still allow the transfer of effort during ENSO events well into the future, but avoid the need for PNA members further to the east to continually purchase vessel days from those in the west, based on present-day catches.

6.6.2 Management

The two issues described above are addressed through the following management approaches:

Removal of large volumes of skipjack tuna: there are comprehensive limits on effort targeting major tuna species through CMM 2008-01 and the VDS, with measures such as the FAD closure intended to reduce the catch of juveniles of the retained species.

Climate change: Significant movement of fish stocks due to climate change will alter the location of fishing grounds. For example, the fishery could now spend several months of the year inside a national EEZ, but this could increase (or decrease) as fish move to another EEZ, or out of (in to) the High Seas. This movement has implications for access for fishing vessels and may change the relative dependencies on the different EEZs. The current fishery governance system is able to adapt to this by monitoring and reacting to variations in annual catches, or location of fish schools.

In addition, there are a number of elements in the WCPFC Convention that provide the basis for strategy leading towards ecosystem-based management. These include:

In **Art. 5 (Principles and Measures)**, Commission Members have agreed to:

Apply the precautionary approach in accordance with this Convention and all relevant internationally agreed standards and recommended practices and procedures;

(d) assess the impacts of fishing, other human activities and environmental factors on target stocks, non-target species, and species belonging to the same ecosystem or dependent upon or associated with the target stocks;

(e) adopt measures to minimize waste, discards, catch by lost or abandoned gear, pollution originating from fishing vessels, catch of non-target species, both fish and non-fish species, (hereinafter referred to as non-target species) and impacts on associated or dependent species, in particular endangered species and promote the development and use of selective, environmentally safe and cost-effective fishing gear and techniques;

(f) protect biodiversity in the marine environment.

In **Art. 6 (Precautionary Approach)**, Commission Members have agreed that the Commission will:

(b) take into account, inter alia, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distributions of fishing mortality and the

³⁵ Email from Johann Bell, Principal Fisheries Scientist - Climate Change Strategic Engagement, Policy and Planning Facility Secretariat of the Pacific Community 1 July 2011

impact of fishing activities on non-target and associated or dependent species, as well as existing and predicted oceanic, environmental and socio-economic conditions; and

(c) develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans where necessary to ensure the conservation of such species and to protect habitats of special concern.

In **Art. 10 (Functions of the Commission)**, Commission members have agreed that the Commission will:

“adopt, where necessary, conservation and management measures and recommendations for non-target species and species dependent on or associated with the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened;”

And in **Art. 12 (Functions of the Scientific Committee)**, Commission members have agreed that the SC will:

(c) encourage and promote cooperation in scientific research, taking into account the provisions of article 246 of the 1982 Convention, in order to improve information on highly migratory fish stocks, non-target species, and species belonging to the same ecosystem or associated with or dependent upon such stocks in the Convention Area;

(d) review the results of research and analyses of target stocks or non-target or associated or dependent species in the Convention Area;

(e) report to the Commission its findings or conclusions on the status of target stocks or non-target or associated or dependent species in the Convention Area;

(f) in consultation with the Technical and Compliance Committee, recommend to the Commission the priorities and objectives of the regional observer programme and assess the results of that programme;

(g) make reports and recommendations to the Commission as directed, or on its own initiative, on matters concerning the conservation and management of and research on target stocks or non-target or associated or dependent species in the Convention Area;

6.6.3 Information

Removal of large volumes of skipjack tuna: SPC is currently conducting stomach content sampling to build predator-prey relationships (Trophic Diet Matrix) and, with Shane Griffiths (CSIRO) and are putting together a more developed EcoPath model (building on the 2007 preliminary EcoPath model) (Valerie Allain, (I22)). As well as the TDM, there has been the incorporation of catch and discard information and this model is now being validated. The move into EcoSim provides a non-static approach (EcoPath is mainly 2005 data) to add 2005 to 2007 data series and allow cross-checking against actual catches. Validation is expected to be completed by Oct 2010. The model includes 5-6 fisheries, including the associated and unassociated PS catches (all flags). This will give the ability to simulate the impact of FAD closures and other management approaches. The accuracy depends upon robustness of the bycatch data, which has been historically patchy but with new 100% observer coverage (for purse seines) will be much improved.

SEAPODYM is a model developed initially for investigating spatial tuna population dynamics under the influence of both fishing and environmental effects. The model is based on advection–diffusion–reaction equations. The main features of this model are: (i) forcing by environmental data (temperature, currents, primary production and dissolved oxygen concentration), (ii) prediction of both temporal and spatial distribution of mid-trophic (micronektonic tuna forage)

functional groups, (iii) prediction of both temporal and spatial distribution of age-structured predator (tuna) populations, (iv) prediction of total catch and size frequency of catch by fleet when fishing data (catch and effort) are available, and (v) parameter optimization based on fishing data assimilation techniques (see **Senina et al 2008**). A recent enhanced version (**Lehodey et al 2008**) has been developed that includes a better definition of habitat indices, movements, and accessibility of tuna and tuna-like predators to different vertically migrant and non-migrant micronekton functional groups (**Lehodey et al 2009**).

Climate change: modelling of sea temperature rise, its pattern within natural cyclical variability and the impact on the recruitment, growth and distribution of tunas has received increasing attention and is one of the main applications of SEAPODYM (see above). Results of SEAPODYM simulations allow realistic prediction of the large-scale distribution of tuna species (**Lehodey, 2001; Lehodey et al 2008**).

A NOAA-funded project (Climate and Fishing Impacts on the Spatial Population Dynamics of Tunas (Project no. 657425) is running two spatial bio-physical models for several tuna species concurrently with different long-term (up to 50 years) climate regime datasets (**Weng et al 2009**). It is anticipated that the models will enable researchers to evaluate potential alternative system states due to physical and anthropogenic forcing and to help determine if the impacts of natural climate variability could be anticipated in such a way as to help establish a management regime that accommodates exploitation pressures and natural variability to build sustainable tuna fisheries.

7 GOVERNANCE AND FISHERY MANAGEMENT FRAMEWORK

7.1 GOVERNANCE

For the purpose of this assessment, the key components of the governance and fishery management framework for tuna and related species in the WCPO, and the tuna purse seine fisheries in particular include

- i) The Western and Central Pacific Fisheries Commission (WCPFC), the tuna RFMO for the WCPO
- ii) The Parties to the Nauru Agreement, known as PNA or the Nauru Group
- iii) Regional organisations that provide management services to the WCPFC and the PNA, including in particular the FFA and the SPC
- iv) The PNA national governments

7.1.1 The Western and Central Pacific Fisheries Commission (WCPFC)

The WCPFC is the one of the newest and one of the largest RFMOs, with over half of the world's tuna catch taken within its Convention Area. The Commission has 25 Members, of which most are small island developing countries (SIDSs), and all major coastal and fishing states in the WCPO are Members, except for Indonesia and Vietnam. The current Members are: Australia, Canada, People's Republic of China, Cook Islands, European Union (EU), Federated States of Micronesia (FSM), Fiji, France, Japan, Kiribati, Korea, Republic of the Marshall Islands (RMI), Nauru, New Zealand, Niue, Palau, Papua New Guinea (PNG), Philippines, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America (USA) and Vanuatu (**WCPFC, 2009e**).

Several other states are granted cooperating non-member status on an annual basis, agreeing to comply with WCPFC measures, participating as observers, and entitled to authorise their vessels to fish in the WCPO within set limits. At WCPFC6, the CNM status of Belize, El Salvador, Indonesia, Mexico and Senegal was renewed, and CNM status was extended to Ecuador and Vietnam (**WCPFC, 2009b**), (paras 22-49)

The WCPFC Convention (**WCPFC, 2000**) follows closely the provisions of the UNFSA, including in particular:

- The objective of ensuring, the long-term conservation and sustainable use of highly migratory fish stocks (Art 2)
- The general principles in Art 5 of the UNFSA including the application of the precautionary approach, incorporating the UNFSA Annex II Guidelines For The Application of Precautionary Reference Points (Art 5)
- The application of these principles by Parties in their cooperation under the Convention, including the application of these principles in areas under national jurisdiction, (Art 7)
- Compatibility of measures established for the high seas and those adopted for areas under national jurisdiction (Art 8)
- Application of the dispute settlement provisions of the UN Fish Stocks Agreement to disputes between WCPFC Members (Art 31)
- Recognition of the interests of small scale and artisanal fishers, and of communities and small island states dependent for their food and livelihoods on tuna resources. (Art 30)

The WCPFC has a consensus-based decision-making process, with provision for a two-chambered voting process requiring a 75% majority in both chambers if all efforts to reach a decision by consensus have been exhausted (**WCPFC, 2004a**), (Rule 22). From the meeting

records, it is evident that the voting provision has not been used for deciding on conservation and management measures. In addition, there are provisions for a decision to be reviewed by a review panel at the request of a Member. **(WCPFC, 2000)** (Art 2, ss 6-9) The subsidiary bodies of the Commission provide extensive, detailed reports to the Commission (see for example **(WCPFC 2009d)**, **(WCPFC 2009e)**), including advice and recommendations. Decision-making is open, with the process, outcomes and basis for decisions recorded in detail in records of Commission sessions and publicly available papers.

The roles and responsibilities of WCPFC members are clearly described in the Convention, especially Articles 23 and 24, the Commission Rules of Procedure, conservation and management measures, and other Commission rules and decisions, including the Rules for Scientific Data to be Provided to the Commission, and the Rules and Procedures for Access to and Dissemination of Data Compiled by the Commission. In addition to Member participation, the WCPFC allows participation by non-members and territories, with particular opportunities for cooperating non-Members, and allows observers to participate in meetings of the Commission and its subsidiary bodies, including the Scientific Committee, the Technical and Compliance Committee and the Finance and Administration Committee. As part of the conditions for Cooperating non-Member status, applicants for CNM status are required to provide annually a *“a commitment to cooperate fully in the implementation of conservation and management measures adopted by the Commission and to ensure that fishing vessels flying its flag and fishing in the Convention Area and, to the greatest extent possible, its nationals, comply with the provisions of the Convention and conservation and management measures adopted by the Commission.”* (CMM 2009-11, para 2b.) The letter of application for CNM status for 2010 for Indonesia is an example of this commitment **(Maarif, M, 2009)**

The records of Commission meetings show that the Commission takes a wide range of advice and inputs from its subsidiary bodies, members and observers before implementing decisions, including the adoption of conservation and management measures. Scientific advice clearly identifies the extent to which different sources of information have been taken into account.

The WCPFC Convention requires the Scientific Committee to *“recommend to the Commission a research plan, including specific issues and items to be addressed by the scientific experts or by other organizations or individuals, as appropriate, and identify data needs and coordinate activities that meet those needs”*. The current WCPFC Strategic Research Plan (SRP) 2007–2011 **(WCPFC 2006d)** was adopted by the Scientific Committee and approved by consensus by the WCPFC in 2006. All PNA Members were party to the adoption of the Plan by the Scientific Committee and the approval of the Plan by the Commission in 2006 **(WCPFC, 2006a)**, **(WCPFC, 2006c)**. The Plan was reviewed and slightly modified by SC6, with an optional peer review of the Plan prior to the development of an SRP for 2012-2016 at SC7, for consideration by WCPFC.

The Plan addresses four overall research and data collection priorities:

- collection and validation of data from the fishery
- monitoring and assessment of stocks
- monitoring and assessment of the ecosystem
- evaluation of management options

With this structure, the Plan is substantially directed towards providing information to enable the Commission to avoid overfishing or depletion of targeted stocks and the application of an ecosystem approach. However, the Implementation process in the Plan is also designed to contribute to improving governance and policy, through the development of management information tools such as Management Strategy Evaluation (MSE), and the development of

relevant scientific and technical capacities in developing country Commission members, including PNA Members as follows:

Opportunities to involve individuals and institutions from developing countries and territories should be a strong feature of the implementation of the Plan. Promoting such involvement should be aimed at both utilising available expertise from developing countries and territories, and at providing important opportunities for building scientific and technical capacity within those countries and territories.

Table 19: WCPFC measures relevant to the fisheries under assessment

Measures	Key Relevant Features
2008-01 Yellowfin and Bigeye	Not undermine measure by transferring purse seine effort to areas N of 20N or S of 20S. Within 20N to 20S: <ul style="list-style-type: none"> • Limit high seas purse seine effort to 2004 or average 2001-04 • Limit EEZ effort to 2004 levels (PNA) or take compatible measures • FAD closure – 3 months from 2010 • Closure of 2 high seas pockets • 100% catch retention/no discards (for tuna species) • 100% observer coverage • capacity of “other fisheries” generally limited to 2004 or average 2001-04
2009-02: FAD Closure and Catch Retention	Specific rules for FAD closure and catch retention, including prohibiting, during the FAD closure, conducting any part of a set within one nautical mile of a FAD.
2008-03 Sea Turtles	<ul style="list-style-type: none"> • Implement FAO Guidelines, • Comatose turtles to be brought on board and resuscitation attempted • Proper handling and release techniques and equipment to be applied as per WCPFC Guidelines • Purse seine operators to follow specific procedures to avoid /release turtles • Purse seine operators to report all interactions and provide reports to WCPFC
2009-04 Sharks	<ul style="list-style-type: none"> • Require full utilisation through retention of carcass • Implement 5% fin to weight ratio • Prohibit retention, transshipment or trading in fins caught in contravention • Encourage live release of sharks in non-target fisheries <p><i>Note: (paras 1-5 (mostly related to NPOAs and reporting) are non-binding, but other paras, including finning-related provisions and live release, are binding)</i></p>
2007-02: VMS	Ensure vessels have ALC on in high seas
2009: Regulation of Transshipment	No purse seine transshipment at sea, except in designated special cases
Resolution 2005-03 Non-target fish (<i>Non-binding</i>)	Avoid to the extent practicable, the capture of all non-target fish species that are not to be retained; Release promptly to the water unharmed, to the extent practicable, non-target fish species that are not to be retained

These measures represent a comprehensive response by the Commission in its early stages to areas where conservation and management measures are needed, but the measures are based on short term *ad hoc* approaches, lacking the longer term framework of TACs and TAEs, reference points and harvest control rules that will be needed. However, in the absence of such formal limits, the WCPFC has adopted a core package of measures in CMM 2008-01 (**WCPFC, 2008a**) for the fisheries under assessment with this set of objectives:

- Ensure through the implementation of compatible measures for the high seas and EEZs that bigeye and yellowfin tuna stocks are maintained at levels capable of producing their maximum sustainable yield; as qualified by relevant environmental and economic factors including the special requirements of developing States in the Convention area as expressed by Article 5 of the Convention.

- Achieve, through the implementation of a package of measures, over a three-year period commencing in 2009, a minimum of 30% reduction in bigeye tuna fishing mortality from the annual average during the period 2001-2004 or 2004;
- Ensure that there is no increase in fishing mortality for yellowfin tuna beyond the annual average during the period 2001-2004 average or 2004; and
- Adopt a package of measures that shall be reviewed annually and adjusted as necessary by the Commission taking account of the scientific advice available at the time as well as the implementation of the measures. In addition, this review shall include any adjustments required by Commission decisions regarding management objectives and reference points.

CMM 2008-01 is a complex measure which imposes purse seine effort limits and longline catch limits, a closure relating to purse seine fishing using fish aggregation devices (FADs), the closure of two high seas pockets (HSPs) to purse seine fishing and measures relating to observer coverage, development of FAD management plans, catch retention, and juvenile tuna catch mitigation research, to be progressively implemented during the period 2009-2011.

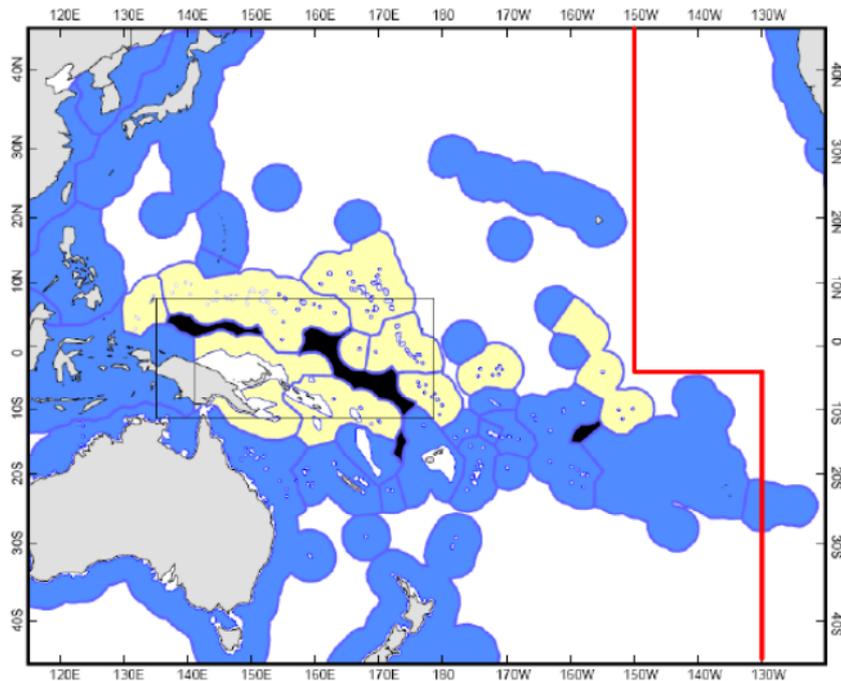
For 2009, for the purse seine fishery, effort in PNA EEZs and the high seas was limited to 2004 reference levels; the FAD closure was applied from August 1st to 30th September, with mandatory observer coverage during that time; and bigeye, skipjack and yellowfin tuna were required to be retained, and not discarded. Non-PNA CCMs were required to implement compatible measures in EEZs bounded by 20^oN to 20^oS to reduce purse seine fishing mortality on bigeye in their EEZs, and the purse seine fishery on the high seas was also subject to the FAD closure, catch retention and mandatory observer coverage.

The 2004 reference levels for the purse seine effort limits included effort obligated under existing agreements, which had been registered with the Commission (para 7). Twelve agreements have been registered with the Commission (**WCPFC, 2008c**) (Table 6). In most cases, the effort provided for in these agreements was fully subscribed in 2004, but in the case of the USMLT, only 21 of the 40 vessels provided for in the Treaty were active in 2004 (**WCPFC, 2008d**). Vessels of Small Island developing State Members are exempt from the purse seine effort limits.

As an incentive to encourage exploration of innovative arrangements to mitigate bigeye bycatch, CCMs meeting certain conditions were authorised to apply a 10% reduction in purse bigeye bycatch as an alternative arrangement to the high seas FAD closure (para 15).

For the second two years of the measure applying (2010-2011), effort limitation continues to apply, the FAD closure is extended to cover the period July 1st to 30th September each year (3 months), and the closure of two high seas pockets wholly enclosed by the EEZs of CCMs (and one CNM), as shown in the map below, applies from 1st January 2010. From January 1st 2010, 100% observer coverage from the Commission's Regional Observer Programme has been required.

Map 2: WCPFC High Seas pockets



The WCPFC Convention area, with the two high seas pockets wholly enclosed between 20⁰N and 20⁰S shown in black.

The PNA EEZs are shown in yellow, and the archipelagic waters of PNG, Solomon Islands, Fiji and Vanuatu in white (**Source: CMM 2008-01**).

For the longline fishery, the total catch of bigeye by longline gear “*will be subject to phased reduction such that by January 2012, the longline catch of bigeye tuna is 70% of the average annual catch in 2001-2004 or 2004*”, with a phased 30% reduction for CCMs, with 10% in the first year, 20% in the second and 30% in the third year. Exemptions apply to CCMs which caught less than 2,000t in 2004, provided that their catch does not exceed 2,000t in each of the years 2009-2011, with other exemptions applying to SIDS and longline fleets catching less than 5,000t of bigeye and landing exclusively fresh fish.

All CCMs are required to report to each regular session of the Technical and Compliance Committee on the implementation of CMM 2008-01 measure (para. 45), and the measures are reviewed annually in conjunction with the scientific advice to measure the impact and compliance with the measure (para. 46).

CMM 2008-01 is the result of a stream of decisions by the WCPFC relating to tropical fisheries management following the Resolution on Conservation and Management Measures adopted at the Commission’s 1st session (**WCPFC, 2004b**) where the Commission decided:

In responding to the advice of the Scientific Committee and the Technical and Compliance Committee and any information provided by members at least thirty (30) days in advance of the second annual session, the Commission shall adopt in accordance with article 5 of the Convention conservation and management measures necessary to address sustainability concerns.

In accordance with article 6 of the Convention the precautionary approach will be applied and the absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

The Commission subsequently adopted **CMM 2005-01** and **CMM 2006-01**, which were broadly aimed at holding catch and effort for bigeye and yellowfin at current levels taking into account

existing Treaty commitments. Then, following the 2008 Scientific Committee recommendation on bigeye for “*a minimum 30% reduction in fishing mortality from the average levels for 2003–2006 with the goal of returning the fishing mortality rate to F_{MSY}* ”. CMM 2008-01 was adopted with objectives including “*a minimum of 30% reduction in bigeye tuna fishing mortality from the annual average during the period 2001-2004 or 2004.*”

The above sequence, from 2004 onwards, demonstrates use of the precautionary approach, and use of the best available scientific information, while not always fully reflecting the scientific advice.³⁶

Information on the effectiveness of CMM 2008-01 is presented in Section 6.2.3.

The package of measures in CMM 2008-001 is sufficiently well defined and measurable that it is annually monitored and assessed against the specified target reference points and levels of fishing mortality for bigeye and yellowfin (**Hampton et al., (2009)**). However, other CMMs, including the CMMs for sharks and sea turtles are not sufficiently well-defined to be measurable.

The WCPFC has not undertaken an external review yet³⁷. In this direction, the WCPFC has:

- agreed to cooperate with other RFMOs toward standardization of performance reviews (**WCPFC4**)
- *agreed that a WCPFC4 paper working paper on a performance review should be used as basis to develop recommendations for a structure and budget for an independent performance review* (**WCPFC5**)
- *but deferred a proposed independent performance review in 2010, largely for financial reasons.* (**WCPFC6**)

The result is that the WCPFC has committed to, but not yet undertaken, an overall external performance review, consistent with the Kobe Course of Actions for the period 2011 to 2013. An independent review (**MRAG, 2009**) has been conducted of the Commission’s science structure and functions resulting in overhauling of the operation of the Scientific Committee, and adoption of a peer review process and other changes to the data and science functions. Completion of the performance review as anticipated in the Kobe programme is important to give an early check on the directions in which the WCPFC has set itself.

7.1.2 Parties to the Nauru Agreement (PNA)

The PNA is an alliance of Pacific Island states whose EEZs collectively account for a significant bulk of the region’s tuna catch and 54% of the purse seine catch. The **Nauru Agreement** is a regional agreement concerned with Cooperation in the Management of Fisheries of Common Interest. The Agreement is a binding Treaty-level instrument considered to be a sub-regional or regional fisheries management arrangement for the purpose of the UNFSA and the WCPFC Convention (PNAO I14). The countries of Solomon Islands, Tuvalu, Kiribati, Marshall Islands, Papua New Guinea, Nauru, Federated States of Micronesia and Palau, have worked collaboratively since 1982 to manage the tuna stocks within their national waters through the

³⁶ WCPFC7 agreed that “*At its 8th session in December 2011, the Commission will adopt an enhanced measure to conserve and manage tropical tunas on the basis of the advice provided by SC7 and the recommendations of TCC7. The CMM will be based upon the most recent scientific advice, and be designed to deliver a substantial improvement in the status of the WCPO bigeye stock, and promote the conservation and management of skipjack and yellowfin in accordance with the WCPF Convention.*”

³⁷ <http://www.tuna-org.org/>

Agreement. PNA coordinate the implementation of management measures with a view to enhancing economic benefits from the fishery, including (PNA Resolution, 1982):

- Harmonising the terms and conditions of access for distant water fishing vessels/fleets; and
- Granting preferential access to vessels of the Parties in order to encourage domestic participation in the fishing industry.

The Organisation operates its secretariat from the Marshall Is. Its objectives are to:

- Enhance regional solidarity; and
- Promote economic control and participatory rights over the tuna resources in PNA waters.

Its primary focus is to:

- Develop of strategic fisheries conservation and management initiatives;
- Develop initiatives to maximise the sustained direct and indirect economic benefits to the Parties,
- Maximise the profitability of the fishery and ancillary industries within the PNA.

This includes operating an access and management regime, which optimises revenue collection for the parties, as well as promoting the development of the Parties' indigenous fishery sector.

Box 3: Contents of the Nauru agreement

Article I The Parties shall seek to establish a co-ordinated approach to the fishing of the common stocks in the Fisheries Zones by foreign fishing vessels and in particular:

(a) shall establish principles for the granting of priority to applications by fishing vessels of the Parties to fish within the Fisheries Zones over other foreign fishing vessels;

(b) shall establish, as a minimum, uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones regarding:

- (i) the requirement that each foreign fishing vessel apply for and possess a licence or permit; the placement of observer on foreign fishing vessels;
- (ii) the requirement that a standardized form of log book be maintained on a day-to-day basis which shall be produced at the direction of the competent authorities;
- (iii) the timely reporting to the competent authorities of required information concerning the entry, exit and other movement and activities of foreign fishing vessels within the Fisheries Zones;
- (iv) standardized identification of foreign fishing vessels;

(c) seek to establish other uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones, including:

- (i) the payment of an access fee, which shall be calculated in accordance with principles established by the Parties;
- (ii) the requirement to supply to the competent authorities complete catch and effort data for each voyage;
- (iii) the requirement to supply to the competent authorities such additional information as the Parties may determine to be necessary;
- (iv) the requirement that the flag States or organisations having authority over a foreign fishing vessel take such measures as are necessary to ensure compliance by such vessel with the relevant fisheries laws of the Parties; and
- (v) such other terms and conditions as the Parties may from time to time consider necessary.

Article II: The Parties shall seek to establish a co-ordinated approach to the fishing of the common stocks in the Fisheries Zones by foreign fishing vessels and in particular:

(a) shall establish principles for the granting of priority to applications by fishing vessels of the Parties to fish within the Fisheries Zones over other foreign fishing vessels;

(b) shall establish, as a minimum, uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones regarding:

- (i) the requirement that each foreign fishing vessel apply for and possess a licence or permit;
- (iii) the requirement that a standardized form of log book be maintained on a day-to-day basis which shall be produced at the direction of the competent authorities;

- (iv) the timely reporting to the competent authorities of required information concerning the entry, exit and other movement and activities of foreign fishing vessels within the Fisheries Zones; and
- (v) standardized identification of foreign fishing vessels;
- (c) seek to establish other uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones, including:
 - (i) the payment of an access fee, which shall be calculated in accordance with principles established by the Parties;
 - (ii) the requirement to supply to the competent authorities complete catch and effort data for each voyage;
 - (iii) the requirement to supply to the competent authorities such additional information as the Parties may determine to be necessary;
 - (iv) the requirement that the flag States or organisations having authority over a foreign fishing vessel take such measures as are necessary to ensure compliance by such vessel with the relevant fisheries laws of the Parties; and
 - (v) such other terms and conditions as the Parties may from time to time consider necessary.

Article III: The Parties shall seek to standardise their respective licensing procedures and in particular:

- (a) seek to establish and adopt uniform measures and procedures relating to the licensing of foreign fishing vessels, including application formats, licensing formats and other relevant documents; and
- (b) explore the possibility of establishing, without prejudice to the respective sovereign rights of the Parties, a centralised licensing system of foreign fishing vessels.

Article IV

The Parties shall seek the assistance of the South Pacific Forum Fisheries Agency in establishing procedures and administrative arrangements for the exchange and analysis of:

- (a) statistical data concerning catch and effort by fishing vessels in the Fisheries Zones relating to the common stocks of fish; and
- (b) information relating to vessel specifications and fleet composition.

Source: Nauru Agreement

The Nauru Agreement is implemented through binding Implementing Arrangements and associated Arrangements, which include:

1st Implementing Arrangement, 1983, setting minimum licensing standards, including reporting, inspection and onboard observation, vessel identification and “good standing” on the FFA regional register

2nd Implementing Arrangement, 1990, adding additional conditions relating to VMS, high seas reporting and a prohibition on transshipment at sea

Palau Arrangement, 1995, limiting the purse seine fishery, initially by limiting vessel numbers, but now through the VDS which is described separately in more detail below

FSM Arrangement: 1994, establishing arrangements for preferential access among the parties for vessels meeting certain standards for the provision of domestic economic benefits

3rd Implementing Arrangement (3IA) 2008, applying a FAD closure, 100% observer coverage and catch retention/no tuna discards in PNA EEZs, and prohibition of fishing in high seas pockets for licensed vessels³⁸.

For the first two decades, the Parties to the Nauru Agreement (PNA) sought to coordinate management measures with a view to enhancing economic benefits from the fishery. Specifically the PNA have harmonised terms and conditions of access for distance water fishing vessels/fleets and granted preferential access to vessels of the Parties in order to encourage domestic participation in the fishing industry. With the WCPFC Convention agreed in 2000, an external review (**Tarte, 2002**) of the Nauru Agreement in 2002 proposed that the Agreement “needs to be broadened to encompass conservation objectives and the core management functions necessary to attain these”, and that PNA “amend existing arrangements (namely the Palau Arrangement and the FSM

³⁸ PNA announced an extension of the High seas closure, to run from 1 January 2011, applicable to purse seine vessels licensed to fish in PNA EEZs. The areas concerned are the additional high seas areas between 10°N and 20°S and 170°E and 150°W 20°S and 170°E and 150°W (PNA, 2010e)

Arrangement) in order to reflect broader management objectives and the PNA's enhanced management role.”
The Report also identified options for increasing the institutional support for PNA including the establishment of a separate PNA secretariat now in place with the establishment of the PNA Office.

The PNA also collaborate to achieve the objectives of the Nauru Agreement and other regional and international instruments through a coordinated approach to their participation in broader groups, including the FFA, SPC and the WCPFC and to their relationships with fishing access partners. In this respect, the First and Second Implementing Arrangements provide the basis for the FFA Harmonised Minimum Terms and Conditions and for many of the compliance elements of the WCPFC Convention and the WCPFC compliance programmes, and the 3IA provides the major purse seine elements of WCPFC CMM 2008-01.

Box 4: The Harmonised Minimum Terms and Conditions for Foreign Fishing Vessel Access

- Common Regional Licence Form to be carried on board at all times.
- Good Standing on the FFA Vessel Register: that vessel and its operator to have good standing on the FFA Vessel Register; and vessel to be registered on the WCPFC Record of Fishing Vessels.
- Transshipment: no purse seine vessel, except for group seiners, to tranship at sea; 72 hours notice; submit full reports on transshipping
- Pay all fees required
- Maintain and Submit Catch Logs in Zones and High Seas
- Reporting: each Wednesday; within a reasonable time of entry into and departure from the zone, and entry into a port. Out-turn documentation, and landing and dock receipts to be provided
- Observers to be allowed and assisted to undertake their duties, every effort to be made to achieve twenty per cent coverage
- agent to be appointed to receive and respond to any legal process
- Vessels in Transit to have fishing equipment stowed or secured for fishing.
- Port State Control: FFA members to exercise powers of port State over fishing vessels in their ports,
- Inspection/Enforcement: operators to comply instructions and directions given by an authorised and identified person
- copy of the International Code of Signals (INTERCO) to be accessible at all times;
- Vessels to be identified in accordance with FAO Standards
- Flag States or Fishermen's Associations to be required in agreements to take measures to ensure compliance by their vessels
- Vessel Monitoring System to be implemented
- Fish Aggregating Devices to be clearly marked and identified
- Compulsory pre-fishing inspections to be carried out

Source: The FFA Harmonised Minimum Terms and Conditions for Foreign Fishing Vessel Access **(FFA, 2008)**

A recent review **(MRAG, 2009b)** found that the MTCs were generally applied by PNA and the broader FFA Membership, except for 2 of the 17 requirements listed above – the requirement for pre-fishing inspections, and the target observer coverage of 20% not being observed in longline fisheries.

The 3IA contains the following (Article II: *Review and Implementation*):

The Parties shall review the implementation of these measures at the annual meeting of the Parties, and decide on the future application of these measures, taking into account:

- (a) *the effectiveness of the measures in reducing fishing mortality, especially on juvenile bigeye and yellowfin tuna; and*

- (b) *the extent to which compatible measures are being applied on the high seas and in the waters of other Members of the Western and Central Pacific Fisheries Commission.*

Following the adoption of Implementing Arrangements, PNA countries implement management measures within their EEZs and require all vessels fishing inside their waters to comply with these measures within National Legislation in the form of changes to the acts or specific Regulations, Bilateral arrangements, individual vessel licenses, and revisions to National Tuna Management Plans.

PNA decision-making is based on consensus. Decisions and decision processes are recorded in records of PNA meetings. An annual meeting of the parties is required by the Nauru arrangement. The Administrator, historically the Director of FFA, but as from 1 January 2010, by the Director of the PNAO, sets the Agenda. Participation is open to Nauru agreement parties, to FFA members and observers, including NGOs, on application (PNAO, I14)³⁹. There are rules governing preparation of the agenda, circulation, reporting and who can attend. These were first set in 2005 (**PNA, 2005**), and are currently being amended to account for the transfer of the Secretariat to the PNAO (**PNA, 2010c**). The record of proceedings is distributed to the Parties. Industry representative often form part of the Delegation. Papers are provided to attendees.

In general, explanations of decisions have been provided in meeting records, media information and consultative meetings with those affected⁴⁰. As a result, the basis for PNA decisions on major issues has been widely understood from the 1980s decisions to establish regional standards for fishing through to the package of measures in the 3rd Implementing Arrangement. There does however, appear to be a lack of clarity and openness in PNA decision-making with respect to the establishment and operation of the VDS Total Allowable Effort, particularly with respect to links to the requirements of WCPFC CMM 2008-01 and the scientific advice.

The PNA has an intensive consultative process among Members with meetings at technical, officials and Ministerial level, with a Leaders level meeting in 2010 (**PNA, 2010a**) (**Koror Declaration**). Member delegations to meetings typically include industry participants. PNA also consults as PNA and as individual Parties with other WCPFC Members through the WCPFC process and other Pacific Island Countries through the FFA process. The Palau Arrangement includes recognition of the need to cooperate with other states or international organisations, and provides for cooperation to take place through informal consultations between the Parties and other states or international organisations. (**Palau Arrangement art 6**) Ad hoc consultations are held with most major fishing partners on request, usually on particular issues, especially the VDS. In 2010, nine such sessions are being held (T. Aqorau, pers com, September, 2010). Notwithstanding these consultation processes, the PNA has also been criticized for failing to provide adequate information on the operation and application of the VDS (**W. Gibbons-Fly, 2010**)

PNA decision-making is very heavily based on the same information provided to the WCPFC, supplemented by additional information from FFA and SPC, and (increasingly) PNAO information systems, and by information from national levels, including from stakeholders. While the PNA and national processes regularly seek and accept information, observer status in PNA Meetings is formally limited to non-PNA Members of the FFA. While PNA positions and decisions are often explained in media releases and statements to WCPFC meetings, the

³⁹ PNA, 14th Annual Management Meeting, of the Parties, 5-8 May, 2009, shows New Zealand, Niue, the Secretariat of the Pacific Community and Greenpeace attended the meeting., as well as staff of the FFA.

⁴⁰ http://www.ffa.int/nauru_agreement

assessors could not find evidence of information from PNA clearly indicating the basis for key decisions, especially on the VDS.

All PNA Members are Parties to UNCLOS, UNFSA and the WCPF Convention. As Parties to UNFSA, all PNA Members are required to apply the precautionary approach in accordance with Articles 5 and 6 and Annex II. As Parties to the WCPF Convention and members of the WCPFC, they are also required to apply the precautionary approach in accordance with Articles 5 and 6 and Annex II of the UNFSA which is incorporated into the WCPF Convention by reference. More specifically, as WCPFC members, PNA members are specifically required under Article 7 of the WCPF Convention to apply in their EEZs the precautionary approach and the other principles set out in Article 5. All PNA members except Kiribati have transferred the principles in the UNFSA and WCPF Convention into their legislation and tuna management plans.

Table 20: Party recognition of UNSFA

Country	Act	Management Plan
FSM	S. 502, Marine Resources Act, 2001	Yes
Kiribati	Not included	No
Marshall Islands	S. 21, Marine Resources Act 1999	Yes
Nauru	S 4, 19 Fisheries Act 1997	Yes
Palau	S 3, draft Fisheries and Marine Resources Act, 2010	Yes
Papua New Guinea	S. 25 FM Act 1998	Yes
Solomon Islands	S. 11 Fisheries Act 1998	Yes
Tuvalu	Marine Resources Act 2006	Yes

Source: FFA Legal Department

Article 8.2 of the Palau Arrangement provides for disputes arising out of the interpretation or implementation of the Arrangement to be settled through peaceful negotiations. The PNA instruments are regarded as sub-regional agreements for the purpose of Article 30 of the UN Fish Stocks Agreement, which means that the dispute settlement provisions of UNCLOS apply to the Nauru Agreement, the Palau Arrangement and the VDS. (PNAO, I14)

There is no formal process in place for review of the performance of the PNA Office. Major elements of the PNA system including the FSM Arrangement and the Nauru Agreement have been reviewed on an ad hoc basis

7.1.3 The Vessel Day Scheme (VDS)

The VDS is a Scheme under the Palau Arrangement for the Management of the Western Purse Seine Fishery (**PNA, 2004**) which establishes a system of tradable fishing days allocated to the Parties as Party Allowable Effort (PAE). The Arrangement was established to regulate the number of purse seine vessels to be licensed by the Parties at any one time, in response to scientific advice of overfishing of yellowfin tuna and the rapid influx of foreign purse seine vessels into the WCPO.

Prior to the coming into force of the Palau Arrangement, the Parties to the Nauru Agreement (PNA) had already set in 1990 a provisional limit of 164 purse seine vessels to be licensed by the Parties. The license allocation limit under the Palau Arrangement in 1995 was for 205 purse seine vessels until the license allocation management scheme was replaced by the VDS in December 2007. The introduction of the VDS was the result of an external review commissioned by the Parties in 2000 (**Geen, 2000**) to assess the effectiveness of the license allocation management scheme in achieving its objectives under the Palau Arrangement. The review Report recommended the adoption of the VDS to regulate the number of fishing days by

purse seine vessels as a long term approach to the management of the purse seine fishery. The Parties adopted the VDS in 2006 following the completion of the signing by all Parties of the MOU for the provisional application of the amendments to the Palau Arrangement to facilitate the implementation of the VDS. A trial operation of the VDS was conducted between 1 December 2006 to 30 November 2007 and the full operation of the VDS came into effect on 1 December 2007. **(PNAO Note on the Operation of the VDS to Date in Appendix G).**

The VDS was originally designed to conserve the target stocks (skipjack and especially yellowfin) and enhance the value of the purse seine fishery. Currently however, it is an important element of the WCPFC measures to conserve bigeye, and the VDS text is incorporated into CMM 2008-01 as an Attachment.

The performance of the VDS was recently reviewed in a one-day Workshop. The VDS text calls for an annual briefing for the Parties from the Administrator on key outcomes of the VDS, but this is only being done for the first time in 2010. The FFA regularly reviews elements of the VDS and provides advice on the Scheme.

Key features of the VDS taken from the scheme text are:

- a) Parties set the Total Allowable Effort in fishing days for each Management Year. Management years are now calendar years
- b) A fishing day is defined as any day or part of a day in the waters of a Party outside archipelagic waters unless prior notice is given of a vessel not fishing, e.g. for transit
- c) Allowances for the FSM Arrangement fleet effort and the USMLT effort are deducted from the TAE
- d) The adjusted TAE after accounting for the FSMA and US effort is allocated amongst the Parties as their Party Allowable Effort (PAE) for each Management Year based on the distribution of estimated biomass and historical effort
- e) there are three Management years in a Management Period
- f) Parties may transfer days freely between themselves and between years within a Management Period, but transfers between Management Periods are limited
- g) Each Party is required to take all necessary measures to ensure that the number of fishing days by purse seine vessels in its EEZ does not exceed that Party's PAE or Adjusted PAE in any Management Year
- h) as a capacity adjustment, a fishing day of a small vessel (<50 metres length overall (LOA)) is counted as half of a fishing day, and large vessels (>80 metres LOA) one and a half fishing days
- i) The VDS is overseen and reviewed by an Inter-Party VDS Committee, and reports to the annual meeting of the Parties to the Palau Arrangement. The role of the VDSC is to have oversight on the operational aspects of the VDS and provide recommendations as appropriate to the plenary meetings of the Parties to the Palau Arrangement, unless mandated to decide on certain operational aspects of the VDS. The Committee has met 10 times since the VDS was adopted by the annual meeting of the Parties in May 2006.

Tables 21 to 23 below (taken from Appendix F) provide details of the operations of the VDS for the period December 2007 to December 2010.

Table 21: Summary of PAE Transactions for MY1 (13months- 1 December 2007 to 31 December 2008)

Party	Agreed PAEs for MY1 (12month) (A)	Agreed PAEs for Dec08 (1month) (B)	Adjusted PAEs for MY1 (13mnths) (C)	Days Used in MY1 (13 mths) (D)	Credit Back AZ Days in MY1 (E)	PAE Balance End MY1 (F)= C-D + E	Transfers from MY2 to MY1 (G)	Non Fishing Days MY1 (H)	Available Days End MY1 (I)=F+G +H	Days Transferred to MY2 (J)
FSM	6,253	513	6,766	5,047	0	1,719	0	0	1,719	1,719
Kiribati	6,194	540	6,734	3,998	0	2,736	0	0	2,736	2,736
Marsh. Is	2,727	227	2,954	712	0	2,242	0	0	2,242	2,242
Nauru	1,452	118	1,570	1,511	0	59	0	0	59	59
Palau	595	51	646	163	0	483	0	71	554	554
PNG	7,907	639	8,546	16,719	4,433	-3,740	4,303	0	563	563
Sol. Is	2,361	201	2,562	4,334	2,032	260	0	0	260	260
Tuvalu	979	83	1,062	588	0	474	0	0	474	474
Totals	28,468	2,372	30,840	33,072	6,465	4,233	4,303	71	8,607	8,607
Total UST Days Exempted						5,838				
Total FSMA Days Exempted (cap 3,907 days)						3,122 (provisional)				

Table 22: Summary of PAE Transactions for MY2 (1 January to 31 December 2009)

Party	Agreed PAEs for MY2 (A)	Transfers from MY2 to MY1 (B)	Adjusted PAEs for MY2 (C) = A - B	Days Used in MY2 (D)	PAE Balance End MY2 (E)= C- D	Transfers from MY1 to MY2 (F)	Non Fishing Days MY2 (G)	Available Days End MY2 (H)=E+F+ G	Transfers to and from MY3 (J)
FSM	6,154	0	6,154	4,591	1,563	1,719	0	3,282	-3,282
Kiribati	6,485	0	6,485	5,687	798	2,736	0	3,534	-3,534
Marsh Is	2,725	0	2,725	456	2,269	2,242	0	4,511	-4,511
Nauru	1,418	0	1,418	1,507	-89	59	0	-30	+30
Palau	608	0	608	80	528	554	0	1,082	-1,082
PNG	12,664 ⁴¹	4,303	8,361	10,606	-2,245	563	2,842	1,160	-1,160
Sol Is	2,961 ⁴²	0	2,961	2,202	759	260	0	1,019	-1,019
Tuvalu	1,001	0	1,001	1,022	-21	474	0	453	-453
Totals	34,016	4,303	29,713	26,151	3,562	8,607	2,842	15,011	-15,011
Total UST Days Exempted					7,477				
Total FSMA Days (outside home Party Waters) Exempted (cap 3,907 days)					3,435				

Table 23: Summary of PAE Transactions for MY2 (1 January to 31 December 2010)

Party	Agreed PAEs for MY3 (A)	Days Used in MY3 (C)	PAE Balance end MY3 (D) = A - C	Non Fishing Days by Parties (E)	Transfers between Parties (F)	Adjusted PAE Balance (G)=D+E+ F	Days Available from MY2 (J)
FSM	6,556	5,648	908	0	0	908	3,282
Kiribati	6,470	4,795	1,675	213 (at 31 Oct10)	0	1,889	3,534
Marshall Is	2,652	637	2,015	114 (at 14 Nov10)	-43	2,086	4,511
Nauru	1,962	2,139	-177	0	43	-134	-30
Palau	610	118	492	86 (at 17 Oct10)	0	578	1,082
PNG	11,959	19,574	-7,615	3,071 (at 30Nov10)	0	-4,544	1,160
Solomon Is	2,548	3,048	-500	0	0	-500	1,019
Tuvalu	1,041	973	68	0	0	68	453
Totals	33,798	36,931	-3,133	3,484		351	15,011
Agreed Limit	28,469	36,931	-8,462	3,484		-4,978	
Total UST Days Exempted				8,920			
Total FSMA Days (outside home Party Waters) Exempted (cap 3,907 days)				5,592			

⁴¹ Includes 5,000 days one off top up for PNG

⁴² Includes 547 days one off top up for Solomon Islands

Table 20 below summarises the status of implementation of national VDS effort limits by the Parties.

Table 24:- Implementation of PAE Allocations by PNA members at February 2011

Party	
FSM	All agreements incorporated the VDS and fleets allocated days per calendar year – <i>PAE not reached in 2010</i>
Kiribati	No information provided.
Marshall Islands	Each licensed vessel allocated 40 days per year in agreements – <i>PAE not reached in 2010. 43 days transferred to Nauru to trade with</i>
Nauru	Olympic run – monitor days against PAE and close of fishing to DWFNs once PAE reached. – <i>PAE was exceeded in 2010. EEZ closed to foreign fishing vessels effective 10 October 2010. Received 43 days from Marshall Islands to trade with foreign fleets.</i>
Palau	Olympic run – monitored total days against PAE. – <i>PAE not exceeded in 2010.</i>
PNG	Allocated days to fleets in agreements. <i>PAE exceeded in 2010. No transfers/trading undertaken</i>
Solomon Islands	Days allocated to Korea, Japan and Taiwan only in agreements. <i>PAE exceeded in 2010. No transfers/trading undertaken</i>
Tuvalu	Olympic run- monitor total days against the PAE. <i>PAE not exceeded in 2010.</i>

A summary of views on the VDS raised by the PNA Members (Statement of intent) in Box 5 reflects recognition of the shortfalls in VDS performance and the need for improvements.

Box 5: Party statement of intent on the application of VDS

Papua New Guinea: Committed to formal exchange system and trading days between parties. A formal mechanism must be established rapidly. PNG has a lower number of days relative to its share of the purse seine catch (NFA, I2).

Kiribati: Process of endorsing change is subject to discussion within Cabinet. Accepted working processes include facility to exchange PAEs between Parties. Kiribati is keen to review capacity penalties to take account of any possible extra impact of the new class of super seiners (MFRD, (I7)).

FSM: Illustrates serious commitment by home parties to fisheries management. The next step is to implement VDS as a mechanism to control effort as a management tool. Presently still resolving final allocation issues between the parties and reducing PAEs to accommodate this (PNA agreement), then will focus on need to ensure scarcity in order to promote environment for a strong market based system (NORMA (I12))

Solomon Is: VDS is a very important tool. However, there is room for improvement. SI is a strong advocate to cap and reduce days. Sustainability of stock is really important. Controlling production will increase competitiveness and address the issue of stock conservation. With reduced capacity only the best players will be left and marginal players will be excluded. This requires a mindset change in PNA worried about potential loss in income. However, the PNA has realised the importance of change, linked to capping VDS and using transfers between countries to account for any shortfalls. MFMR a driver to ask PNA to reduce days. Currently weakness in VDS is USMLT not following the process. (FMR I6)

Nauru: VDS is a good way to go, much more appropriate than the capacity ceiling under Palau arrangement (Vessel cap). It is the most effective way of managing the fishery in the Region, with the view to also increasing the economic benefits for the PICs. The future focus will be on creating scarcity and increasing value. Target is possibly to reduce days and to allow balancing opportunities through exchange. However capacity penalties need to be improved. Refined so that it will reflect catch/carrying capacity. VDS is a quick response to a requirement for action with a link, through the biomass criteria, to stock availability. PNA members needed to action as lack of momentum from other support organisations (NFMRA, (I9)).

RMI: Process is to now implement a hard limit and a trading mechanism between parties, then to standardise implementation systems at Party level, so all working off the same structure. Need to explore existing systems and draw from best practice. VDS is only part of the equation. Other management measures are as important. (Glen Joseph, Director, MIMRA (I3))

Palau: VDS endorsed at the highest levels by leaders of PNA. Palau now needs further improvements to optimise exploitation prospects, but to place a more commercial emphasis on operations for the benefit of all Parties. Believe that there are some underutilised VDS which can be allocated to possible additional opportunities within Palau (BMR (I8))

Tuvalu: VDS is felt to be the most appropriate management tool, but effort within Tuvalu waters has been historically low, but there are signs of an increase in effort (I26).

Shortfalls in the implementation of the VDS have been addressed by other stakeholders, including the lack of clarity and transparency (**Gibbons-Fly, 2010**) and the failure of the VDS to effectively limit fishing capacity (**Hamby, 2010**).

The VDS is a very large management programme being applied by a group of developing countries of varying capacities. Taken together with the various other measures of the 3IA and CMM 2008-01, the VDS provides a central element in the management of the target stocks and is also an important element in the regional strategy to conserve bigeye.

A summary of its core strengths include:

- binding agreement on allocations of fishing effort
- mechanisms to account for effort creep
- high-level political support in the PNA Leadership (PNOA, I14)
- a long history of cooperative PNA management efforts
- an extensive consultative process with stakeholders directly involved
- acceptance of the VDS by the WCPFC and its incorporation into CMM 2008-01
- centralized monitoring of effort by VMS
- support from the FFA VMS and the Regional Observer Programme
- monitoring (logsheet) and scientific support from SPC

Weaknesses apparent in the VDS, including those apparent from the analyses of the operation of the VDS above (and additional details in Appendix F), include

- the lack of a clear link between the PAE and scientific advice on stock status
- PAE allocation has been unsettled, and difficulties have been addressed in part through increasing the TAE and individual PAEs through ad hoc adjustments
- Trading has been slow to develop
- The ad hoc adjustments, lack of trading and high provisions for transfers between years resulted in high adjusted PAEs for 2010 and increased effort in 2010, including allowing the transfer, instead of removal, of effort from the closed high seas areas
- Some Parties have overrun their PAEs, and it is not clear that the sanctions in the Scheme for over-runs are being applied
- Limits have only been partially applied at national level
- There are inconsistencies in the treatment of non-fishing days, with apparently high provisions for non-fishing days for one Party, while no provisions are made for other Parties
- The Scheme does not apply to archipelagic waters, and effort has increased substantially in archipelagic waters of the Parties since 2004
- The FSMA effort is capped at 3,907 days but this looks likely to have been exceeded in 2010
- The need to bring US effort under the VDS.

In response to the early experience **with** the VDS, including the shortfalls in performance, PNA has reported (see Appendix F) amending the VDS Management Scheme to improve the Scheme including:

- eliminating the rollover three year Management Periods in order to prevent the automatic carry-over of days between Management Periods;
- disallowing the transfer of days between Management Years and between

- Management Periods;
- disallowing the allocation of temporary allocations for special circumstances for Parties, effective MY3; and
- requiring FSMA vessels to cease fishing once the cap for days outside home Party waters is exceeded in a Management Year;

Other enhancements advised by PNA (see Appendix F) include agreement to apply a hard limit of 28,469 days for MY4 (2011), improved VMS reporting, and upgrade administrative systems supporting the VDS.

In addition, PNA has advised (PNAO, I14) (Appendix F) that additional enhancements under consideration include:

The Parties have initiated discussions with the US for the US Treaty vessels to operate and have their days limited under the VDS, if not in the current Treaty period which ends 14 June 2013, then in the Treaty extension after 14 June 2013, should there be an extension.

The VMS reporting to the FFA VMS has improved significantly since the VDS commenced in 2007 and the calculation/computation of days for the VDS using the FFA/Absolute software program has also improved significantly.

The PNAO advise that these features are under review (PNAO (I14)):

- Latest science advice, effort, CPUE and conservation and management objectives;
- maintaining hard limits, and impacts of resulting scarcity, including DWFN and FSMA vessels;
- internal provisions, allocations and formulas;
- impact of dramatic rise of effort inside Parties waters, but outside the governance of the VDS scheme, due to "other effort" - USMLT growth outside of 2008-01 / VDS scheme;
- the value of retaining provisions under the original scheme to carry forward unused days, special allocations, to year variances;
- looking at a better trading mechanism between Parties to ensure all allocations are used within each management year;
- considering limiting the number of purse seine vessels to be licensed by the Parties to complement the VDS in managing the purse seine fishery.

The effectiveness of the VDS is a key issue in this report because of the importance of the VDS as a tool for managing the WCPO tropical tuna fisheries, including the fisheries for skipjack. The information noted above indicates the Scheme has not been fully implemented, and there have been difficulties and inadequacies in the early stages of implementation. However, the responses to the shortfalls in the performance in the comments noted above both from the PNA Members and other stakeholders appear to reflect a sense of frustration that the VDS has not been effectively implemented, rather than a concern that it is an inappropriate or ineffective tool. In the longer term, there may be other options for effective management such as catch limits as alternatives or complements to the VDS, but in the short to medium term, effective implementation of the VDS is necessary for the sustainability of the fisheries for skipjack. PNA needs to demonstrate that it has the capacity to ensure that the VDS is effectively implemented.

In terms of the effectiveness of the VDS, nominal purse seine effort was stable in PNA EEZs between 2005, when agreement to apply the VDS was included in CMM 2005-01, and 2009 as shown in Figure 1, after growing by nearly 30 percent in the period from 2001 to 2005 (**WCPFC, 2010c, Table 1**). Catches in PNA waters were also stable over this period as shown in Figure 2. Trends in aggregate purse seine catch and effort including in high seas and archipelagic waters over this period were similar (**WCPFC, 2010c, Table 1**). This data also indicates that fishing effort in PNA EEZs in 2008 and 2009 is likely to have been consistent with CMMs 2005-01 and 2008-01. While the VDS were not in force for the whole of this period, and was not fully implemented when it was in force, these trends provide some indication that the tools in use are effective.

On the other hand, effort is likely to have grown substantially in PNA EEZs in 2010, (and moderately in aggregate in the WCPO), as a result of increases in US effort outside the VDS and the transfer of effort from closed high seas areas, indicating that PNA needs to improve the effectiveness of the VDS.

7.1.4 Regional Organizations (FFA and SPC)

FFA and SPC play significant roles in the management framework for the fisheries under assessment because of the support and services they provide both to PNA and the WCPFC.

FFA

Based in Honiara, Solomon Islands, FFA's 17 [members](#) are Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu. FFA was established to help countries sustainably manage their fishery resources that fall within their 200 mile Exclusive Economic Zones (EEZs). FFA is an advisory body providing expertise, technical assistance and other support to its members who make sovereign decisions about their tuna resources and participate in regional decision making on tuna management through agencies such as the [Western and Central Pacific Fisheries Commission](#) (WCPFC).

The joint aim of members of the FFA is captured in its Vision Statement, which states:

“We, the Member Countries of the Forum Fisheries Agency, will enjoy the highest level of economic and social benefits that is compatible with sustainable use of our tuna resources.”

Approximately 50 staff at the regional FFA headquarters in Honiara support their national contact points in each member jurisdiction. FFA focuses its work on:

- a) Fisheries management – providing policy and legal frameworks for the sustainable management of tuna
- b) Fisheries development – developing the capacity of members to sustainably harvest, process and market tuna to create livelihoods
- c) Fisheries operations – supporting monitoring, control and surveillance of fisheries as well as treaty administration, information technology and vessel registration and monitoring.

The founding document of the Agency is the South Pacific Forum Fisheries Agency Convention and the governing body is the Forum Fisheries Committee (FFC). The [FFC](#) meets annually in Officials and Ministerial sessions to review FFA performance, and consider regional policies and the budget and work programme of FFA. The development and operation of FFA's Annual Work Plan and Budget is driven by the Statement of Intent, which is a rolling three year bridging arrangement to ensure achievement of the longer term Strategic Plan (**FFA, 2005**). Performance

against the Statement of Intent is through the Director-General's Annual Report. An external review of the FFA performance has been undertaken in 2010 (**Cartwright et al., 2010**).

FFA also reports annually to Pacific Island Leaders, meeting at the Pacific Islands Forum, where tuna fisheries issues are given a high priority as reflected in the following statement on fisheries in the 2009 Forum Communique (**Pacific Islands Forum, 2009**)

15. Leaders noted that fisheries resources of the Pacific represent a major source of food and income for Pacific Islands Countries (PICs) and for many Pacific people is the main prospect for sustainable economic development. The maximization of return from these resources and their sustainable conservation and management is therefore fundamental to the long-term socio-economic wellbeing and stability of the region, as is the protection of those resources.

16. Leaders committed to working collectively to ensure that the Western and Central Pacific Fisheries Commission (WCPFC) adopts and implements effective measures to address overfishing of highly migratory fish stocks that are critical to the development opportunities of many Forum members countries.

17. Leaders also committed to working with the Forum Fisheries Agency (FFA) to ensure coastal States in the region are able to manage tuna resources, and maximise economic returns from the long-term sustainable utilization of this resource for the enhancement of sustainable development and food security for the Pacific islands. To achieve these objectives it is important that the WCPFC, as well as national, conservation and management measures are underpinned by a strong, monitoring, control and surveillance framework. Leaders therefore welcome the initiative of the FFA to develop a Regional Monitoring, Control and Surveillance Strategy.

18. Leaders recalled the Vava'u Declaration and its reaffirmation in Niue in 2008, in particular, their call for "strengthened mechanisms to protect regional fisheries via new multilateral Pacific regional arrangements patterned on the Niue Treaty Subsidiary Agreement model for exchange of fisheries law enforcement data, cross-vesting of enforcement powers and the use of fisheries data for other law enforcement activities."

Within the overall FFA programme, the Fisheries Management Programme is designed to assist FFA Members including PNA Parties, to refine and maintain effective policy and legal frameworks for the sustainable management of their tuna fisheries resources. This programme provides advice on:

- i. appropriate legal frameworks for national tuna management, including members' obligations under various treaties and arrangements;
- ii. appropriate fisheries management frameworks including the incorporation of the principles of ecosystem based fisheries management;
- iii. effective fisheries administration, including access arrangements, licensing of foreign and domestic fishing vessels, economic implications of different management systems, and the use of new systems and technologies;
- iv. development and implementation of monitoring, control and surveillance systems and effective compliance regimes;
- v. and provides these services
- vi. assisting members to keep abreast of best practice fisheries management models, and develop stronger and deeper regional co-operation in fisheries management;
- vii. providing effective oversight, and where appropriate management of a regional vessel register, vessel monitoring system, and observer program;
- viii. servicing regional fisheries treaties and arrangements; and
- ix. improving capacity in fisheries management.
- x. Two key instruments in the implementation of these programmes are:
- xi. the Regional Tuna Management and Development Strategy (**FFA, 2009**); and
- xii. the Regional Monitoring Control and Surveillance Strategy (**FFA, 2010**)

In addition to providing services to FFA Members, FFA supports the WCPFC VMS through shared facilities with the FFA VMS, providing establishment, maintenance, diagnostic and support infrastructure and services, mobile transmission unit (MTU) or automatic location communicator (ALC) management services and communication gateways for the Commission VMS, along with training for Commission staff. **(WCPFC, 2008b)**

SPC

With its headquarters in Noumea, New Caledonia, the Secretariat of the Pacific Community (SPC) is an intergovernmental organisation that provides technical and policy advice and assistance to its Pacific Island members. SPC was established as an international organisation in 1947 and has 26 member countries and territories, including American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji Islands, France, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States of America, Vanuatu and Wallis and Futuna.

The SPC vision for the region is a secure and prosperous Pacific Community, whose people are educated and healthy and manage their resources in an economically, environmentally and socially sustainable way.

The SPC mission is to help Pacific Island people position themselves effectively to respond to the challenges they face and make informed decisions about their future and the future they wish to leave for the generations that follow.

SPC services are provided primarily in the form of technical assistance, training and research. The governing body of SPC is the Conference of the Pacific Community, which is held every two years, with each member entitled to one vote on decisions. However, debates are usually resolved in the Pacific way by consensus. The Committee of Representatives of Governments and Administrations (CRGA) meets annually, and in the years that the conference does not meet, is empowered to make decisions on the governance of SPC.

The focus of SPC's work changes over time in response to evolving regional needs and regional collaborative arrangements with other organisations. In 2010, the organisation has six divisions.

One of those Divisions is the **Fisheries, Aquaculture and Marine Ecosystems (FAME) Division** which includes the coastal fisheries and oceanic fisheries programmes, together with the project co-ordination unit of the Coral Reef Initiative for the Pacific (CRISP). Within the FAME Division, the Oceanic Fisheries Programme (OFP) aims "*to provide member countries with the scientific information and advice necessary to rationally manage fisheries exploiting the region's resources of tuna, billfish and related species*". The OFP functions as three sections:

- i) Statistics and Monitoring, including compilation of catch and effort data, data processing and technical support for port sampling programmes and observer programmes in member countries and territories, training in fisheries statistics and database management, statistical analyses and the provision of statistical support to the WCPFC.
- ii) Tuna Ecology and Biology: including analysis of the biological parameters and environmental processes that influence the productivity of tuna and billfish populations, focusing on age and growth, movement and behaviour as observed from classical or electronic data archiving tags, and diet in a more general study devoted to the food web of the pelagic ecosystem; and development of . mathematical models to understand environmental determinants of tuna fishery production, including impacts of climate fluctuation
- iii) Stock Assessment and Modelling, including regional stock assessments, development of tuna movement and simulation models, bioeconomic modelling, National Fisheries

Assessments and scientific input to national tuna management plans and support for national EAFM analyses, tag-recapture database management

The FAME Division Strategic Plan (2010-2013) **(SPC, 2009)** addresses three priority areas in ways that are designed to be closely coordinated with, and contribute to WCPFC-level research outcomes as follows:

- i) To provide high-quality scientific information and advice for regional and national fisheries management authorities on the status of, and fishery impacts on, stocks targeted or otherwise impacted by regional oceanic fisheries;
- ii) To collect and analyse accurate and comprehensive scientific data for regional and national fisheries management authorities on fisheries targeting the region's resources of tuna, billfish and other oceanic species; and
- iii) To improve understanding of pelagic ecosystems in the western and central Pacific Ocean

The building of national capacity to monitor fisheries, manage data, provide technical support to fisheries management and participate meaningfully in regional management discussions is a cross-cutting priority.

Within these areas, the key services being provided to PNA as SPC Members are **(Hampton, pers com, September, 2010)**:

- i. Provision of advice on the regional status of stocks and national implications thereof.
- ii. Scientific support for the development and implementation of national fisheries management plans.
- iii. Capacity building in stock assessment interpretation.
- iv. Provision of data processing and data management services and capacity building.
- v. Capacity building in fishery monitoring, particularly in observer training, debriefer training and the development of in-country observer training capabilities.
- vi. Provision of data and data summaries to the PNA in support of implementation of the purse seine VDS.
- vii. Provision of data and analyses to PNA in support of the development of a longline VDS.
- viii. Provision of analyses of management options being considered by FFA and/or PNA at the sub-regional level.

In addition to serving SPC Members, the OFP provides data and scientific services to the WCPFC, including **(Hampton, *ibid*)**:

- i. Core scientific services in stock assessment, evaluation of management options and measures, data management.
- ii. implementation of projects regarding estimation of purse seine species composition, bigeye tuna biology, tuna tagging, and others

The budget for the core scientific services for WCPFC is US\$700,000 for 2010, with additional funding for specific high priority activities. **(WCPFC, 2009e, Table 2) (WCPFC, 2009b, Annex II)**. The WCPFC funding contributes around 15% of the SPC-OFP budget. **(Hampton, *ibid*)**

7.1.5 The PNA National Governments

PNA national governments have a range of forms of fisheries management institutions responsible for the tuna fisheries. In four Parties (FSM, Nauru, PNG and Marshall Islands) there are statutory authorities. In the other four Parties, the management of the tuna fisheries is the responsibility of government departments, either separate Ministries responsible for fisheries marine resources (Kiribati, Solomon Islands) or in smaller administrations, departments within Ministries with broader responsibilities (Palau, Tuvalu).

The structures of the national legal frameworks for offshore fisheries management are based on the implementation of global and regional instruments including UNCLOS, the UN Fish Stocks Agreement, the Nauru Agreement and its subsidiary and associated arrangements, the WCPFC Convention and Commission measures and other decisions, and the FFA Convention and subsidiary FFA arrangements including the Niue Treaty and the FFA Minimum Terms and Conditions. As Parties to the UNFSA and the WCPFC Convention, all PNA Parties have accepted the obligation to comply with the provisions of those Agreements, including the obligation to apply the principles in those agreements, including the precautionary approach, in their EEZs. The approaches to implementation of these instruments in national laws are also broadly similar, reflecting the long period of collaboration of the Parties in tuna management through PNA, FFA and more recently, the WCPFC. Box 6 describes the relevant legal processes in PNA Members.

Box 6: Legal processes outlined by national administrations

Acts, regulations and gazettes are prepared by Authorities or Government Fishery Departments. Formal and informal consultation takes place at national level. In the case of the Authorities, the legal drafts are submitted to each Board for approval (NFA (I.2) and MIMRA (I.3), BMR (1.8), NFMRA (1.9)), before submission for legal testing and authentication to the Attorney General's office. Other national Ministries follow the same process (MFMR (I.6), MFRD (I.7), MNR&E (I.26)). All organisations submit to the Attorney General vetting process, then to Cabinet or Parliament, depending on the status of the legal statute. Gazettes or regulations are usually lower level and may not require submission to Parliament.

As part of English Law, which provides the basis for the region's legal system, there is provision for legal challenges in court through Judicial Review processes or matters of interpretation can be made. The Fisheries Departments seek to prevent any such challenges through effective consultation, but if challenged the processes of adjustment are in place to implement rapid changes to legislation, facilitated by the Attorney General's office in each country. (Comments made by Attorney General spokesperson for NFA, PNG). None appear to have been tested, but the process for challenge/judicial review is in place.

Five PNA Members (FSM, Marshall Islands, Palau, PNG and Solomon Islands) have adopted Tuna Management Plans. Seven Parties have undertaken risk assessment-based EAFM analyses (FFA advise that this work for Solomon Islands will be undertaken in 2010).

PNA arrangements and most WCPFC CMMs apply obligations to Parties or Members, rather than vessels. Implementing arrangements are then required at national level to legally bind boat owners and operators. These arrangements can take the form of legislation, regulations, Gazette Notices, Authority decisions (which in some cases have the power of regulations), access agreement provisions or licence conditions. The table below sets out the status of national implementation of the 3rd Implementing Arrangement.

Table 25: Status of Implementation of Regulations for the 3rd Implementing Arrangement (as at 9 June 2010)

Party	Status	As at
FSM	In process of final review of 3IA Regulations. Elements of the 3IA have been incorporated in bilateral access agreements since mid October 2009.	8 March 10
Kiribati	The 3IA has been incorporated into agreement/licence conditions. The new legislation under which 3IA Regulations will be promulgated has been read in Parliament and will be tabled again in Parliament next session which is in Aug/Sept 2010.	4 June 10
Marshall Islands	Fishing Licence (Third Implementation Arrangement) Regulations of 2009 (Title 51MIRC) - promulgated 23 rd December 2009	8 March 10
Nauru	Fisheries (PNA Implementing Arrangement) Regulations 2009 - enacted 30 July 2009	8 March 10
Palau	Fisheries Permit (PNA Third Implementing Arrangement) Regulations 2009 – Title 27 Division 1 Foreign Fishing – submitted for review in February 2010. Update - Ratification of the 3IA, VDS, and FSMA are currently in the process of being ratified by both Houses in Congress. The Senate has ratified and awaiting the House of Delegates	4 June 2010
PNG	Given legal effect through NFA Board Resolution and implemented under Access agreements by 1 st Jan, 2010	
Solomon Is	Fisheries (PNA Third Implementing Arrangement) Regulations 2010 – Fisheries Act 1998, gazetted 30 March 2010.	9 June 10
Tuvalu	Conservation and Management Measures (PNA Third Implementing Arrangement) Regulations 2009 (section 96 Marine Resources Act 2006) – signed and published 30 th October 2009	8 March 10

Source: PNAO, June 2010

In addition to measures deriving from the various global and regional instruments, the Parties apply specific additional measures nationally (Table 16). These are generally focused on managing interactions between large scale distant water fleets and local fleets, especially small scale fishers.

There are relatively very few issues associated with traditional rights over offshore resources in the Pacific Islands region, compared with the extensive systems of rights over the resources of nearshore reefs and lagoons. Where offshore rights exist, they typically apply to the shallow water resources around offshore banks and reefs. Some exceptions existed, such as those relating to fishing in tuna “holes”, generally in Polynesia. Current national fisheries management systems provide protection for customary rights and the interests and livelihoods of small scale fishers in various ways. Approaches include:

- a) Prohibiting fishing by outsiders in areas to which customary rights apply, unless specifically authorized (Kiribati, 2009) s. 19;
- b) providing for registration of customary rights, and compensation to be paid when customary rights are breached (Solomon Islands, 1998) ss 10 and 12
- c) full recognition and respect for customary rights in all transactions affecting the resource or the area in which the right operates. (PNG, 1998) s. 26

For the purse seine fisheries, fishing is prohibited inside the 12-mile territorial seas, and in many cases inside a 50-mile radius around main islands. There is substantial attention to, and concern about, the impact of offshore fisheries on nearshore small scale fisheries, but direct conflicts with tuna developments are most clear in the impacts of fishing in lagoons for bait for pole and line fisheries (D’Arcy, 2006).

At national levels, tuna policies and decisions are the subject of extensive consultations of varying forms, particularly where there are established domestic interests in the tuna fisheries.

Tuna plan reviews and the EAFM processes all involve broad consultative processes as illustrated in Box 7.

Box 7: Government and Fishery Authority consultation processes conducted in PNA countries

Formal consultations take place in **Papua New Guinea** (with the FIA), across a wide range of domestic stakeholders. In the case of PNG, industry members are also on the Board of Directors of the NFA, and industry representatives regularly received for informal discussions (NFA, I.2). PNG **FIA** describes the NFA as being *very inclusive* (I.5)

FSM and RMI: Hold regular workshops with its industry to discuss fisheries management issues (NORMA (I.12), and MIMRA (I.3).

Kiribati, Solomon Is, Nauru and Tuvalu: Informal consultations take place between national or foreign investment stakeholders at Government level in these countries (MFRD (I.17), MFMR (I.6), NFMRA (I.9) MNR&E (I.26))

Palau: The island is so small that the BMR Board represents an effective consultation process (BMR (I.8))

In all cases where the domestic industry has a presence (**PNG, Solomon Is, Kiribati, FSM and RMI**), they will participate in international meetings as part of the national delegations (I.5 and I15)

PNA Parties individually engage regularly with bilateral partners on management issues. Meetings are held annually or bi annually based on demand (NFA (I.2), MIMRA (I.3), MFRD (I.17), MFMR (I.6), NORMA (I.12)

The PNA Members provide Annual Reports in two parts to the WCPFC on:

- i. research and statistics – reports for 2010 available at <http://www.wcpfc.int/meetings/2010/6th-regular-session-scientific-committee>
- ii. management and compliance. These reports are confidential to the WCPFC Secretariat and CCMs. A template for the report can be found at <http://www.wcpfc.int/doc/tcc-01/annual-report-commission-part-2-management-and-compliance>

The WCPFC Secretariat reviews and summarises the national management and compliance reports for presentation to the Commission.

The PNA national administrations are reviewed through a range of public sector management processes including annual and other reporting and financial audits (e. g. The performance of the PNG NFA is reviewed against indicators in the Corporate Plan, and the performance of the Kiribati MFMRD against the Ministerial operational plan is reviewed every 6 months by Ministry of Finance and Economic Development & Planning.

7.2 MONITORING, CONTROL AND SURVEILLANCE

The WCPFC has designed, largely established, and is in the early stages of implementing a comprehensive compliance programme, including the following elements:

- Requirements for vessels, including support vessels operating outside their own waters to be on the WCPFC Record of Fishing Vessels and Authorisation to Fish (CMM 2009-11)
- Responsibilities and process for Cooperating Non Members (CMM 2004-02)
- Specifications, Markings and Identification of Vessels (CMM 2004-03)
- High seas Boarding and Inspection Procedures (CMM 2006-08)
- Regional observer programme (CMM 2006-07)
- High seas Vessel Monitoring System (CMM2007-02)
- blacklist of IUU Vessels (CMM2007-03)

- Regulation of Transshipment, including ban on purse seine vessels transshipping at sea (CMM 2009-06)
- Charter Notification Scheme (CMM 2009-08)
- Monitoring Landings of Purse Seine Vessels (CMM 2009-10)
- Rules for Provision of Scientific Data and Data Dissemination

Some of the major elements of this programme, including the observer and VMS programmes, are founded on, and supported by FFA programmes. Additional elements being developed include conservation and management measures for Port State Controls and a Catch Documentation Scheme. Addressing IUU fishing over the huge area of the WCPO is a major challenge. With most of the fishing taking place in national waters, the broad strategy of the WCPFC compliance programme is to focus on controlling high seas fishing, strengthening the exercise of control by coastal state CCMs, and monitoring compliance with CCM obligations throughout the range of application of Commission measures. Compliance failures by vessels are addressed by the application of the WCPFC IUU listing procedure. Compliance failures by CCMs, rather than vessels, are currently addressed through Commission processes of monitoring, reporting and accountability. The Commission is developing a formal process for the application of sanctions for non-compliance. A Commission at-sea inspection scheme adopted in 2006 allows Commission Members, including PNA to inspect foreign and other vessels on the high seas.

Box 8: Summary of WCPFC compliance strengthening observations to CCMs.

- Establishing the WCPFC provided additional strength to ensure CCMs complied with Regional Management Decisions. Parties, including all DWFNs are accepted as compliant and are monitored by CCMs in EEZs and WCPFC VMS on the high seas as well as 100% observer coverage for purse seiners in all areas between 20N and 20S, and all CCMs have mechanisms in place to respond to queries.
- CCMs report infringements to the Commission and propose such vessels for the WCPFC Draft IUU list for final decision by the Commission if the case has not been satisfactorily resolved. The Secretariat reports suspect activities to flag States to assist them in controlling their fleets.
- WCPFC support PNA and other Member International MCS operations – data on high seas operations. Reports on boardings are sent to flag State and copied to WCPFC. WCPFC is the only tuna RFMO allowing High Seas Boardings.
- Closure of other High Seas pockets will be a significant positive step to deter unauthorized vessels fishing in the Central Pacific if appropriate monitoring and observer coverage can be met, most particularly with unauthorized fishing inside the EEZs. (for those with VMS on board, as opposed to non registered/unlicensed) This will have the benefit of concentrating authorized fishing activities inside the Party EEZs.
- Observer coverage is a clear advance and ensures compliance. The Regional Observer Programme deployment now has Commission approval to ensure carry over of observers when working across EEZs. In the PNA waters, the PNA has declared that the ROP observer aboard must be from a PNA country.

Source: Carlot A, Flewwelling P and Richards A, WCPFC (I13).

The Forum Fisheries Agency (FFA) maintains a regional vessel register, coordinates the regional observer programme (and US Treaty vessels), operates the FFA centralised VMS and maintains several other databases on behalf of the FFA parties such as the violations and prosecutions database, and coordinates, through the FFA Regional Fisheries Surveillance Centre, Joint Deployment Actions. All vessels licensed to fish in the waters of FFA Members are required to maintain a VMS reporting to FFA at all times when they are in EEZ waters. VMS operation is not required in high seas waters, although many vessels do not switch their transponders off. The WCPFC Convention, the FFA MTCs and national laws and the Palau Arrangement at sea prohibit transshipment.

An extensive VMS system is in operation, as well as a 100% observer programme, Observers report data from catches in EEZ waters, with special provisions through a MoU (PNAO, 2008)

to allow observers to operate in the waters of several EEZs. The national observer programme run by PNG ensures that all Philippine vessels licensed by PNG to undertake transshipments under mother ship operations at sea have 100% observer coverage.

The Niue Treaty includes provisions for common conditions for access, information exchange, and cooperation in enforcement (including provisions for patrols to extend into the waters of another Party, sharing of personnel/means of surveillance), cooperation in prosecutions and the enforcement of penalties, transparency of penalty schedules across the region. Joint patrolling and enforcement activities are undertaken (e.g. Operation Bigeye between Palau, FSM and RMI has been operational since the early 2000s; Operation Island Chief⁴³ between Papua New Guinea, Federated States of Micronesia, Palau, Marshall Islands, Nauru, Kiribati and the United States of America) and other similar joint MCS projects). FFA maintains databases on regional VMS, licensing, vessel register, violations and prosecutions. Overflight surveillance is provided by France, US, Australia, and New Zealand.

MCS capacity varies in the PNA area. The region has a network of PPBs (Pacific patrol boats), supplied with the support of the Australian Government. MCS capacity is generally acknowledged to be moderate to good (MRAG, 2009) and IUU activity is usually detected.

MRAG (2009) undertook an assessment of risks throughout the WCPO fleet. Specific compliance risks identified with the region were as follows:

- Under-reporting of catches in vessel logs or weekly reports. Historically 31 % of purse seiners would under report, even when observers were on onboard.
- Under-reporting of bycatches
- CCMs not reporting details on catch and effort to WCFPC
- Failure to inspect vessels on landing
- Landings into foreign ports
- Failure to implement pre fishing inspections to check licence and other details (e.g. ships master)
- High observer turnover
- Observer reports of violations not acted upon
- Weaknesses in implementation of fisheries violations in some countries
- Weak system of information exchange and data base management

MRAG (2009) also identified the region's strengths as: key solid national fisheries licensing systems with good databases and good regional systems, most notably the Pacific VMS, but also others within FFA, WCPFC and SPC.

PNA Office responses to the risk identified, whilst still evolving, have been to implement a series of changes:

- Many of the non compliance risks are associated with the longline fleet
- 100% catch retention (for bigeye, skipjack and yellowfin) strengthens the reporting and validation of log book records, though automatic cross checking procedures need to be put in place
- Increasing observer coverage to 100%, allied to a comprehensive debriefing process strengthens the ability to accurately record catch data, but also to observe other infringements such as fishing in the High Sea and fishing during FAD closures

⁴³ http://www.ffa.int/operation_island_chief_2010

- Setting an observer MoU between PNA parties to allow for more efficient deployment and consistency in training and debriefing processes
- Transshipping at sea is prohibited, and most catches are transhipped or landed in the region, However, the Japanese fleet systematically land their catch outside the region.
- Penalty systems and prosecution laws have been revised through changes to legislation. All National Acts contain schedules with the facility for forfeiture, with fines of up to US\$ 1 million for major offences
- Joint initiatives in data exchange are happening between countries
- All countries maintain an ongoing commitment to fisheries inspector (NFA, I2) enforcement officer and observer training. PNG has its own nautical college (Kavieng College) which supports access to all island countries.

Evaluating these issues, the assessors draw the following observations:

Purse seine non-compliance is extremely modest as compared to longliners. This is borne out by the number of offences detected (Box 10). **MRAG (2009)** identified residual risk ratings for the purse seine fishery generally scoring lower than those for equivalent risks in the longline fishery. This was attributed to stronger MCS measures applied to the purse seine fishery, but to some extent this reflected fewer vessels in the fishery⁴⁴.

Log sheet coverage is reported as between 82% and 86 % from purse seiners, with most of the shortfall relating to fishing in the high seas (Hampton, pers com, September 2010), in the years 2006 to 2009, as compared to long liners (18% to 40%).

Observer coverage has been extended from 20% to 100% (CMM 2008-01), with 100% applying in 2009 to cover the FAD closure periods, and 100% thereafter for all purse seine activities. All tuna catches are to be retained on board (CMM 2008-01), but some countries, Papua New Guinea (NFA I2) have also extended this provision to include all bycatch species. Observers are required to complete detailed modules within a standard manual and are subjected to an extensive debriefing process⁴⁵, conducted by a Senior Observer/Observer coordinator (WCPFC/SPC, I11) and the National Observer coordinator respectively. Observer records are subsequently validated by SPC through data entry (I10), with feed-back to the National coordinators as and when required. Moreover, to ensure that the system is operating effectively, WCPFC have introduced an audit process, which is about to become operational (WCPFC, Audit of Agreed Minimum Standards, 2010). All observers are subject to competency training (Staisch *et al.*, WCPFC (I11) and Park, FFA (I19), across the different levels. Regular workshops are also held between the management organisations and the National Coordinators to evaluate the progress and instigate change. The most recent issues discussed at these workshops relate to extending the training network, ensuring complimentary in application throughout the countries and logistical deployment between the countries (island and distant waters) (Staisch *ibid*).

Member State observations on working experiences of the Observer scheme are summarised in Box 9 below. A summary highlighting positives and negative issues associated with the workings of the scheme are summarised in Box 10.

⁴⁴ 257 purse seiners (PNAO, 2010) and 770 long liners (FFA Vessels of Good Standing⁴⁴).

⁴⁵ <http://www.spc.int/oceanfish/Html/Statistics/Forms/index.htm#Obs>

Box 9: Party actions, observations and statement of intent on PNA Observer scheme

Papua New Guinea: PNG trained 180 trained observers, increasing the total pool to 400. Has strong nucleus of trained trainers and holds regular training and refresher courses for all parties at Kavieng Fisheries College. PNG has a high pool of Senior Observers and coordinators. The observer scheme has very low levels of attrition, but current problems are: coordination of increasing numbers with the key issue of ensuring good quality of work; observers wanting feed back, reporting incidents; intimidation/observer obstruction. When it happens will address. Heavy penalties, so less likely but two recent serious issues on longliners. (NFA, I2). The **PNG FIA** states the NFA are the shining stars in observer coverage throughout the region, and have high degree of confidence in the accuracy of observer data.

Kiribati: Proactively endorse observer scheme, with one trained trainer under going advanced training with FFA/SPC. Now has a pool of 60 observers, 10 Senior observers. Observer investing processes demonstrates selection of a high calibre of observers, but accept the need for greater in-house validation of observer quality (MFRD, I7)

FSM: 70 observers, recent new intake of 15, 12 Senior Observers. Also have a joint agreement with RMI for observer sharing. Confident that NORMA debriefing process is effective (NORMA (I12))

Solomon Is: 80 observers, big increase from under 20 (these now Senior Observers), when at 20%. Advanced in just 12 months. SI has 2 of its own trainers. SPC and FFA to train observers. Debriefing undertaken by an Observer Coordinator and Senior Observer. 80-100% confidence level in outputs. Requires more training on debriefing and collection/quality if data. Quality check is in house, but SPC provides secondary evaluation of the data outputs. Perhaps strengthening the process to identify violations, but perceive that these are picked up, if they occur at all. Any Violations reported to fisheries inspectors (MFMR (I6))

Nauru: Observers: Nauru has 6 active observers, but striving to reach 20 observers. Observers are debriefed FFA debrief. A programme and coordinator will be added.

RMI: One senior observer coordinator and two trainers of trainers, with a pool growing from 30 to 50 observers, but there can be a problem with recruitment due to the low island population, hence the drive to share observers between PNA countries, with some attrition. MIMRA has strong confidence in the observer system, otherwise wouldn't have moved from 20% to 100%. Perceives that this system allied to VMS leads to very high levels of compliance (MIMRA, I3). RRMI fishing companies confirmed a high degree of confidence in data collected and ability of observers to identify the quantity caught.

Palau: Political priority set to improve observer system. Observer pool will be 25, 11 presently certified, with the aim to have access to a reserve pool. Training supplied from FFA but looking to others through PNA e.g. PNG, to assist in training. FFA presently debriefing observers but also investigated and interrogated by coastguard to assess for possible violations. A programme coordinator will be added to the staff.

Tuvalu: 5 current observers, with 6 additional observers training in Kevieng. This system appears to have demonstrated dividends with only minor infringements committed on purse seiners in the last 2 years. Offences are more likely to be detected on Long liners. Tuvalu is presently strengthening its debriefing process. There is presently 1 senior observer but 2 observers will be sent to SPC.

Box 10: Observations concerning the operation of the observer scheme by the principal management and support organisations.

Positive issues:

- 100% coverage of purse seine vessels, and to date strong compliance by boats
- Observer presence has ensured verified monitoring of the FAD closure
- Focus during FAD closures is now on detecting free schools and using helicopters. School fish quality is generally better.
- PNA observer initiative extremely positive.

Negative issues:

- Not enough funds available for the scheme
- Continued commitment to training and extending the observer pool
- Standards in training and course content need to be high. Some parties weaker than others
- Minimal levels of intimidation occur. One recent alleged murder of an observer while carrying out duties at sea.

- Logistical issues moving observers around the region. Require visas to go through US – Embassies only in Fiji, Papua and Fiji, and observers have to travel through these places. Entry visas into Australia also problematic.
- Observer tasks are very onerous, with many things to report. MSC and Commission Management Measure requirements might require 2 observers per boat. Already sufficiently onerous as is.
- Some minor evidence of corruption. These things can be spotted in de-briefing, or when an alternate observer goes on board.
- There were some grey areas, including interpretation of different FAD sets. These have been rectified with clear definitions and instruction.

Source: Staisch and Brogan, WCPFC/SPC (I11) and Park, FFA (I19).

All vessel purse seine **transhipments** are required to take place in designated port under enforcement officer supervision (CMM 2008-01), with the exception of mothership operations in PNG and Philippines. Of the 10 DWFN, 8 tranship, and three land directly into ports (Japan, New Zealand into Pago Pago, and the EU fleet). Japanese inspections are reported to be extensive (Kazuo Shima, President, Kaimaki, Japan (I18)). An extract from the MSC assessment from the Japanese pole & line assessment reads as follows:

There are port inspections of vessels that land at a Japanese port and all tuna landings have to be distributed through the wholesale market in Japan. The amount of landings is recorded and reported to the government by the manager of the market (the Wholesale Market Law). In this way, catch data can be verified by the market statistics. The Japanese government implements a scoring mechanism for each licensee. If poor or bad data are submitted to MAFF, they can get penalized according to the degree of seriousness. After 4 points have been deducted during the lifetime of the license, it can be revoked for a period up to 5 years.

PNA Parties indicates a strong commitment to implementing penalties for violations. In all cases the penalty schedules have been revised significantly to include forfeiture, and fines of up to US\$ 1 million (National Fishery Acts). This is consistent across all countries with the exception of the Solomon Is, where penalties are lower (up to a maximum of US\$ 142,000). Interviews with the industry confirmed very high levels of compliance (FIA, I5; Muller *et al* I15). Most violations are dealt with through court processes, but with two reported exceptions. Kiribati operates a Tribunal (Fisheries Administrative Penalty Committee), which examines violations and determines actions (Taberannang, MFMRD, I7). The NFA Board is also empowered to establish a Summary Administrative Panel to hear enforcement matters that can be dealt with by administrative sanction (NFA I1).

Box 11: Government observations of compliance effectiveness:

Solomon Is: Catch reporting procedures strengthened considerably with regular cross checks against observer records. Violation results in USD 30,000 fine (MFMR (I6)).

FSM: 100% observer coverage, allied to VMS ensures full compliance (NORMA (I12))

RMI: Effective enforcement is complimented by catch certification, and a strong focus on checking transhipments; Regional MCS policy provides strong joint deployment opportunities between parties and larger nations. Micronesian Trilateral arrangement (Palau, FSM and RMI). Operation Bigeye and Island Chief are examples where sharing info and assets has worked. This was supported by NZ, France, US, Australia and Japan (RMI); Through WCPFC Technical Committee process, Port State and Flag State issues are being strengthened (MIMRA (I3)).

Palau: As a small island nation, Palau relies heavily on support from international support - usually USA to control IUU. However, it participates in actions as and when these occur utilising its own Patrol vessel supplied by the Australian Government. The main fishing participants, Japan are seen to be very compliant (BMR (I8)). Main areas of concern are IUU fishing from Philippines and Indonesia.

Box 12: Government observations on non compliance

FSM and RMI: No evidence of systematic non compliance (MIMRA, I3) and NORMA (I12) reported attempts by some vessels to bribe observers following implementation of the FAD closure, 3 cases in RMI and 1 in FSM. But these attempts were reported by the observers, or spotted through the debriefing checks. Penalties are also perceived to be so severe (i.e. the risk of forfeiture or a heavy fine (USD 300,000 in the case of FSM case), that non-compliance is extremely unlikely.

PNG reports no serious breaches for 2 years. VMS provides the disincentive to misreport (NFA, I2). 7 prospective violations presently under investigation (N. Pakop, MCS EO, NFA, pers com, September, 2010).

Kiribati reported a breach to the catch retention system, but dealt with effectively without any repeat violation (MFRD, I7)

Solomon Is. Reported one breach with an observer left on an island, resulting in a USD 100,000 fine.

The FFA Region is reported to have a moderate to strong VMS system (MRAG, 2009). There is an hourly VMS polling of purse seine vessels under the VDS scheme and both FFA and the PNG systems now integrate the use of automated alerts (entry/exit, on/off, entry into closed zones) to improve monitoring. There is some VMS data sharing between parties, but there are reported gaps in coverage amongst FFA members and between FFA members and the WCPFC (Carlot, *et al*, WCPFC, I13).

There are acknowledged weaknesses in **systems of information exchange** and database management. Strengthening information exchange is a core component of the FFA MCS strategy (**FFA, 2010**). There is an urgent need to improve the coverage and quality of information to underpin future implementation across the region. In light of this, an important focus of the FFA Strategy will be in supporting measures to enhance information management and analysis at the national and regional levels. The enhancement of information management systems, including the establishment of ‘compliance analysis engines’ at the national levels and a Regional Information Management Facility at the regional level will be undertaken. Improved information management systems will be supported by improved analytical capability at both levels. Strengthened information management systems should allow for the routine cross-referencing of different data sources (e.g. VMS, logbooks, observer reports, port inspections, etc) to verify compliance, as well as better support exchange of information under current and future agreements (e.g. Niue Treaty, PSMA).

The conclusion from above is that non compliance may feature as part of the day to day activities of the purse seine sector, and some violations may have occurred following the introduction of the FAD closure. However, the observer system has been proven to identify violations, and there is no systematic non compliance. Alleged violations reported by observers are followed up in a number of manners. Serious violations are investigated and result in penalties. Other issues such as inaccurate logsheet reporting, which appear to be the major problem (Pakop, *ibid*) are followed up in consultations with fishing companies and fishing states.

A further weakness has been the failure of some WCPFC Members, including some PNA members, to comply with the reporting requirements of the WCPFC via Part 2 Annual Reports. As reported to WCPFC7, 9 of 35 Part 2 Reports for 2009 were still not submitted by CCMs, including 2 from PNA CCMs (see WCPFC7-2010/19), As of June 2011⁴⁶ there were two PNA members with outstanding part 2 reports in 2009 and 2010 were Kiribati and RMI (2009) and RMI and Palau (2010). WCPFC is however proposing to streamline the reporting requirements. (WCPFC, 2010b)

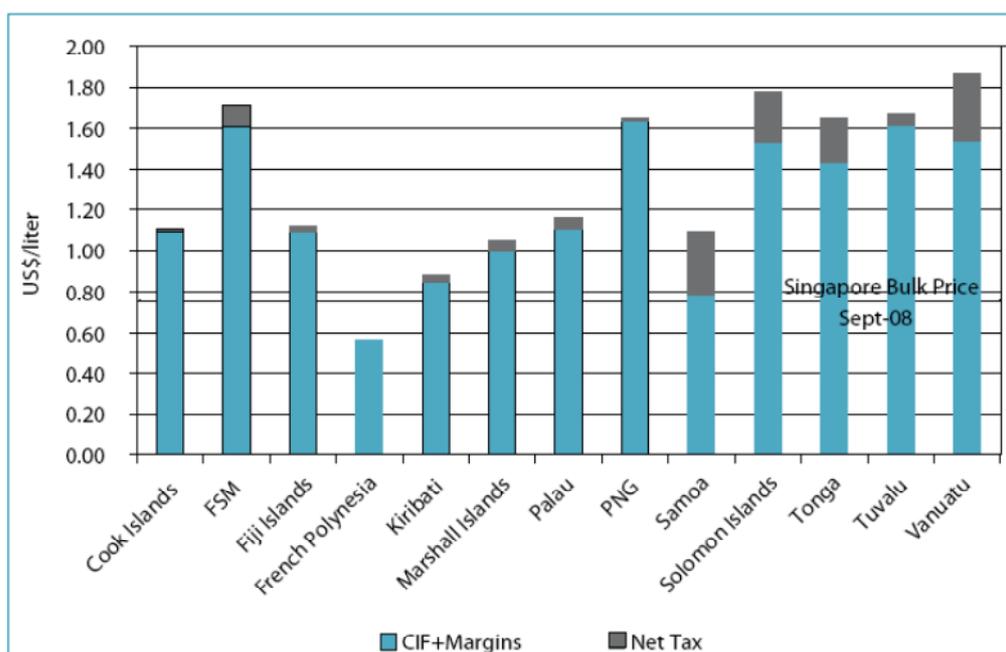
⁴⁶ Manarangi-Trott, L., ffa.int, email of 19 June 2011

7.3 INCENTIVES TO SUSTAINABLE FISHING

The VDS creates a rights-based framework, which attaches rights at national level in terms of fishing days. It is clear from PNA documentation that this framework creates a strong incentive for sustainable fishing providing incentives to the PNA to limit fishing effort to maximise economic benefits from lower levels of effort – in a form of a resource “cartel” limiting effort well below the MSY-based level for the major target stocks for economic purposes. PNA agreement to limit purse seine effort generally to 2004 levels demonstrates the outcome of that framework. That framework also creates opportunities to establish enterprise-level rights, creating incentives for enterprises to be cautious and compliant, and value sustainable gains over short-term gains, and seeks to ensure that perverse incentives are not created.

The VDS effort limits are an input control. Input controls tend to provide incentives for the substitution of inputs and the use of new and improved technology. Vessel size restrictions in particular tend to encourage increases in vessel fishing power and effort limits tend to encourage effort creep. The VDS length adjustment factors are more than a simple size limit in the way that size restrictions are usually applied as input controls, in that they automatically adjust nominal effort to take account of increases in vessel length, and the adjustment factors and length classes can be modified to take into account changes in fleet size composition and vessel fishing power. In addition, the VDS text requires the Administrator to report annually to the Parties on *“catch and effort levels and any observed or potential increase in average effective fishing effort for each fishing day since the introduction of the vessel day scheme (effort creep)”*, and requires the Parties to *“take the necessary management action to ensure such effort creep is not detrimental to the fishery”*, where *“Options for management action by the Parties shall include controls on vessel length, vessel capacity, well size, the use of fish aggregating devices or any other necessary measure.”*

In the developing country context of the WCPO tropical fisheries, there are a number of financial and economic transfers that might be characterised as subsidies. An ADB study found systematic subsidization of aquaculture in Pacific Island Countries and territories, and refers also to cases of subsidization of inshore commercial fisheries. It contains one reference to subsidization of commercial tuna fisheries in Pacific Island countries, in FSM, involving support for government fishing ventures. An analysis of fuel costs in that report (illustrated below) indicated fuel subsidies in French Polynesia, but not in PNA countries.



FSM = Federated States of Micronesia, PNG = Papua New Guinea, Sept = September.

Source: Wilson, J., and M. McCoy. 2009. *Study of the Impact of Energy Price Fluctuations on Fisheries in the Pacific, with Emphasis on the Tuna Industry*. Washington, DC: World Bank.

There are highly likely to be elements of subsidy in the provision of access preferences and services to some fleets which, may, from some points of view, be seen as unfair, but do not necessarily create perverse incentives within a system of effective limits to fishing mortality.

On the other hand, the access fees levied by PNA, estimated at \$74.9m annually in 2007, not generally payable in other high seas tuna fisheries, estimated as ranging from 3.9% (PNG) to 10.9% (Kiribati) of catch value in 2007 (ADB, 2009) represent a form of resource rent or payment for environmental services that can be expected to significantly reduce profits and provide a disincentive to investment in increasing effort in PNA waters.

On balance, the assessors consider that the management system for the PNA purse seine fisheries provides for incentives that are consistent with sustainability.

In addition, there is evidence in the VDS (including the length adjustment factors) and in PNA decision-making processes (including PNA's position on the US Treaty) of efforts to ensure that perverse incentives do not arise. However, the lack of clarity in the links between the VDS decisions and the scientific advice and the inherent tendency towards effort creep in effort limits creates a risk of perverse incentives potentially affecting sustainability in future.

8 OTHER FISHERIES AFFECTING THE TARGET STOCK

Other fisheries interacting with the target species include non-PNA purse seine fisheries, archipelagic purse seine fisheries and pole and line fisheries. The PNA purse seine fishery historically accounts for more than 50% of the catch within its EEZs. This dependency is likely to increase following the introduction of high seas closures, which were extended further in 2010. Detailed dependencies are summarised in Section 4.4.

9 STANDARD USED

The MSC Principles and Criteria for Sustainable Fisheries form the standard against which the fishery is assessed and are organised in terms of three principles. Principle 1 addresses the need to maintain the target stock at a sustainable level; Principle 2 addresses the need to maintain the ecosystem in which the target stock exists, and Principle 3 addresses the need for an effective fishery management system to fulfil Principles 1 and 2 and ensure compliance with national and international regulations. The Principles and their supporting Criteria are presented below.

9.1 PRINCIPLE 1

A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.⁴⁷

The intent of this principle is to ensure that the productive capacities of resources are maintained at high levels and are not sacrificed in favour of short term interests. Thus, exploited populations would be maintained at high levels of abundance designed to retain their productivity, provide margins of safety for error and uncertainty, and restore and retain their capacities for yields over the long term.

Criteria:

1. The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.
2. Where the exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level consistent with the precautionary approach and the ability of the populations to produce long-term potential yields within a specified time frame.
3. Fishing is conducted in a manner that does not alter the age or genetic structure or sex composition to a degree that impairs reproductive capacity.

9.2 PRINCIPLE 2

Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

The intent of this principle is to encourage the management of fisheries from an ecosystem perspective under a system designed to assess and restrain the impacts of the fishery on the ecosystem.

Criteria:

1. The fishery is conducted in a way that maintains natural functional relationships among species and should not lead to trophic cascades or ecosystem state changes.

⁴⁷ The sequence in which the Principles and Criteria appear does not represent a ranking of their significance, but is rather intended to provide a logical guide to certifiers when assessing a fishery. The criteria by which the MSC Principles will be implemented will be reviewed and revised as appropriate in light of relevant new information, technologies and additional consultations

2. The fishery is conducted in a manner that does not threaten biological diversity at the genetic, species or population levels and avoids or minimises mortality of, or injuries to endangered, threatened or protected species.
3. Where exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level within specified time frames, consistent with the precautionary approach and considering the ability of the population to produce long-term potential yields.

9.3 PRINCIPLE 3

The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

The intent of this principle is to ensure that there is an institutional and operational framework for implementing Principles 1 and 2, appropriate to the size and scale of the fishery.

A. Management System Criteria:

1. The fishery shall not be conducted under a controversial unilateral exemption to an international agreement.

The management system shall:

2. Demonstrate clear long-term objectives consistent with MSC Principles and Criteria and contain a consultative process that is transparent and involves all interested and affected parties so as to consider all relevant information, including local knowledge. The impact of fishery management decisions on all those who depend on the fishery for their livelihoods, including, but not confined to subsistence, artisanal, and fishing-dependent communities shall be addressed as part of this process.
3. Be appropriate to the cultural context, scale and intensity of the fishery – reflecting specific objectives, incorporating operational criteria, containing procedures for implementation and a process for monitoring and evaluating performance and acting on findings.
4. Observe the legal and customary rights and long term interests of people dependent on fishing for food and livelihood, in a manner consistent with ecological sustainability.
5. Incorporates an appropriate mechanism for the resolution of disputes arising within the system⁴⁸.
6. Provide economic and social incentives that contribute to sustainable fishing and shall not operate with subsidies that contribute to unsustainable fishing.
7. Act in a timely and adaptive fashion on the basis of the best available information using a precautionary approach particularly when dealing with scientific uncertainty.
8. Incorporate a research plan – appropriate to the scale and intensity of the fishery – that addresses the information needs of management and provides for the dissemination of research results to all interested parties in a timely fashion.
9. Require that assessments of the biological status of the resource and impacts of the fishery have been and are periodically conducted.
10. Specify measures and strategies that demonstrably control the degree of exploitation of the resource, including, but not limited to:
 - a) setting catch levels that will maintain the target population and ecological community's high productivity relative to its potential productivity, and account for the non-target

⁴⁸ Outstanding disputes of substantial magnitude involving a significant number of interests will normally disqualify a fishery from certification.

- species (or size, age, sex) captured and landed in association with, or as a consequence of, fishing for target species;
- b) identifying appropriate fishing methods that minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;
 - c) providing for the recovery and rebuilding of depleted fish populations to specified levels within specified time frames;
 - d) mechanisms in place to limit or close fisheries when designated catch limits are reached;
 - e) establishing no-take zones where appropriate.
11. Contains appropriate procedures for effective compliance, monitoring, control, surveillance and enforcement which ensure that established limits to exploitation are not exceeded and specifies corrective actions to be taken in the event that they are.

B. Operational Criteria

The fishing operation shall:

- 12. Make use of fishing gear and practices designed to avoid the capture of non-target species (and non-target size, age, and/or sex of the target species); minimise mortality of this catch where it cannot be avoided, and reduce discards of what cannot be released alive.
- 13. Implement appropriate fishing methods designed to minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas.
- 14. Not use destructive fishing practices such as fishing with poisons or explosives.
- 15. Minimise operational waste such as lost fishing gear, oil spills, on-board spoilage of catch etc.
- 16. Be conducted in compliance with the fishery management system and all legal and administrative requirements.
- 17. Assist and co-operate with management authorities in the collection of catch, discard, and other information of importance to effective management of the resources and the fishery.

10 BACKGROUND TO THE EVALUATION

10.1 EVALUATION TEAM

Lead Assessor Project Coordinator: Richard Banks

Richard Banks is a fisheries management specialist with international experience in many industrial and artisanal fisheries. An economist by training, he has 28 years experience in Government, industry and consultancy. Mr Banks works as lead assessor for Moody Marine in SE Asia, the Pacific and Australia. He is an experienced policy and institutional specialist having work for international organizations ADB, FAO and World Bank in a number of Asia Pacific African and European countries His technical expertise has included working with Fishery Departments to refine policy, design results based activities and upgrade institutional structures to implement change. Richard has also undertaken a series of evaluations into the efficiencies of MCS systems including best practice in observer deployment, risk analysis and cost efficiency analysis.

Richard has undertaken a series of assessments into tuna fisheries in the Western and Central Pacific covering pure seine, long line, pole & line, troll and hand-line fisheries. More recently Richard was part of a two-person team evaluating the regional Indian Ocean tuna tagging programme and its contribution to the assessment of Indian Ocean tuna stocks. He was also Team Leader of EU Fisheries Partnership evaluations which included impact assessments into tuna fishing activities in the Pacific, Atlantic and Indian Ocean. This included a report, assessing the world's tuna fisheries on behalf of DG Mare.

Mr Banks holds a degree in Economics (University of Portsmouth) and a Masters in Agricultural Economics (Imperial College, London). He is based in Queensland, Australia, and is a Director of Poseidon Aquatic Resource Management.

Expert advisor: Antony Lewis

Tony Lewis has 30 years research experience in the biology and ecology of tunas throughout the WCPO region, including a PhD on the population genetics and ecology of tunas. He has undertaken extensive work and contact at all levels in all PNA, other Pacific Island and South East Asian countries over many years, including long term employment in Papua New Guinea, Fiji and New Caledonia

He served from 1988-2002 as chief scientist/manager of the Oceanic Fisheries Programme at SPC, which produces regular assessments of skipjack, yellowfin, bigeye and albacore tunas; these well regarded assessments are peer reviewed by the WCPFC Scientific Committee and in earlier times, the Standing Committee on Tuna and Billfish. The OFP is now the contracted science provider to the WCPFC, with stock assessments the key element of this service.

Expert advisor: Tim Huntington

Tim Huntington is an experienced fisheries assessor, having lead on seven fisheries assessments and participated in a number of others, mainly specializing in Principle 2 (ecosystem impacts). He has also conducted a number of pre-assessments and chain of custody assessments and also developed the MSC group chain of custody on behalf of MSC's Technical Advisory Board.

Relevant MSC experience include conducting a pre-assessment for tuna fisheries in the Western Central Pacific for FFA and he is currently lead assessor and P2 specialist on the Maldives pole and line tuna assessment. Tim also works outside of MSC, specializing in sustainability issues in fisheries and aquaculture for a wide range of clients including the EC (DG Mare and DG Env), World Bank, FAO, WorldFish Centre, GEF, Danida, as well as e-NGOs such as WWF, RSPB and the UK Wildlife Trusts. Tim's experience of tuna fisheries stems from the environmental impact assessment work he did in conducting evaluations of the impacts of EU purse seine and

long-line fishing fleets in Mauritius and Tanzania. More recently Tim was part of a two-person team evaluating the regional Indian Ocean tuna tagging programme and its contribution to the assessment of Indian Ocean tuna stocks. Tim has a Masters degree in Applied Fish Biology and is a Director of Poseidon Aquatic Resource Management and is based in the UK.

Expert Advisor: Les Clark

Mr Les Clark has over 25 years experience in fisheries management and policy in the Pacific (in-country activities in Cook Islands, FSM, Fiji, Kiribati, Marshall Islands, Niue, Palau, Papua New Guinea, Solomon Islands, Tuvalu and Vanuatu), the Caribbean (Antigua, Trinidad), the Middle East (Oman), North Africa (Eritrea, Morocco) and Southern Africa (Namibia, plus regional activities). This experience includes providing policy analysis, technical assistance and training, and serving as a senior manager at national level.

Les has over 15 years experience in tuna fisheries management in the Pacific. For the last 10 years he has been involved in every major regional tuna fisheries management initiative, including the establishment of the Western and Central Pacific Fisheries Commission and national application of WCPFC measures and programmes, the establishment of the PNA Vessel Day Scheme, the PNA Office and other recent PNA and FFA tuna management initiatives

Les Clark is closely familiar with the fishing fleets, onshore operations, fishery and related administrations, tuna fishery policies and programmes and senior political, commercial and administrative personnel in all PNA Members. He has not had any form of contractual arrangement with the PNA Office, but has previously provided advice to the Parties both collectively and individually, through work funded by the FFA or individual Parties. This has generally been as part of projects to provide advice on national issues to the Parties concerned. Moody Marine does not consider this a disqualifying conflict of interest. Les has an MA in Economics (Auckland University).

10.2 PREVIOUS CERTIFICATION EVALUATIONS

The fishery has not been previously assessed against the MSC standard.

10.3 INSPECTIONS OF THE FISHERY

Inspection of the fishery focused on the practicalities of fishing operations, the mechanisms and effectiveness of management agencies and the scientific assessment of the fisheries.

Meetings were held as follows. Some of the key issues discussed have been identified for each meeting.

Name	Affiliation	Date	Key Issues
PNAO	Fishery managers on behalf of the PNA	July, 2010	Governance issues
		September, 2010	Assessment and feed-back on Draft conditions
PNA parties	National Fishery management Authorities	July, 2010, September, 2010	National laws, consultation and decision making. Fishery specific issues including regulations and compliance
WCPFC	Regional Fishery Management Organisation	July, 2010	Observer and VMS
SPC	Research Organisation	July and August,	Stock Assessment, Bycatch and ecosystems

Name	Affiliation	Date	Key Issues
		2010	
FFA	Management support organisation	July 2010	Fisheries Management and support role provided by FFA and Observer coordination
The Domestic Fishery Sector	Fishing industry stakeholders	July 2010	Fisheries management and compliance issues; Consultation and decision making
The Foreign Fishery Sector	Fishing industry stakeholder	July, 2010	Fisheries management and compliance issues; Consultation and decision making
ISSF	NGO	June and July 2010	See ISSF submission of 10 August 2010
WWF	NGO	August 2010	See WWF submission of 6 August, 2010

11 STAKEHOLDER CONSULTATION

11.1 STAKEHOLDER CONSULTATION

A total of 44 stakeholders were identified and 25 requested direct face to face meetings with Moody Marine. A total 89 stakeholders were interviewed. Information was also made publicly available at the following stages of the assessment:

Date	Purpose	Media
27 April 2010	Announcement of assessment	Direct E-mail/letter Notification on MSC website Advertisement in press
27 April 2010	Notification of Assessment Team nominees	Direct E-mail Notification on MSC website
2 June 2010	Notification of intent to use MSC FAM Standard Assessment Tree	Direct E-mail Notification on MSC website
8 June 2010	Notification of assessment visit and call for meeting requests	Direct E-mail Notification on MSC website
26 June 2010	Assessment visit	Meetings
30 th July 2010	Notification of Proposed Peer Reviewers	Direct E-mail Notification on MSC website
27 April 2010	Notification of Public Draft Report	Direct E-mail Notification on MSC website

11.2 STAKEHOLDER ISSUES

Two formal submissions received by World Wildlife Fund and International Seafood Sustainability Foundation. These are presented in Appendix E, along with the response from Moody Marine.

12 OBSERVATIONS AND SCORING

12.1 INTRODUCTION TO SCORING METHODOLOGY

The MSC Principles and Criteria set out the requirements of certified fishery. These Principles and Criteria have been developed into a standard (Fishery Assessment Methodology) assessment tree - Performance Indicators and Scoring Guideposts - by the MSC, which is used in this assessment.

The Performance Indicators (PIs) have been released on the MSC website. In order to make the assessment process as clear and transparent as possible, each PI has three associated Scoring Guideposts (SGs) which identify the level of performance necessary to achieve 100, 80 (a pass score), and 60 scores for each Performance Indicator; 100 represents a theoretically ideal level of performance and 60 a measurable shortfall.

For each Performance Indicators, the performance of the fishery is assessed as a 'score'. In order for the fishery to achieve certification, an overall weighted average score of 80 is necessary for each of the three Principles and no Indicator should score less than 60. As it is not considered possible to allocate precise scores, a scoring interval of five is used in evaluations. As this represents a relatively crude level of scoring, average scores for each Principle are rounded to the nearest whole number.

Weights and scores for the Fishery are presented in the scoring table (Appendix B).

13 LIMIT OF IDENTIFICATION OF LANDINGS FROM THE FISHERY

Traceability of product from the sea to the consumer is vital to ensure that the integrity of the MSC standard is maintained. There are several aspects to traceability that the MSC require to be evaluated: Traceability within the fishery; at sea capture of target, as opposed to other non certified species; at-sea processing and storage; the point of transshipment to a carrier or the point of landing for those vessels not transshipping; and consequently the eligibility to enter the chain of custody.

This fishery presents particular issues in relation to traceability, as a single vessel may be engaged in fishing on free-schools, log-sets and FAD-sets on a single trip.

A number of problems therefore arise:

- Vessels may go to sea to specifically target free schools, without any intent to use other sets – log sets or artificial FADs. CoC might then commence at the point of transshipment or landing, but with a requirement to ensure that the freeschool-set is validated. However, even with the intention to specifically target free schools, sets may be re-classified, in the event that objects are discovered in the net.
- Vessels may seek to target FAD-sets, usually from around 4 am-7am, and then target free schools during the daylight hours. This is the normal practice for some fleets, although other fleets may fish by preference for free schools (e.g. Korea)
- The mixed FAD-set / unassociated fishery will require the eligible free school product to be securely separated from log-set and FAD-set catches

Moody Marine and the client are aware of the need for a well designed and controlled Chain of Custody process to ensure that only product from free-school sets within the Unit of Certification can be marketed as MSC certified under this fishery certificate. Accordingly, the client has commissioned MRAG Asia Pacific to support the implementation of a group chain of custody scheme that will be administered by the client and will ensure the separation and clear demarcation of product from this fishery/Unit of Certification.

Further information on the chain of custody scheme proposed is set out in Appendix J. No product will be marketed from this fishery as MSC certified until the Group Chain of Custody scheme is in place and certified.

As set out in Appendix J. Chain of custody must begin at the point of sighting, free school confirmation and capture on the fishing vessel concerned, i.e. each vessel will have chain of custody certification begins at the point of landing on the vessel.

13.1 TRACEABILITY

The combination of logbooks, observer reports and fishing practices provide a series of independent and verifiable records that would enable the point of capture to be determined. Verifiable on board storage, transshipment records at designated ports (Table 16), as well as landing declarations at the point of landing (mainly but Japan, US and Philippines, but with 29 ports listed (Table 17) requires that all transactions at the first point of discharge are fully recorded, allowing immediate traceability between the fishery and the first point of the chain of custody whilst the logbook provides a record of the time, location and nature (species and volumes) of the catch.

The main possible risk is the mixing of product from certified and non-certified Functional Units (set types). Discussions with the client and individual vessel owners suggest that this is potentially a risk. Accordingly, a Group Chain of Custody scheme, to be administered by the client, will be established to ensure clear traceability from the certified fishery.

13.2 AT-SEA SEPARATION AND PROCESSING

The tuna fleet operates in two ways whilst at sea. Most vessels discharge into wells and are frozen when salt brine refrigerated to -16⁰C, is pumped in and then circulated. When the fish is frozen, the brine is pumped out; the fish is either held in the well or dropped to a dry hold and held at about -20⁰C. A very small handful of boats from the fleet may also be carrying, or have on board, other freezing capacity and operate at lower temperatures. All processing takes place immediately after hauling and thus the produce can be attributable to a specific Functional Unit.

The main risks, associated with this at-sea processing stage, are the possible mixing of product from certified and non-certified Functional Units, addressed in Section 13.1 above.

13.3 POINTS OF LANDING (DOMESTIC)

Some FSMA and most Domestic fish are landed into domestic ports, for processing or export as round fish. Processing takes place in PNG, Rep Marshall Is and Solomon Is.

Table 26: Current and prospective tuna processing plants in PNA island countries

Company	Location	Type	Production
SSTC Wewak	PNG	Loins	110mt/day
RD Madang	PNG	Canning	180 mt.day
Frabelle Lae	PNG	Canning/loin	100mt/day
Soltai Canning Noro	Solomon Is	Loins/canning	60mt/day
Pan Pacific Majuro	RMI	Loins	40mt/day

Notes: New investments include International Food Corporation [IFC] who have expanded mackerel lines to process tuna in Lae. Others under development include in PNG; Majestic Seafoods [350mt/day], TPJ [100mt] and Zhoushang [100mt] in Lae, and RD/TMI/Fairwell JV in Madang. , In Solomon Islands, 2 proposals- Dongwon and Frabelle. In RMI expansion of PanPacific plant into domestic canning, and in FSM a proposed loin plant (Luen Thai jv)

Source: PNA Office, 2010

DWFN vessels can land to domestic ports but typically tranship in PNA ports designated for transshipment shipment to processors in non PNA countries. This may include to distant markets in the Philippines, Thailand, Korea, Japan, Latin America or the EU. As governed by the MTCs, all transshipment to carriers must take place in port under in the presence of an observer. All product from these mother ships are destined for processing or transshipping to a carrier for export in the Home Party port. On the carriers, it is normal practice to separate fish from different vessels, and separation continues in the holding bins in the processors cold stores.

However, this separation may not necessarily ensure 100% of fish from vessels are not mixed between each other.

Some distant water fleets carry fish to home-ports and don't tranship, this includes Japan, New Zealand, Philippines and USA, but this practice is declining due to economic considerations.

Table 27: Designated transshipping ports

Party	<i>DESIGNATED PORTS</i>
Federated States of Micronesia	Yap, Chuuk, Pohnpei, Kosrae
Kiribati	Betio, Canton, Kiritimati
Marshall Islands	Majuro
Solomon Is	Honiara, Noro, Tulagi
Nauru	Nauru
Palau	Koror
Papua New Guinea	Port Moresby, Lae, Madang, Rabaul, Kimbe, Kavieng, Alotau, Lorengau, Bialla, Oro Bay, Vanimo, Vidar, Wewak
Tuvalu	Funafuti

Source: PNAO

Carriers will be included in the client-administered Group Chain of Custody scheme. Chain of Custody documentation commences from the vessel if combining sets, or the carrier (if transporting from differently source products and vessels) through to the next chain in fish handling. The critical issue from the MSC perspective is that all MSC product must be included within the PNA CoC scheme.

13.4 POINTS OF LANDING (INTERNATIONAL)

A smaller proportion of material (20-25%) from this fishery is landed at a number of ports outside the operational area. Japan, which accounts for < 20% of the product, lands into 8 ports, Philippines into 4, but the latter usually relies on dedicated carriers, US and New Zealand purse seiners more typically land direct into American Samoa. Other dedicated fleets will land into the main markets in Thailand, Singapore or even the EU.

Given that there are likely to be landings of similar but non-certified fish into these ports, it is important that an appropriate Chain of Custody is established. A key part of this will be traceability back to a named vessel or carrier from the client fleet. Furthermore vessels will need to ensure traceability back to the Functional Unit of origin (The set, well and dry hold) to ensure that products from other Functional Units and from areas outside FUs, not covered in the Unit of Certification are excluded from the Chain of Custody. As discussed in Section 13.1 above, product from the unit of certification will be subject to a specific Group Chain of Custody scheme.

Table 28: Landing port destinations [non exhaustive list]

Country	Port
Japan	Yamagawa, Shimizu, Watanoha, Yaizu-Shi, Makurazuki, Osaka, Shizuoka, Tokyo
Philippines	General Santos, Zamboanga, Manila, Davao (Toril), Batangas

USA	Pago Pago, Guam
Taiwan	Kaohsiung, Tungchiang
Korea	Busan/Pusan (4 ports), Mokpo
Thailand	Bangkok
Singapore	Singapore
China	Puto, Nanjing, Ningbo, Zoushan Island
El Salvador	La Union
Fiji	Suva, Levuka
Vanuatu	Port Vila, Luganville

Source: PNAO

13.5 ELIGIBILITY DATE

The Actual Eligibility date is confirmed as 1 June 2011.

14 ASSESSMENT RESULTS

The Performance of the Fishery in relation to MSC Principles 1, 2 and 3 is summarised below:

MSC Principle	Fishery Performance	Fishery performance:
	Free school/unassociated	Log set
Principle 1: Sustainability of Exploited Stock	Overall: 83.8 PASS	Overall: 84.4 PASS
Principle 2: Maintenance of Ecosystem	Overall: 86.3 PASS	Overall: FAIL
Principle 3: Effective Management System	Overall: 84.5 PASS	Overall: 85.5 PASS

FreeSchool-Set

The free school/unassociated fishery attained a score of 80 or more against each of the MSC Principles and did not score less than 60 against any Indicators. It is therefore recommended that the free school/unassociated fishery be certified according to the Marine Stewardship Council Principles and Criteria for Sustainable Fisheries.

A determination was made by the Intertek Moody Marine Supervisory Board to certify this fishery. Following an objection, this determination was upheld.

Log-Set

The log set fishery failed under the P2 MSC Principle, but attained a score of 80 or more for P1 and P3 Principles. It is therefore recommended that the log set fishery is NOT certified according to the Marine Stewardship Council Principles and Criteria for Sustainable Fisheries.

14.1 CONDITIONS

Two units of Certification were assessed.

FreeSchool-Set

The free school/unassociated fishery attained a score of 80 or more against each of the MSC Principles and did not score less than 60 against any Indicators. It is therefore recommended that the free school/unassociated fishery be certified according to the Marine Stewardship Council Principles and Criteria for Sustainable Fisheries.

Log-Set

The log set fishery failed under the P2 MSC Principle, but attained a score of 80 or more for P1 and P3 Principles. It is therefore recommended that the log set fishery is NOT certified according to the Marine Stewardship Council Principles and Criteria for Sustainable Fisheries.

14.2 HARMONISATION CONSIDERATIONS

The targeted stock (Pacific skipjack tuna) has also been the subject of another MSC assessment – for the Tosakatsuo Suisan Pole and Line Fishery. The outcome of this assessment was that the

Tosakatsuo fishery was certified to the MSC standard. The outcome of the PNA assessment is therefore harmonised.

The Performance indicators for which conditions were set for the Tosakatsuo fishery were a) PI 1.1.2 and b) PI 1.2.2.

- a) Following stakeholder comments on the PCD Report, the score for PI 1.1.2 has been adjusted to 75 and a condition has been raised. This PI is now harmonised.

- b) The PNA fishery also has a condition specified for PI 1.2.2 and is therefore harmonised.

Conditions for Principle 2 are PNA fishery-specific (being linked to gear effects on the ecosystem). Conditions for Principle 3 are specific to PNA management.

Table 29: Conditions for the PNA Free school set fishery

Outcome	1.1.2 Reference Points
PI	Limit and target reference points are appropriate for the stock.
SG60	<ul style="list-style-type: none"> • <u>Generic</u> limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.
SG80	<ul style="list-style-type: none"> • Reference points are appropriate for the stock and can be estimated. • The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity. • The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome. • For low trophic level species, the target reference point takes into account the ecological role of the stock.
SG100	<ul style="list-style-type: none"> • The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of relevant <u>precautionary issues</u>. • The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome, <u>or a higher level</u>, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.
Scoring	<p>75</p> <p>Article 6 of the Convention requires that the Commission apply the guidelines of Annex II of the United Nations Fish Stocks Agreement (Guidelines for the Application of Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks) including determination of stock-specific limit reference points (LRPs) and target reference points (TRPs).</p> <p>The current assessment provides estimates of a range of indicators that can be used appropriately as LRPs and TRPs, although management advice is provided solely with respect to MSY-based TRPs. Generic MSY-related reference points are used by the WPCFC Scientific Committee to assess stock status, consistent with the WCPFC Convention, UNFSA and current practice in other tuna RFMOs - management advice and implications of this advice are regularly provided in these terms to the Commission, and are used to determine whether conservation and management measures need to be adopted, but this advice has consistently indicated that measures to conserve skipjack have not been required thus far, although it was recognized that measures adopted (and reviewed) for other species will have collateral benefit for skipjack conservation and management. Explicitly determined limit and target Reference Points for management of skipjack tuna have not yet been adopted by PNA or the WCPFC.</p> <p>In practice, the stock is managed with B_{msy} or above as a default TRP. The general observed strategy of the WCPFC and PNA managing regional tuna stocks is to reduce the exploitation rate when F exceeds F_{MSY}, which should ensure for skipjack that the exploitation rate is reduced as the level associated with an appreciable risk of recruitment being impaired is approached – in this sense there</p>

	<p>is an implied LRP above the level at which there is an appreciable risk of impairing reproductive capacity (FAM 6.2.22). Condition 1 (PI 1.2.2) requires management by PNA of the stock (within PNA waters, but as outlined above, this is sufficient proportion of the stock to enable effective stock management) in accordance with the default reference points based on Bmsy.</p> <p>Skipjack tuna is not considered a low trophic level species (Nicol et al, 2009).</p> <p>Precautionary issues such as the ecological role of the stock have been considered but have not been taken into account in setting the TRP.</p>
Rationale	<p>Default MSY-based (and depletion-based) reference points can be estimated and are appropriate for the stock (80).</p> <p>There is an implied limit reference point above the level at which there is an appreciable risk of impairing reproductive capacity, but these are not explicit, nor set by management nor implemented as part of the management plan. (60)</p> <p>The default target reference point is consistent with maintaining the stock at B_{MSY}, (80)</p> <p>Skipjack tuna is not considered a low trophic level species hence the TRP does not need to take into account the ecological role of the stock, (80).</p>
Condition	<p>Condition 1:</p> <p>Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the following SG80 requirements have been met:</p> <ul style="list-style-type: none"> • Reference points are appropriate for the stock and can be estimated. • The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity. • The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome. • For low trophic level species, the target reference point takes into account the ecological role of the stock. <p>To this end:</p> <ol style="list-style-type: none"> 1. PNA and/or WCPFC shall establish and adopt explicit and appropriate target and limit reference points for skipjack; 2. PNA vigorously pursue the adoption of reference points in the WCPFC. <p>Milestones in achieving this end are:</p> <ol style="list-style-type: none"> 2. Year 1 identification and development of appropriate reference points initiated by PNA 3. Year 2 explicit and appropriate target and limit reference points for skipjack adopted by PNA, and adoption of appropriate target and limit reference points for skipjack promoted by PNA within WCPFC.
Client action plan	See Appendix D (15.4)
Consultation on condition	Early consultations were held with the client on 10 September 2010. Discussion on this point has occurred between PNA and WCPFC.

Outcome	1.2.2
PI	Harvest control rules and tools: There are well defined and effective harvest control rules in place
SG60	<ul style="list-style-type: none"> • <u>Generally understood</u> harvest control rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached • There is <u>some evidence</u> that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.
SG80	<ul style="list-style-type: none"> • <u>Well defined</u> harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. • The <u>selection</u> of the harvest control rules takes into account the <u>main</u> uncertainties. • <u>Available evidence indicates</u> that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules
SG100	<ul style="list-style-type: none"> • <u>Well defined</u> harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. • The <u>design</u> of the harvest control rules take into account a <u>wide</u> range of uncertainties. • <u>Evidence clearly shows</u> that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
Scoring	<p>60</p> <p>There is a general understanding that actions would be taken to reduce the exploitation rate on skipjack if necessary to achieve management objectives, including adoption of measures by the WCPFC in accordance with the Convention provision and the application of the precautionary approach and, PNA adjustments to the total allowable effort (TAE) under the VDS. However there are no well-defined rules in place for the skipjack stock that ensure that the exploitation rate is reduced as limit reference points are approached.</p> <p>The level of effort in PNA EEZs, by vessels covered under the VDS, has not increased since it was introduced in 2008. There are appropriate mechanisms to adjust for effort creep and apply effort limits at national level. These together provide some evidence that harvest control approaches are appropriate and effective in controlling exploitation. But the VDS is in the early stages of implementation, and therefore has not been fully tested, and does not address the transfer of effort to archipelagic waters, nor how to balance and assess the VDS TAEs against the increasing effort by the USMLT.</p>
Rationale	<p>Through the nature of the WCPFC Convention and the VDS, there are generally understood harvest control rules in place which are consistent with the harvest strategy and which could act to reduce the exploitation rate of skipjack as limit reference points are approached (60).</p> <p>There is some evidence that the VDS and other tools (e.g. WCPFC limits on other fleets) used to implement harvest control rules are appropriate and effective</p>

	in controlling exploitation (60).
Condition	<p>Condition 2: Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met:</p> <ul style="list-style-type: none"> • Well defined harvest control rules shall be in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. • The selection of the harvest control rules shall take into account the main uncertainties. • Evidence shall be available that indicates that tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules <p>Milestones in achieving this end are:</p> <ol style="list-style-type: none"> 1. Plans for the development and adoption of appropriate HCRs for skipjack, including scientific analysis to assess the scope for SG80 requirements applying to the whole stock to be met by PNA actions and consideration of the main uncertainties, should be in place by the first surveillance audit. 2. If the analysis to be undertaken in Year 1 demonstrates that adoption of appropriate HCRs for the WCPO skipjack stock by PNA will be effective, proposals for adoption of appropriate HCRs by PNA should be prepared and under consideration by PNA by the second annual surveillance audit. PNA should also promote the adoption of appropriate HCRs for skipjack by the WCPFC. 3. By the third surveillance audit, PNA should either adopt appropriate HCRs for the WCPO skipjack stock or support specific proposals for adoption of appropriate HCRs by the WCPFC. 4. HCRs within PNA (and/or WCPFC) should be in place by the fourth surveillance audit. <p>In achieving this outcome, PNA (and/or WCPFC) may consider the following:</p> <ol style="list-style-type: none"> 3. adopt defined harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy and act to reduce the exploitation rate, as limit reference points are approached). 4. assessment of the main uncertainties should include the fishing mortality in archipelagic waters and territorial waters in order to ensure that the exploitation rate is appropriately reduced as limit reference points are approached. <p>In demonstrating that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules, PNA (and/or WCPFC) should consider demonstrating that effort is effectively limited within overall PAE levels established in accordance with the VDS text, Implementing Arrangements and appropriate WCPFC conservation and management measures. . In the event that these tools were</p>

	to substantially change, then their effectiveness should be re-evaluated.
Client action plan	See Appendix D (15.4)
Consultation on condition	Early consultations were held with the client on 10 September 2010. Discussion on this point has occurred between PNA and WCPFC.

Outcome	2.2.2
PI	Management strategy: There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.
SG60	<ul style="list-style-type: none"> • There are measures in place, if necessary, which are expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery. • The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).
SG80	<ul style="list-style-type: none"> • There is a partial strategy in place, if necessary, for managing bycatch that is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery. • There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or the species involved. • There is some evidence that the partial strategy is being implemented successfully.
SG100	<ul style="list-style-type: none"> • There is a strategy in place for managing and minimising bycatch. • The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work. • There is some evidence that the strategy is achieving its objective. • There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring.
Scoring	<p>Overall score: 70</p> <p>Silky shark: CMM 2006-05 (amended in 2008 (CMM 2008-06), in 2009 (CMM 2009-04) and 2010 2010-07)) is specific to shark bycatch management. It requires that CCMs take measures to (i) implement the FAO International Plan of Action for the Conservation and Management of Sharks (non-binding); (ii) define key shark species / shark catch & discard reporting requirements (non-binding); (iii) support research and development of strategies for the avoidance of unwanted shark captures (non-binding); (iv) fully utilize any retained catches of sharks (including restrictions on finning (binding)); (v) prohibit their fishing vessels from retaining, trans-shipping, landing, or trading any fins (binding) and (vi) encourage the release of live sharks (binding).</p> <p>Proposals for a shark research plan in the WCFPO will be tabled at the August 2010 WCPFC SC meeting. If implemented, this may lead to further, more targeted actions focused on key sharks species considered vulnerable to fishing in this ocean area. The PNA has also raised the issue of finning through WP9 – Application of Management Arrangements for Sharks, submitted to the PNA</p>

	<p>29th Special Meeting in February 2010 (PNA, 2010). At this meeting it was agreed to discuss the issue of shark finning at their Annual Meeting. It was suggested in WP9 that a prohibition on shark finning should be considered in a package of management arrangements for a fourth implementing arrangement. This is considered the appropriate place for these arrangements as they will be applied consistently across the waters of all PNA members, which will result in all DWFNs being subject to the same arrangements.</p>
Rationale	<p>Silky Shark: there is a precautionary partial strategy in response to the potential vulnerability of the species is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits (80).</p> <p>However, even though there is inadequate and conflicting information on whether the partial strategy will work, there is some basis for confidence that the partial strategy is working with the implementation of 100% observer coverage, but the objective evidence is not yet available (60).</p>
Condition	<p>Condition 3: Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (second and third scoring issues) have been met:</p> <ul style="list-style-type: none"> • There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or the species involved. • There is some evidence that the partial strategy is being implemented successfully. <p>Milestones in achieving this are:</p> <ol style="list-style-type: none"> 1. By the first annual surveillance audit, PNA should review available data (e.g. observer, logsheet) to provide the necessary level of confidence that the current management measure (CMM 2010-07) for sharks will work. The review should be initiated by the first annual surveillance audit, with a specific focus on silky sharks. 2. The review of available information should be completed by the second annual audit. 3. If the above should indicate that this fishery has a significant impact on shark populations, then implementation of those elements of the Pacific Islands RPOA for sharks that have “a high likelihood, in aggregate, of delivering improved conservation outcomes for sharks” should be instigated by the third surveillance audit, and completed by the fourth. . These may include (i) the release of all live sharks, (ii) that sharks to be landed with fins naturally attached, allowing for fins to be partially severed and folded back against the carcass for storage; and (iii) the prohibition of dumping carcasses after landing.
Client action plan	See Appendix D (15.4)
Consultation on condition	N/A

Outcome	2.3.1
PI	<p>Status: The fishery meets national and international requirements for protection of ETP species.</p> <p>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</p>
SG60	<ul style="list-style-type: none"> • Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species. • Known direct effects are unlikely to create unacceptable impacts to ETP species.
SG80	<ul style="list-style-type: none"> • The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species. • Direct effects are highly unlikely to create unacceptable impacts to ETP species. • Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.
SG100	<ul style="list-style-type: none"> • There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species. • There is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species.
Scoring	<p>Overall score: 70</p> <p>Four key ETP species were considered (false killer whale, sei whale, whale shark and common dolphin).</p>
Rationale	<p>Whilst whale shark mortality is well known from the comprehensive observer programme and has been considered in various research and management activities, it cannot be said that it is <i>highly</i> likely that whale shark mortality are both within limits nor the fishery is <i>highly</i> unlikely to create unacceptable impacts to whale shark populations.</p>
Condition	<p>Condition 4:</p> <p>Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements have been met for whale sharks:</p> <ul style="list-style-type: none"> • The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species. • Direct effects are highly unlikely to create unacceptable impacts to ETP species. • Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts. <p>Milestones in achieving this outcome are:</p> <p>PNA should adopt both the RPOA for Shark’s recommended prohibition on schools associated with whale sharks as well as the subsequent PNA decision to prohibit sets on whale sharks. This should be validated by written and agreed rules to implement this by the first annual surveillance audit.</p> <p>3. Reviews of the level of whale shark interactions should be begun by the second annual surveillance audit and published by the third annual audit.</p> <p>Any necessary actions in response to the above should be initiated by the fourth</p>

	surveillance audit
Client action plan	See Appendix D (15.4)
Consultation on condition	N/A

Outcome	3.2.1
PI	<p>Fishery- specific objectives</p> <p>The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC’s Principles 1 and 2.</p>
SG60	<p><u>Objectives</u>, which are broadly consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are <u>implicit</u> within the fishery’s management system.</p>
SG80	<p><u>Short and long term objectives</u>, which are consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are <u>explicit</u> within the fishery’s management system.</p>
SG100	<p><u>Well defined and measurable short and long term objectives</u>, which are demonstrably consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are <u>explicit</u> within the fishery’s management system.</p>
Scoring	<p>The original score for this PI was 80. However, under objection, this was reviewed following a remand by the Independent Adjudicator. On review, it was decided to reduce the score for this PI to 70.</p>
Rationale	<p>The objectors consider that the short term objectives do not meet the SG80 requirements, that ‘short term objectives which are consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2 are <u>explicit</u> within the fishery’s management system’. The Adjudicator’s Decision was that the score awarded is considered arbitrary or unreasonable.</p> <p>Factors contributing to this finding include:</p> <ul style="list-style-type: none"> i) CMM 2008-01 is not expressly concerned with skipjack tuna ii) the Final Report casts doubt on the linkage between the VDS Scheme and the scientific advice (noting also that there is a lack of openness with regard to the decision making processes in this regard); and iii) the lack of mention in the Palau Agreement, taken to be the “VDS text”, of objectives consistent with the outcomes required under Principles 1 & 2 of the MSC Standard. <p>There is some misunderstanding on this issue in that the Palau Arrangement is not the VDS Text, (which is a separate document). The VDS Text does include more specific objectives in Article 2 than the Palau Arrangement. However these objectives in the VDS Text are also more general and longer term, contributing to meeting the requirement of SG80 in respect of explicit long term objectives, but not short term objectives.</p> <p>Regarding the reference to para 30 of CMM 2008-01 in para 111 of the decision, WCPFC documentation (see WCPFC6-2009/IP06 (Rev.1), page 7) reports that this applies only to Australia.</p> <p>Accepting the IAs decision in this matter, we consider that the rationale provided</p>

	in the Final Report meets the SG60 requirement for this PI, that appropriate objectives are implicit within the fishery's management system. and goes some way to meeting the SG80 requirement for appropriate explicit short and long term objectives in that long term objectives are explicit but short term objectives are not. We therefore consider a score of 70 to be appropriate.
Condition	<p>Condition 6:</p> <p>Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements (third and fourth scoring issues) have been met:</p> <p>Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.</p> <p>Milestones in meeting this objective are:</p> <p>Year 1. PNA should show identification of appropriate management vehicles (within PNA and/or WCPFC) where such objectives would be appropriate, and provide draft text for objectives.</p> <p>Year 2. PNA should show tabling of proposed objectives at relevant meetings and consideration of their adoption.</p> <p>Year 3. Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, should be included within the management framework of PNA and/or WCPFC</p>
Client action plan	See Appendix D (15.4)
Consultation on condition	N/A

Outcome	3.2.2
PI	<p>Decision-making processes</p> <p>The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives.</p>
SG60	<ul style="list-style-type: none"> • There are <u>informal</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. • Decision-making processes respond to <u>serious issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take <u>some</u> account of the wider implications of decisions.
SG80	<ul style="list-style-type: none"> • There are <u>established</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. • Decision-making processes respond to <u>serious and other important issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.

	<ul style="list-style-type: none"> Decision-making processes use the precautionary approach and are based on best available information. <u>Explanations</u> are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
SG100	<ul style="list-style-type: none"> There are <u>established</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. Decision-making processes respond to <u>all issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions. Decision-making processes use the precautionary approach and are based on best available information. <u>Formal reporting</u> to all interested stakeholders describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
Scoring	<p>75</p> <p>Whilst there is clear evidence of proactive PNA decision-making over a long period there are shortfalls in the extent to which decisions are clearly seen to be based on best available information, and the extent to which explanations are provided for decisions that are taken. The link between the VDS TAEs, WCPFC requirements and the scientific advice needs to be clearly established by the PNA. These discussions need to be formally reported at PNA level. Discussions, and reports must also embrace evaluation of VDS operations and monitoring and plans to improve the system, thus highlight PNAs commitment to an effective management system.</p>
Rationale	<ol style="list-style-type: none"> There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives (100). Decision-making processes respond to serious and other important issues, <i>but not all issues</i>, identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions (80). At the WCPFC level it is clear that the precautionary approach is used, and decisions are based on the best available information. At the PNA level it is clear that the best available information is used for decision-making but there is a lack of clarity in the links between decisions on the VDS and the requirements of WCPFC CMM 2008-01 and the best available scientific information (75) See Condition 3 Explanations are provided at the WCPFC level but not always at the PNA level for actions, or lack of action associated with relevant findings and recommendations (75).
Condition	<p>Condition 5:</p> <p>Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (third and fourth scoring issues) have been met:</p> <ul style="list-style-type: none"> Decision-making processes use the precautionary approach and are based on

	<p>best available information.</p> <ul style="list-style-type: none"> • <u>Explanations</u> are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity. <ol style="list-style-type: none"> 3. By first annual surveillance audit, provide a description of decision making processes and their relation to scientific advice 4. Subsequent meeting output should then explain decision making processes in relation to scientific information. <p>In meeting this condition, PNA may consider the following:</p> <p>The link between the VDS TAEs and WCPFC requirements and the scientific advice should be clearly established by the PNA. Records of meetings should demonstrate discussion on VDS TAEs, that scientific advice is incorporated into the decision making process, and that PNA actions are being agreed upon and implemented.</p> <p>Explanation of decisions by PNA, particularly relating to the operation, monitoring and reporting of the VDS should be improved. An administrator's report could be prepared annually beginning by the first annual surveillance audit (as opposed to on an <i>ad hoc</i> basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document should be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers.</p>
Client action plan	See Appendix D (15.4)
Consultation on condition	N/A

14.3 RECOMMENDED ACTIONS

In addition to the above, a number of non-binding recommended actions are also made by the assessors.

Recommendation 1:

1. PNA draw up a management strategy for PNA which integrates existing elements to apply specifically to the skipjack harvest and is linked to limit and target reference points established as per Condition 1; and
2. PNA vigorously pursue the adoption of a management strategy for WCPO skipjack in WCPFC.

PI 1.2.1: (80). The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points. (100)

Suggested Actions: PNA to define how monitoring and assessment should be linked to management actions so that these elements are seen to work together to achieve management

objectives PNA to promote adoption of a compatible management strategy by the WCPFC

Recommendation 2: Encouragement of, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.

PI 1.2.3 (85): All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty (100).

Suggested Actions:

PNA to facilitate exchange visits from Indonesia, Philippines and Vietnam.

Recommendation 3: PNA provide documented evidence that the partial strategy *continues* to be implemented successfully for bigeye and yellowfin tuna.

PI 2.1.2 (80): The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work (100)

Suggested Actions:

PNA continually assesses the interaction with retained species to ensure that the levels of bycatch are maintained to a level that does not contribute to the decline stock status, and to report on the implementation of the technical conditions (CMM 2009-02) associated with the FAD closure.

Recommendation 4: Stock assessments of both silky shark (IATTC, under way & WCPFC scheduled for 2011) and blue marlin (ISC, 2012) will provide greater understanding of the status of these stocks as will planned shark assessments for WCPFC. Results of these should be reviewed and if necessary appropriate mitigation measures taken to reduce mortalities of these species

PI 2.2.1 (80): There is a high degree of certainty that bycatch species are within biologically based limits. (100)

Suggested Actions

If necessary appropriate mitigation measures taken to reduce mortalities of these species.

Recommendation 5: The PNAO will also review the Nauru agreement and related instruments to ensure that the appropriate principles including the precautionary approach are required to be applied

PI 3.1.3 (80): Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within and required by management policy (100)

Suggested Actions

PNA to amend the Nauru agreement to include reference to the precautionary principle.

Recommendation: 6: A biennial review of MCS arrangements in the purse seine fishery should be undertaken, using the MRAG national/regional study as a benchmark.

PI 3.2.3 (80): Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery. (80).

Suggested Actions

PNA or FFA to engage independent consultants to monitor compliance, offences detected and actions taken.

Recommendation 7: The PNA should establish a system of regular internal and external reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery. The Internal review should comprise an annual administrator's report prepared **annually** (as opposed to on an *ad hoc* basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document must be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers and lessons learned. The external review should be undertaken within **3 years** of Certification.

PI 3.2.5 (80): The fishery has in place mechanisms to evaluate key parts of the management system and is subject to regular internal and occasional external review (80).

Suggested Actions:

PNA to initiate an Administrators report based on the recommendation above. PNA will also engage an independent consultant, within 3 years, to evaluate the performance, management and reporting of the VDS scheme.

15 APPENDICES

15.1 APPENDIX A: SCORING

Table 30: MSC scores for the Unassociated fishery

Scoring worksheet - MSC Fishery Assessment Methodology - Default Assessment Tree - Version 2 - 31 July 2009

Note: Scores are to be entered in the green-shaded cells in column K

Columns G, H and L apply in fisheries where the stock rebuilding PI (1.1.3) is NOT triggered

Columns I, J and M give the Principle 1 Outcome score contributions in fisheries where the stock rebuilding PI (1.1.3) is triggered

Prin- ciple	Wt (L1)	Component	Wt (L2)	PI No.	Performance Indicator (PI)	Wt Weight (L3) in Principle				Score	Contribution to Principle Score	
						Either	Or	Score	Either		Or	
One	1	Outcome	0.5	1.1.1	Stock status	0.5	0.25	0.333	0.1667	100	25.00	16.67
				1.1.2	Reference points	0.5	0.25	0.333	0.1667	75	18.75	12.50
				1.1.3	Stock rebuilding			0.333	0.1667			0.00
		Management	0.5	1.2.1	Harvest strategy	0.25	0.125			80	10.00	10.00
				1.2.2	Harvest control rules & tools	0.25	0.125			60	7.50	7.50
				1.2.3	Information & monitoring	0.25	0.125			85	11.25	11.25
				1.2.4	Assessment of stock status	0.25	0.125			95	11.88	11.88
Two	1	Retained species	0.2	2.1.1	Outcome	0.333	0.0667			80	5.33	5.33
				2.1.2	Management	0.333	0.0667			80	5.33	5.33
				2.1.3	Information	0.333	0.0667			80	5.33	5.33
		Bycatch species	0.2	2.2.1	Outcome	0.333	0.0667			80	5.33	5.33
				2.2.2	Management	0.333	0.0667			75	5.00	5.00
				2.2.3	Information	0.333	0.0667			90	6.00	6.00
		ETP species	0.2	2.3.1	Outcome	0.333	0.0667			70	4.67	4.67
				2.3.2	Management	0.333	0.0667			85	5.67	5.67

		2.3.3	Information	0.333	0.0667		85	5.67	5.67		
	Habitats	0.2	2.4.1	Outcome	0.333	0.0667		100	6.67	6.67	
			2.4.2	Management	0.333	0.0667		100	6.67	6.67	
			2.4.3	Information	0.333	0.0667		100	6.67	6.67	
			2.5.1	Outcome	0.333	0.0667		80	5.33	5.33	
	Ecosystem	0.2	2.5.2	Management	0.333	0.0667		95	6.33	6.33	
			2.5.3	Information	0.333	0.0667		95	6.33	6.33	
Three	1	Governance and policy	0.5	3.1.1	Legal & customary framework	0.25	0.125		95	11.88	11.88
				3.1.2	Consultation, roles & responsibilities	0.25	0.125		95	11.88	11.88
				3.1.3	Long term objectives	0.25	0.125		90	11.25	11.25
				3.1.4	Incentives for sustainable fishing	0.25	0.125		80	10.00	10.00
		Fishery specific management system	0.5	3.2.1	Fishery specific objectives	0.2	0.1		70	8.00	8.00
	3.2.2			Decision making processes	0.2	0.1		70	7.00	7.00	
	3.2.3			Compliance & enforcement	0.2	0.1		85	8.50	8.50	
	3.2.4			Research plan	0.2	0.1		90	9.00	9.00	
	3.2.5			Management performance evaluation	0.2	0.1		80	8.00	8.00	
	Overall weighted Principle-level scores								Either	Or	
Principle 1 - Target species				Stock rebuilding PI not scored				83.8			
Principle 2 - Ecosystem								86.3			
Principle 3 – Management								84.5			

Table 31: MSC Scores for the Log set fishery

Columns I, J and M give the Principle 1 Outcome score contributions in fisheries where the stock rebuilding PI (1.1.3) is triggered

Prin- ciple	Wt (L1)	Component	Wt (L2)	PI No.	Performance Indicator (PI)	Wt (L3)	Weight in Principle		Score	Contribution to Principle Score		
One	1	Outcome	0.5	1.1.1	Stock status	<u>Either</u> 0.5	0.25	0.333	0.1667	100	<u>Either</u> 25.00	<u>Or</u> 16.67
				1.1.2	Reference points	0.5	0.25	0.333	0.1667	75	18.75	12.50
				1.1.3	Stock rebuilding			0.333	0.1667			0.00
		Management	0.5	1.2.1	Harvest strategy	0.25	0.125			80	10.00	10.00
				1.2.2	Harvest control rules & tools	0.25	0.125			60	7.50	7.50
				1.2.3	Information & monitoring	0.25	0.125			90	11.25	11.25
				1.2.4	Assessment of stock status	0.25	0.125			95	11.88	11.88
		Two	1	Retained species	0.2	2.1.1	Outcome	0.333	0.0667			80
2.1.2	Management					0.333	0.0667			FAIL		
2.1.3	Information					0.333	0.0667			80	5.33	
Bycatch species	0.2			2.2.1	Outcome	0.333	0.0667			80	5.33	
				2.2.2	Management	0.333	0.0667			75	5.00	
				2.2.3	Information	0.333	0.0667			90	6.00	
ETP species	0.2			2.3.1	Outcome	0.333	0.0667			100	6.67	
				2.3.2	Management	0.333	0.0667			85	5.67	
				2.3.3	Information	0.333	0.0667			85	5.67	
Habitats	0.2			2.4.1	Outcome	0.333	0.0667			100	6.67	
				2.4.2	Management	0.333	0.0667			100	6.67	
				2.4.3	Information	0.333	0.0667			100	6.67	
Ecosystem	0.2			2.5.1	Outcome	0.333	0.0667			80	5.33	
				2.5.2	Management	0.333	0.0667			95	6.33	
				2.5.3	Information	0.333	0.0667			95	6.33	

Three	1	Governance and policy	0.5	3.1.1	Legal & customary framework	0.25	0.125	95	11.88	
				3.1.2	Consultation, roles & responsibilities	0.25	0.125	95	11.88	
				3.1.3	Long term objectives	0.25	0.125	90	11.25	
				3.1.4	Incentives for sustainable fishing	0.25	0.125	80	10.00	
			Fishery specific management system	0.5	3.2.1	Fishery specific objectives	0.2	0.1	80	8.00
					3.2.2	Decision making processes	0.2	0.1	70	7.00
					3.2.3	Compliance & enforcement	0.2	0.1	85	8.50
					3.2.4	Research plan	0.2	0.1	90	9.00
					3.2.5	Management performance evaluation	0.2	0.1	80	8.00

Overall weighted Principle-level scores		Score
Principle 1 - Target species	Stock rebuilding PI not scored	84.4
Principle 2 - Ecosystem		FAIL
Principle 3 – Management		85.5

15.2 APPENDIX B: SCORING TABLE

Principle 1	A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.
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1.1	Management Outcomes:
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	PI	SG60	SG80	SG100
1.1.1	Stock Status: The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing	It is <u>likely</u> that the stock is above the point where recruitment would be impaired.	It is <u>highly likely</u> that the stock is above the point where recruitment would be impaired. The stock is at or fluctuating around its target reference point.	There is a <u>high degree of certainty</u> that the stock is above the point where recruitment would be impaired. There is a <u>high degree of certainty</u> that the stock has been fluctuating around its target reference point, or has been above its target reference point, <u>over recent years</u> .

Scoring Comments
The most recent skipjack assessment indicates that there is a zero probability that B/B_{MSY} is anywhere close to 1.0, and has been for the past 10 years, although the most recent value is around 1.6. The stock remains well above either limit RPs at which point recruitment might be impaired based on FAM guidance ($B_{current}/B_0 = 0.75$ cf 0.2; $B_{2009}/B_{MSY} = 1.6$ cf. 0.5)
Score: 100
There is a <u>high degree of certainty</u> that the stock is above the point where recruitment would be impaired (100)
There is a <u>high degree of certainty</u> that the stock is above the default target reference point (B_{MSY}) and has been for the past 10 years (100)
Audit Trace References
1. Hoyle <i>et al</i> , 2010; MSC, 2009; SPC (I10); WWF (submission).

	PI	SG60	SG80	SG100
1.1.2	Reference Points: Limit and target reference points are appropriate for the stock.	<u>Generic</u> limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	<p>Reference points are appropriate for the stock and can be estimated.</p> <p>The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.</p> <p>The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome.</p> <p>For low trophic level species, the target reference point takes into account the ecological role of the stock.</p>	<p>The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of relevant <u>precautionary issues</u>.</p> <p>The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome, <u>or a higher level</u>, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.</p>

Scoring Comments

Article 6 of the Convention requires that the Commission apply the guidelines of Annex II of the United Nations Fish Stocks Agreement (Guidelines for the Application of Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks) including determination of stock-specific limit reference points (LRPs) and target reference points (TRPs).

The current assessment provides estimates of a range of indicators that can be used appropriately as LRPs and TRPs, although management advice is provided solely with respect to MSY-based TRPs. Generic MSY-related reference points are used by the WCPFC Scientific Committee to assess stock status, consistent with the WCPFC Convention, UNFSA and current practice in other tuna RFMOs - management advice and implications of this advice are regularly provided in these terms to the Commission, and are used to determine whether conservation and management measures need to be adopted, but this advice has consistently indicated that measures to conserve skipjack have not been required thus far, although it was recognized that measures adopted (and reviewed) for other species will have collateral benefit for skipjack conservation and management. However, explicitly determined limit and target Reference Points for skipjack tuna have not yet been adopted by PNA or the WCPFC.

In practice, the stock is managed with B_{msy} or above as a default TRP. The general observed strategy of the WCPFC and PNA managing regional tuna stocks is to reduce the exploitation rate when F exceeds F_{MSY} , which should ensure for skipjack that the exploitation rate is reduced as the level associated with an appreciable risk of recruitment being impaired is approached – in this sense there is an implied LRP above the level at which there is an appreciable risk of impairing reproductive capacity (FAM 6.2.22). Skipjack tuna is

not considered a low trophic level species (Nicol et al, 2009).

Precautionary issues such as the ecological role of the stock have been considered but have not been taken into account in setting the TRP.

Score: 75

Default MSY-based (and depletion-based) reference points can be estimated and are appropriate for the stock (80).

There is an implied limit reference point above the level at which there is an appreciable risk of impairing reproductive capacity, but these are not explicit, nor set by management nor implemented as part of the management plan. (60)

The default target reference point is consistent with maintaining the stock at B_{MSY} , (80)

Skipjack tuna is not considered a low trophic level species hence the TRP does not need to take into account the ecological role of the stock, (80).

A Recommendation (1) is raised for this PI (See Section 14.2).

Audit Trace References

WCPFC Convention; MSC, 2009, Nicol *et al*, 2009;)

	PI	SG60	SG80	SG100
1.1.3	Stock Rebuilding: Where the stock is depleted, there is evidence of stock rebuilding.	Where stocks are depleted rebuilding strategies which have a <u>reasonable expectation</u> of success are in place. Monitoring is in place to determine whether they are effective in rebuilding the stock within a <u>specified</u> timeframe.	Where stocks are depleted rebuilding strategies are in place. There is <u>evidence</u> that they are rebuilding stocks, or it is highly likely based on simulation modelling or previous performance that they will be able to rebuild the stock within a <u>specified</u> timeframe.	Where stocks are depleted, strategies are <u>demonstrated</u> to be rebuilding stocks continuously and there is strong evidence that rebuilding will be complete within the <u>shortest practicable</u> timeframe.

Scoring Comments
Not applicable as the stock is not depleted
Score: <Put Score Here>
<Justification of score>
Audit Trace References
<References>

1.2	Harvest Strategy (management)
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	PI	SG60	SG80	SG100
1.2.1	Harvest Strategy: There is a robust and precautionary harvest strategy in place	<p>The harvest strategy is <u>expected</u> to achieve stock management objectives reflected in the target and limit reference points.</p> <p>The harvest strategy is <u>likely</u> to work based on prior experience or plausible argument.</p> <p><u>Monitoring</u> is in place that is expected to determine whether the harvest strategy is working.</p>	<p>The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy <u>work together</u> towards achieving management objectives reflected in the target and limit reference points.</p> <p>The harvest strategy may not have been fully tested but monitoring is in place and <u>evidence</u> exists that it is achieving its objectives.</p>	<p>The harvest strategy is responsive to the state of the stock and is <u>designed</u> to achieve stock management objectives reflected in the target and limit reference points.</p> <p>The performance of the harvest strategy has been <u>fully evaluated</u> and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.</p> <p>The harvest strategy is <u>periodically reviewed and improved</u> as necessary.</p>

Scoring Comments

The harvest strategy for WCPO skipjack has several components, with WCPFC, PNA and national and archipelagic management actions, supported by a robust stock assessment and extensive monitoring frameworks, but it does not include formal harvest control rules (HCRs).

The elements of the harvest strategy work together in that the implementation of the purse seine effort limit systems is based on the FFA and WCPFC VMSs, the WCPFC management actions in respect of the purse seine fisheries are largely based on the PNA actions (Third Implementing Arrangement, the assessment and monitoring results are presented to WCPFC, PNA and national authorities and are considered in decision-making on the WCPFC, PNA and national management actions, and the assessment models are used in the design and evaluation of the management actions, but the different sets of management actions are not fully integrated. While the WCPFC management arrangements cover in excess of 75% of the catch, it is not clear that coherent management actions are applied throughout the range of the stock, particularly in Indonesia and the Philippines; hence the score for this element is only 80.

The harvest strategy is responsive to the state of the skipjack stock in that it has previously been largely aimed at optimizing the value of the purse seine fishery based on the assessment results indicating that the stock was only moderately exploited and limiting the major skipjack fisheries to lower levels of skipjack fishing mortality than indicated by MSY-based skipjack stock reference points in order to meet objectives related to bigeye and yellowfin conservation. However, at WCPFC7, the Commission responded to the

change in the results of the skipjack assessment and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011.

With the skipjack stock assessed until 2010 as remaining in a healthy state relative to all indicators, the strategy has not been fully tested. The changes in the 2010 assessment will provide the first real test of the strategy. However, even using this assessment, there is evidence from stock projections that with the current management actions, the skipjack stock will be maintained well above MSY-based reference point measures. These results and the robust state of the skipjack stock provide evidence that the strategy is achieving its objectives.

A Recommendation (1) is raised for this PI. See Section 14.2.

This PI was the subject of a remand as part of the Objection Process (Appendix K). The IMM response to the remand is as follows:

We note that the score awarded was not considered arbitrary or unreasonable (Para 63) and that harmonisation with the Tosakatsuo skipjack fishery was effected (Para 23). The IA has, however, questioned to what extent the consideration of PNA leverage has influenced this scoring decision. We have clarified the distribution of catches in Section 1 above.

The rationale for the objection against this PI is that the final report does not show evidence that the harvest strategy for the WCPFC is responsive to the state of the stock. The objectors considered that the scoring justification was based on a WCPFC decision that was a potential outcome rather than existing evidence.

In reconsidering the score allocated to this PI in light of these catch distributions, we note the following

- The Adjudicator’s Decision did not find that the score to be arbitrary or unreasonable, noting in particular that the WCPFC7 decision was reasonably viewed as a management action in itself.
- The scoring rationale states “While the WCPFC management arrangements cover in excess of 75% of the catch, it is not clear that coherent management actions are applied throughout the range of the stock, particularly in Indonesia and the Philippines; hence the score for this element is only 80.” And “the different sets of management actions are not fully integrated, and it is not clear that coherent management actions are applied throughout the range of the stock, which limits the score to only 80.”
- The harvest strategy for the stock is characterised as having several components, with WCPFC, PNA and national and archipelagic management actions, supported by a robust stock assessment and extensive monitoring frameworks. The roles of the WCPFC, PNA and other actors in these components vary.
- The assessment is largely a matter for the WCPFC. In-zone monitoring is largely undertaken by coastal states and also flag states; high seas monitoring is largely undertaken by flag states and the WCPFC. Management actions are taken at all levels and are related.
- In scoring this PI, relatively higher weight was attached to management actions by the WCPFC (as noted in the scoring comments and by the objectors in their Notice of Objection, page 15), particularly because of the requirement to consider the extent to which the harvest strategy responded to stock status. This also considered the fact that the recent change in stock status was being reflected initially in changes at the WCPFC level to the priority for skipjack assessment, attention to monitoring of skipjack catches and management action to address skipjack stock status.
- There was, therefore, no assumption in the scoring of this PI relating to PNA leverage across the range of the stock.

Therefore the scoring of this PI was not affected by the mistake in the PNA share of WCPO skipjack catches.

Score: 80

There is evidence that the harvest strategy is responsive to the state of the skipjack stock. The elements of the harvest strategy, including the various sets of management actions, the assessments and the monitoring, appear to work together towards achieving management objectives, including the implied limit reference point. However, the different sets of

management actions are not fully integrated, and it is not clear that coherent management actions are applied throughout the range of the stock, which limits the score to only 80. (80)

The harvest strategy has not been fully tested. Monitoring is in place. The robust state of the skipjack stock and stock projections provide evidence that the strategy is achieving its objectives. (80)

Audit Trace References

WWF submission; 3IA; SPC (I10); CMM 2008-01, National Fisheries Acts, Regulations and Decrees.

	PI	SG60	SG80	SG100
1.2.2	Harvest control rules and tools: There are well defined and effective harvest control rules in place	<p><u>Generally understood</u> harvest control rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.</p> <p>There is <u>some evidence</u> that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.</p>	<p><u>Well defined</u> harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.</p> <p>The <u>selection</u> of the harvest control rules takes into account the <u>main</u> uncertainties.</p> <p><u>Available evidence indicates</u> that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules</p>	<p>The <u>design</u> of the harvest control rules take into account a <u>wide</u> range of uncertainties.</p> <p><u>Evidence clearly shows</u> that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.</p>

Scoring Comments

HCRs: *a set of well-defined pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points* (Glossary: MSC, 2009)

There is a general understanding that actions would be taken to reduce the exploitation rate on skipjack if necessary to achieve management objectives, including adoption of measures by the WCPFC in accordance with the Convention provision and the application of the precautionary approach and, furthermore, PNA adjustments to the total allowable effort (TAE) under the VDS. However there are no well defined rules in place for the skipjack stock that ensure that the exploitation rate is reduced as limit reference points are approached.

There is a range of tools in place for controlling fisheries for skipjack. Some of these, particularly the VDS, and various national measures, are aimed at controlling skipjack exploitation. Others, such as the WCPFC high seas closures and FAD closure, are aimed at controlling exploitation of other species, especially bigeye, but result in controls over fisheries for skipjack. These tools are appropriate and some information from monitoring and review of the performance of these tools since they were implemented indicates that the tools control skipjack exploitation. However, there are shortfalls in the design and implementation of these tools, including the VDS, and improvements are necessary to ensure that the tools can control skipjack exploitation in accordance with specific harvest control rules.

This PI was the subject of a remand as part of the Objection Process (Appendix K). The IMM response to the remand is as follows:

Again, we note that the score awarded was not considered arbitrary or unreasonable (Para 63) and that harmonisation with the Tosakatsuo skipjack fishery was effected (Para 23). The IA has, however, questioned to what extent the consideration of PNA leverage has influenced this scoring decision. We have clarified the distribution of catches in Section 1 above.

In reconsidering the score allocated to this PI in light of these catch distributions, we note the following:

- The basis for the objection was that the objectors consider that SG80 requirements for the entire stock cannot be met if only PNA adopts a harvest control rule. The adjudicator’s decision finds that the requirements for SG60 were not disputed and have been met.
- With respect to the weight given to the role of PNA in scoring this PI, the PNA and WCPFC were considered in parallel under this PI. The report determined (as noted in Section 5.4.2) that “*There has been no formal development of harvest control rules for skipjack in PNA waters or the WCPO*” (noting that para 69 of the Adjudicator’s Decision has referred to “*in PNA waters of the WCPO*”). The Report also determined in Section 5.4.2 as noted in para 69 of the Decision that “*PNA and the Commission have demonstrated a capability of applying measures to reduce the exploitation rate for bigeye tuna on the basis of scientific advice that fishing mortality exceeding FMSY*”.
- On this basis, the assessment found a general understanding that actions would be taken to reduce the exploitation rate on skipjack if necessary to achieve management objectives, including adoption of measures by the WCPFC in accordance with the Convention provision and the application of the precautionary approach and adjustments by PNA to the total allowable effort (TAE) under the VDS consistent with SG60, but did not find the well defined harvest control rules required for SG80 to have been formally developed by either PNA or WCPFC.
- In this sense, the scoring for this PI did not assign any weighting to the role of PNA in putting place harvest control rules, but rather considered the status of harvest control rules in both the PNA and the WCPFC in parallel.

Therefore the mistake in the PNA share of the WCPO skipjack catch did not affect the scoring of this PI.

Score: 60

Through the nature of the WCPFC Convention and the VDS, there are generally understood harvest control rules are in place that are consistent with the harvest strategy and which could act to reduce the exploitation rate of skipjack as limit reference points are approached, but these rules are not well defined. (60).

There is some evidence that the VDS and other tools (e.g. WCPFC limits on other fleets) in use are appropriate and effective in controlling exploitation, but there are shortfalls in the application of these tools, and it is not clear that they will be effective in achieving the exploitation levels required under harvest control rules that will be adopted. (60).

A Condition (1) is raised for this PI (See Section 14.1).

Audit Trace References

PNAO (2010), National Fishery Acts and Management Plans, Williams (2010), SPC (I10), National Fishery Administrations (I2, I3, I6-19, I12), PNAO (I14, I24)

	PI	SG60	SG80	SG100
1.2.3	Information / monitoring: Relevant information is collected to support the harvest strategy	<p><u>Some</u> relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</p> <p>Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.</p>	<p><u>Sufficient</u> relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.</p> <p>Stock abundance and fishery removals are <u>regularly monitored at a level of accuracy and coverage consistent with the harvest control rule</u>, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.</p> <p>There is good information on all other fishery removals from the stock.</p>	<p>A <u>comprehensive range</u> of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available.</p> <p><u>All information</u> required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent <u>uncertainties</u> in the information [data] and the robustness of assessment and management to this uncertainty.</p>

Scoring Comments

A comprehensive range of information (on stock structure, stock productivity, fleet composition), is available to monitor and assess stock status including; tagging data for stock identification, catch reporting and size-frequency sampling by each fleet and catch-per-unit-effort data from these fleets

Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with likely and best practice HCRs, and indicators of catch and effort are available and monitored with sufficient frequency to support catch or effort-related HCRs. In addition there is a very high level of observer coverage (100% since 2010), port sampling and transshipment monitoring.

There is good information on all other fishery removals from the stock, except for Indonesia. However there are a number of ongoing initiatives to strengthen data collection in Indonesia, Philippines and Vietnam, supported by GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM), These data and revised catch estimates have been incorporated in the 2010 assessment.

This PI was the subject of a remand as part of the Objection Process (Appendix K). The IMM response to the remand is as follows:

Again, we note that the score awarded was not considered arbitrary or unreasonable (Para 63) and that harmonisation with the Tosakatsuo skipjack fishery was effected (Para 23). The PI is remanded because the mistake as to fact set out in Section 1 above goes to the weight given by the certification body to the importance of data collection for Indonesia,

Philippines and Vietnam.

In reconsidering the score allocated to this PI in light of these catch distributions, we note the following:

- The objectors argued that the 3rd element of SG80 is not met because the quality of information from fisheries in Indonesia, Philippines and Vietnam does not meet the requirement for 'good information on other fishery removals'.
- The Decision noted that data from these other fisheries, albeit deficient in some regards, may reasonably be characterised as currently at a 'good' level, noting also advice of improvement in the quality of data from these fisheries.
- Therefore the requirements for the 3rd scoring issue of SG80 are met and this scoring issue is appropriately scored at 80.
- The quality of information for PNA skipjack fisheries was assessed under the 2nd scoring issue and also scored at 80.
- Since the quality of information for the Indonesia, Philippines and Vietnam fisheries was scored separately and against a different scoring issue from the quality of information for PNA skipjack fisheries, the mistake of fact on PNA leverage and the associated share of catches by Indonesia, Philippines and Vietnam did not affect the scoring of the quality of information from fisheries in Indonesia, Philippines and Vietnam. The improvements in the quality of information in these countries and the latest data provided from SPC, confirms our judgement that this remains appropriate at the 'good' level of data provision

Reviewing the scores, we confirm that 1 SG achieves the 100 level and 2 SGs meet the 80 level. On this basis, the score is reduced to 85 (noting the IAs comments in para 79).

Score: 85

A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available (100).

Stock abundance and skipjack catches within the assessment area are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and a number of indicators are available and monitored with sufficient frequency to support the harvest control rule (80).

There is comprehensive information on fishery removals from most other sources e.g. longline, other purse seine and pole & line fisheries, and considerable information from the diverse fisheries of Indonesia and Philippines, including estimates of total catch, size and some effort data, especially in the Philippines. This has been supported by a number of recent regional and national initiatives. However, despite a number of deficiencies in compilation and analysis from the Indonesia and Philippines, this reaches SG80 (80).

A Recommendation (2) is raised for this PI (See Section 14.2).

Audit Trace References

SPC, Williams (2010), Lawson (2010), 2nd session of the WCPFC in December 2005; GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM),

	PI	SG60	SG80	SG100
1.2.4	Assessment of stock status: There is an adequate assessment of the stock status	<p>The assessment estimates stock status relative to reference points.</p> <p>The assessment identifies major sources of uncertainty.</p>	<p>The assessment is appropriate for the stock and for the harvest control rule, and is evaluating stock status relative to reference points.</p> <p>The assessment takes uncertainty into account.</p> <p>The assessment of stock status is subject to peer review.</p>	<p>The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.</p> <p>The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.</p> <p>The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.</p> <p>The assessment has been <u>internally and externally</u> peer reviewed.</p>

Scoring Comments
<p>There is a robust and internationally acknowledged stock assessment programme in place (Williams, 2010). The assessments use the MULTIFAN-CL stock assessment model, an age- and spatially-structured model utilizing catch, effort, size composition data grouped into 17 fisheries and quarterly time periods from 1952-2009. The model has been used for skipjack since 1998, is continually fine-tuned and improved and benefits from a large tagging database which enables more reliable estimation of parameters such as absolute biomass levels, indices of abundance and exploitation rates that pose particular difficulty for skipjack assessments.</p> <p>The assessment is appropriate for the WCPO skipjack stock. No HCRs have been adopted, but the assessment is appropriate for the generally understood harvest control rules that are being applied and for the range of formal HCRs that might be adopted, and is evaluating stock status relative to default generic MSY-based reference points.</p> <p>The assessment:</p> <ol style="list-style-type: none"> 1. takes into account the major features relevant to the biology of the species and the nature of the fishery. 2. takes into account uncertainty and is evaluating stock status relative to MSY-based reference points in a probabilistic way. 3. has been tested and shown to be robust. <p>Alternative hypotheses and assessment approaches have been rigorously explored</p> <p>The assessment is subject to internal peer review through the WCPFC SC. The WCPFC is also beginning to apply an external peer review process but this has not been applied to this assessment.</p>
Score: 95
The assessment is appropriate for the skipjack stock in the WCPO and for the harvest control rule and takes into account the major features relevant to the biology of the species

<p>and the nature of the fishery (100).</p> <p>The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way (100).</p> <p>The assessment has been tested since 2002 and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored (100).</p> <p>Whilst the assessment of stock status is subject to rigorous internal peer review, it has not yet been subjected to external peer review (80).</p>
Audit Trace References
Hoyle et al. 2010; Langley and Hampton, 2008; Williams, 2010; Harley et al., 2010

Principle 2	Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends
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2.1	Retained non-target species
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	PI	SG60	SG80	SG100
2.1.1	Status: The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species.	Main retained species are <u>likely</u> to be within biologically based limits or if outside the limits there are <u>measures</u> in place that are <u>expected</u> to ensure that the fishery does not hinder recovery and rebuilding of the depleted species. If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.	Main retained species are <u>highly likely</u> to be within biologically based limits, or if outside the limits there is a <u>partial strategy</u> of <u>demonstrably effective</u> management measures in place such that the fishery does not hinder recovery and rebuilding.	There is a <u>high degree of certainty</u> that retained species are within biologically based limits. Target reference points are defined and retained species are at or fluctuating around their target reference points.

Scoring Comments
<p>This assessment considers the main retained species, yellowfin tuna and bigeye tuna. It is noted that bigeye tuna represents <1% of the unassociated and ~5 % of log set catches, when the unidentified species component of the observed catch is allocated to skipjack, yellowfin and bigeye, but is still considered due to its vulnerability, economic significance to the longline fishery, and the significant impact of the log fishery on the bigeye stock spawning potential.</p> <p>Yellowfin tuna: Not overfished, within biological based limits (FAM 7.1.11/7.1.12). $B_{current} / B_{MSY} = 1.37-1.88$; $B_{current} / B_0 = 0.57- 0.60$ (Langley <i>et al.</i>, 2009); $B_{MSY}/B_0 = 0.37-0.38$; Likelihood profile indicates highly certain that $B/B_{MSY} > 1.0$. Biomass is therefore estimated to be currently above $B_{LIM} = 0.2B_0$, with a high degree of certainty.</p> <p>Bigeye tuna: Not overfished, within biologically based limits (FAM 7.11/7.11.12). $B_{current} / B_{MSY} = 1.39$; $B_{current} / B_0 = 0.42$. (Harley et al., 2010). Biomass is therefore likely, with a high degree of certainty, to be <u>currently</u> above $B_{lim} = 0.20 B_0$.</p>
Score: 80
<p><u>Both main retained species are therefore within biologically based limits (80); Yellowfin tuna:</u> There is a high degree of certainty that yellowfin tuna stocks in the WCPO are within biologically-based limits (i.e. above $B_{LIM} = 0.20 B_0$).</p> <p>Likelihood profiles in the 2009 assessment indicate there is almost zero probability of B_{curr}/B_{MSY} being less than 1.0 and hence well above B_{LIM} ($0.20 B_0$); similarly there is close to</p>

zero probability of F_{curr}/F_{MSY} being above 1.0.

Default target reference points (i.e. B_{MSY} & F_{MSY}) are defined (but not adopted) and yellowfin tuna has never dropped below these TRPs (Langley *et al*, 2009).

Bigeye tuna: There is a high degree of certainty that bigeye tuna stocks in the WCPO are within biologically-based limits (i.e. above $B_{lim} = 0.20 B_0$); there is no likelihood profile available for B_{curr}/B_{MSY} , but that for SB shows there is a 0.5% probability of being below the target value of 1.0, and highly likely that this applies to B; overfishing is however occurring, with very high probability that F_{curr}/F_{MSY} is much greater than 1.0

Default target reference points (i.e. B_{MSY} & F_{MSY}) are defined (but not adopted).

Audit Trace References

FAM ref for B_{lim} & serious / irreversible harm (7.1.11 & 7.1.12 respectively) and measurement of impact on stock recovery (7.1.14), FAM 6.2.19 (d)

Langley *et al*, 2009, Harley *et al*, 2010.

	PI	SG60	SG80	SG100
2.1.2	<p>Management strategy: There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species.</p>	<p>There are <u>measures</u> in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a <u>partial strategy</u> in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p> <p>There is some <u>objective basis for confidence</u> that the partial strategy will work, based on some information directly about the fishery and/or species involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being <u>implemented successfully</u>.</p>	<p>There is a <u>strategy</u> in place for managing retained species.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and <u>testing</u> supports <u>high confidence</u> that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being <u>implemented successfully</u>, and intended changes are occurring.</p> <p>There is some evidence that the strategy is <u>achieving its overall objective</u>.</p>

Scoring Comments
<p><u>Yellowfin</u>: there is a partial strategy in place based on the various elements of CMM 2008-01 to control the overall level of purse seine effort and the impact of associated sets. Projections show that these measures will maintain the stock within biologically-based limits over time. Overfishing is not occurring and projections show that this stock will not become over-fished or fall below B_{LIM} ($0.2B_0$ or $0.5B_{MSY}$) (Hampton & Harley, 2009).</p> <p><u>Bigeye</u>: there is a partial strategy in place based on the various elements of CMM 2008-01 to control the overall level of purse seine effort and the impact of associated sets. However projections show that these measures will not maintain the stock within biologically-based limits over time. Overfishing is occurring and projections show that this stock will become over-fished and fall below B_{LIM} ($0.2 B_0$ and $0.5 B_{MSY}$) and thus outside biologically-based limits in around 10 years (Hampton & Harley, 2009). The assessment indicates that the stock is not overfished but projections show that this stock will become overfished in around 10 years.</p> <p>Fishery impact figures show that the unassociated sets make a very small (<1%) contribution to reduction in the spawning potential of the bigeye stock. Fishery impact figures also show that the log sets make a larger contribution to reduction in the spawning potential of the bigeye stock, currently estimated to have been responsible for 8-10% reduction.</p> <p>For the <i>unassociated schools</i>, due to the limited impact of this fishery on the BET stock, there are no measures necessary, although monitoring of set activity in compliance with CMM 2009-02 is required. In the case of <i>log sets</i>, the measures in place (CMM 2008-01) are not considered able to maintain the bigeye stock at levels that are highly likely to be within biologically-based limits and they may not effectively limit the impact of log sets on the recovery and rebuilding of the bigeye stock, especially if there is transfer of effort from</p>

drifting FAD to log sets.	
Scientific analysis offers some encouragement for the likely success of the measure, but this remains to be confirmed by more rigorous analysis and performance during the longer closures (3 months) during 2010 and 2011.	
Unassociated set: 80	Log sets: FAIL
<p><u>Yellowfin tuna</u>: there are measures and a partial strategy in place to constrain effort. These are projected to work to maintain the stock at levels which are highly likely to be within biologically based limits. There is some evidence that effort restrictions are being implemented successfully (80).</p> <p><u>Bigeye tuna</u>: there are measures and a partial strategy in place to constrain effort and reduce juvenile bigeye mortality from FAD use. The projections provide some objective basis for confidence that this partial strategy and measures will work to continue to ensure that this fishery does not hinder the recovery and rebuilding of bigeye tuna within the effort limits set by the VDS. This is supported by some evidence that the FAD closure and effort restrictions are being implemented successfully (80).</p> <p>A Recommendation (3) is set for this PI (Section 14.2).</p>	<p><u>Yellowfin tuna</u>: there are measures and a partial strategy in place to constrain effort. These are projected to maintain the yellowfin stock at levels which are highly likely to be within biologically based limits. There is some evidence that effort restrictions are being implemented successfully (80).</p> <p><u>Bigeye tuna</u>: there are measures and a partial strategy in place to constrain effort. and reduce juvenile bigeye mortality from FAD use The SG60 level is not met because stock projections provide an objective basis for confidence that the partial strategy will not be successful at maintaining the bigeye tuna stock within biologically based limits, and may not work adequately to be able to ensure that this fishery does not hinder the recovery and rebuilding of the bigeye tuna stock (FAIL).</p>
Hampton and Harley, 2009; Hampton and Harley, 2010; SPC, 2009;	

	PI	SG60	SG80	SG100
2.1.3	<p>Information / monitoring: Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species.</p>	<p><u>Qualitative information</u> is available on the amount of main retained species taken by the fishery.</p> <p>Information is <u>adequate</u> to <u>qualitatively</u> assess outcome status with respect to biologically based limits.</p> <p>Information is adequate to support <u>measures</u> to manage <u>main</u> retained species.</p>	<p><u>Qualitative information</u> and some quantitative information are available on the amount of main retained species taken by the fishery.</p> <p>Information is <u>sufficient</u> to estimate outcome status with respect to biologically based limits.</p> <p>Information is adequate to support a <u>partial strategy</u> to manage <u>main</u> retained species.</p> <p>Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).</p>	<p>Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.</p> <p>Information is <u>sufficient</u> to <u>quantitatively</u> estimate outcome status with a <u>high degree of certainty</u>.</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage retained species, and evaluate with a <u>high degree of certainty</u> whether the strategy is achieving its objective.</p> <p>Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.</p>

Scoring Comments

This assessment includes information on the catches of other fleets outside the assessment, including those from Indonesia and the Philippines. This takes a precautionary approach given the FAM guidance on the scope of P2 (FAM v2, 7.1.14)

There is accurate and verifiable information available on the catch of both yellowfin and bigeye tuna from the fleets under assessment. This is incorporated in the recurrent stock assessments. There is qualitative and some quantitative information from both Indonesia and the Philippines (Williams, pers. comm. 2010) and this information is sufficient to estimate outcome status with respect to biologically based limits. Information is available from a cross-section of verifiable data sources which are continually being monitored and improved as the need arises. This includes the observer programme, on-board & port sampling strategies and VMS.

Score: 80

The two units of certification are scored together as similar information is available across both fisheries.

There is accurate and verifiable information available on the catch of both yellowfin and bigeye tuna from the fleets under assessment. This is incorporated in the recurrent stock assessments. There is qualitative and some quantitative information from both Indonesia and the Philippines (80)

The information is sufficient to estimate outcome status with respect to biologically based limits (80).

Information is adequate to support a partial strategy to manage both yellowfin and bigeye tuna stocks (80).

A high level of information is available from the assessed fleets. This information is available from a cross-section of verifiable data sources, which are continually being monitored and improved as the need arises. This includes the observer programme, on-board & port sampling strategies and VMS (80).

Audit Trace References

SPC, Williams (2010), Lawson (2010), 2nd session of the WCPFC in December 2005 GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM),

2.2	Discarded species (also known as “bycatch” or “discards”)
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	PI	SG60	SG80	SG100
2.2.1	<p>Status The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups.</p>	<p>Main bycatch species are <u>likely</u> to be within biologically based limits, or if outside such limits there are mitigation <u>measures</u> in place that are <u>expected</u> to ensure that the fishery does not hinder recovery and rebuilding.</p> <p>If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the bycatch species to be outside biologically based limits or hindering recovery.</p>	<p>Main bycatch species are <u>highly likely</u> to be within biologically based limits or if outside such limits there is a <u>partial strategy</u> of <u>demonstrably effective</u> mitigation measures in place such that the fishery does not hinder recovery and rebuilding.</p>	<p>There is a <u>high degree of certainty</u> that bycatch species are within biologically based limits.</p>

Scoring Comments

Historical discards of tuna tend to be low, mostly as it is too small for canning (discarding YFT/BET/SKJ is now prohibited) (SPC, 2009). The tuna discard rates have been higher for log sets, presumably because there is a greater proportion of undersize fish. The discard of other tuna species (e.g. frigate mackerel, bullet tuna) tends to be higher, with 14.3% (unassociated) and 27.4% (log sets) being discarded. As a whole, around 84% (unassociated) and 71% (log) of non-tuna species are discarded. The volumes concerned are very low, with retained fish probably being used for consumption by the crew. The status, interaction and management, and information on the discarding of key non-tuna species is discussed below. It should be stressed that the discard rates of the two species examined (silky shark and blue marlin) are all substantially below the 5% threshold guidance given in the MSC FAM.

Silky shark: represents the main shark bycatch from these two fisheries, especially with unassociated sets. However catch rates are very low (0.06% and 0.12% for unassociated and log sets respectively). At least 80% is discarded, and observer reports indicate that there is some level of post-discard survival (c. 30%). It appears that, based upon length-frequency information that the majority of the population is relatively stable, although there may be areas of local depletion. As such it appears high likely that this species is within biologically-based limits, although there is an evident need to reduce fishing pressure on these potentially vulnerable species. Preliminary stock assessment work is underway by IATT

Blue marlin: catch rates of blue marlin are very low (c. 0.03% of total catch volume for both set types), with total annual catches likely to be less than 100t for unassociated sets and 10t for log sets. Discard levels in the unassociated catches is high (c. 60%) but post-discard survival is unknown, but likely to be low. Although the stock is likely to be fully exploited, it is likely to be within biological limits and this fishery contributes a very small part of overall fishing mortality. An ISC stock assessment for blue marlin is scheduled 2012 (ISC, 2009).

Unassociated sets: 80	Log Sets: 80
<p>Silky Shark: although the status is uncertain, there is a partial strategy through RPOA-Sharks and CMM 2010-07 that, given the very low proportion of the species in unassociated sets and as a proportion of the total removals by all fisheries, means that this fishery will not hinder recovery and rebuilding if necessary. Available evidence suggests reduction in mortalities (Molony, 2007). (80)</p> <p>Blue Marlin: assessments indicate stock highly likely to be within biological limits, although these need to be updated (80)</p> <p>A Recommendation (4) is set for this PI (Section 14.2).</p>	<p>Silky Shark: although the status is uncertain, there is a partial strategy through RPOA-Sharks and CMM 2010-07 that, given the very low proportion of the species in unassociated sets and as a proportion of the total removals by all fisheries, means that this fishery will not hinder recovery and rebuilding if necessary. Available evidence suggests reduction in mortalities (Molony, 2007). (80)</p> <p>Blue Marlin: assessments indicate stock highly likely to be within biological limits, although these need to be updated (80)</p> <p>A Recommendation (5) is set for this PI (Section 14.2).</p>
Audit Trace References	
SPC, 2009 Moloney, 2007 ISC, 2009; yield (IATTC 2004). Kleiber <i>et al.</i> (2003),	

	PI	SG60	SG80	SG100
2.2.2	<p>Management strategy: There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.</p>	<p>There are <u>measures</u> in place, if necessary, which are expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, for managing bycatch that is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery.</p> <p>There is <u>some objective basis for confidence</u> that the partial strategy will work, based on some information directly about the fishery and/or the species involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being implemented successfully.</p>	<p>There is a <u>strategy</u> in place for managing and minimising bycatch.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports <u>high confidence</u> that the strategy will work.</p> <p>There is some <u>evidence</u> that the strategy is achieving its objective.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring.</p>

Scoring Comments	
<p>Silky shark: CMM 2006-05 (amended in 2008 (CMM 2008-06), 2009 (CMM 2009-04) and 2010 (CMM 2010-07)) is specific to shark bycatch management. It requires that CCMs take measures to (i) implement the FAO International Plan of Action for the Conservation and Management of Sharks (non-binding); (ii) define key shark species / shark catch & discard reporting requirements (non-binding); (iii) support research and development of strategies for the avoidance of unwanted shark captures (non-binding); (iv) fully utilize any retained catches of sharks (inc restrictions on finning (binding); (v) to prohibit their fishing vessels from retaining, trans-shipping, landing, or trading any fins (binding) and (vi) encourage the release of live sharks (binding).</p> <p>Proposals for a shark research plan in the WCFPO will be tabled at the August 2010 WCPFC SC meeting. If implemented, this may lead to further, more targeted actions focused on key sharks species considered vulnerable to fishing in this ocean area. The PNA has also raised the issue of finning through WP9 – Application of Management Arrangements for Sharks, submitted to the PNA 29th Special Meeting in February 2010 (PNA, 2010). At this meeting it was agreed to discuss the issue of shark finning at their Annual Meeting. It was suggested in WP9 that a prohibition on shark finning should be considered in a package of management arrangements for a fourth implementing arrangement. This is considered the appropriate place for these arrangements as they will be applied consistently across the waters of all PNA members, which will result in all DWFNs being subject to the same arrangements.</p> <p>Blue marlin: the key non-shark species being discarded by the fisheries under assessment is the blue marlin (0.03% of total catch for both fisheries). At present this species is not considered to be outside of biologically-based limits and thus, considering the low levels of bycatch from these two fisheries, no bycatch strategy is currently considered necessary.</p>	
Unassociated sets: 75	Log sets: 75
<p>Silky Shark: there is a precautionary partial strategy in response to the potential vulnerability of the species is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits (80)</p> <p>However, while there is inadequate and conflicting information the assessment on whether the partial strategy will work, the assessment team consider it likely to work given monitoring by observers, and flag state controls (60),</p> <p>There is some evidence that the partial strategy is being implemented based on 100% observer coverage (80)</p> <p>A Condition (23) is set for this PI (Section 14.1).</p>	<p>Silky Shark: there is a precautionary partial strategy in response to the potential vulnerability of the species is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits (80)</p> <p>However, while there is inadequate and conflicting information the assessment on whether the partial strategy will work, the assessment team consider it likely to work given monitoring by observers, and flag state controls (60),</p> <p>There is some evidence that the partial strategy is being implemented based on 100% observer coverage (80)</p>
Audit Trace References	
CMM 2006-05; CMM 2008-06; CMM 2009-04; CMM 2010-07; PNA, 2010; Shelley Clarke, SPC pers. comm., 4 August 2010	

	PI	SG60	SG80	SG100
2.2.3	<p>Information / monitoring</p> <p>Information on the nature and amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch.</p>	<p><u>Qualitative information</u> is available on the amount of main bycatch species affected by the fishery.</p> <p>Information is <u>adequate to broadly understand</u> outcome status with respect to biologically based limits.</p> <p>Information is adequate to support <u>measures</u> to manage bycatch.</p>	<p><u>Qualitative information and some quantitative information are</u> available on the amount of main bycatch species affected by the fishery.</p> <p>Information is sufficient to estimate outcome status with respect to biologically based limits.</p> <p>Information is adequate to support a <u>partial strategy</u> to manage main bycatch species.</p> <p>Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).</p>	<p><u>Accurate and verifiable information</u> is available on the amount of all bycatch and the consequences for the status of affected populations.</p> <p>Information is <u>sufficient</u> to quantitatively estimate outcome status with respect to biologically based limits with a <u>high degree of certainty</u>.</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage bycatch, and evaluate with a high degree of certainty whether a strategy is achieving its objective.</p> <p>Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.</p>

Scoring Comments
<p>Sharks: Some steps have already been taken toward assessment of shark species through a multi-year project on ecological risk assessment conducted by SPC in collaboration with FFA, CCMs and non-governmental organizations (NGOs), and presented to the SC at each of its meetings beginning in 2006 (Kirby and Molony, 2006). In 2010 the WCPFC SC drafted a research plan for the assessment of the status of these stocks (Clarke & Harley, 2010), which was presented, to the SC's 6th Regular Session in mid-August 2010 with a more complete analysis to be presented to the SC in 2011 (WCPFC, 2010). Species-specific shark catch records are historically sparse in the purse seine log sheet data held by SPC OFP (Clarke & Harley, 2010). Species-specific reporting of the silky shark and oceanic whitetip shark has largely only been in place since 2009. There has been 100% observer coverage on purse seiners since January 2010.</p> <p>While the quantity and quality of shark data submitted to the Commission appear to be increasing over the past few years, the sufficiency of Commission-held data for supporting Commission requests for shark assessment is an important consideration. Information on the current level of shark finning is lacking, but will be contained in recent but as yet uncompiled observer reports. CMM 2010-07 requires that CCMs shall advise the Commission on their implementation of the IPOA Sharks and reported annually in Part 2 of their</p>

annual reports, but it is understood that very little has been reported to date. CMM 2009-04 (and subsequently CMM 2010-07) also requires that each CCM include both catches and discards of silky shark and oceanic whitetip⁴⁹ to species level in their annual reports (Shelley Clarke, pers. comm., 04 Aug. 2010).

Blue marlin: Both quantitative and considerable qualitative information is available on the catches of non-target species, although there may be the occasional mis-identification between marlin species. As discussed earlier, observer coverage has been high (at least 20% of the PNG EEZ catches which account for around 2/3 of the total catches and form the beginning of 2010, full coverage of all purse seine fishing). The increase in observer coverage should ensure that the risk assessment can be updated and any conservation strategies formulated if considered necessary.

Stock assessments, as well as CPUE, length frequency and other data on blue marlin catches suggest that it is likely that this species is well within biological limits. This species was included in a risk assessment conducted by Kirby & Hobday in 2007. Given the low catches of blue marlin in both the fisheries under assessment, it is considered that current information provision is sufficient to support strategies to manage their catch. However, as stated above, given the susceptibility of blue marlin to fishing (Kirby & Hobday, 2007), it is recommended that the results of the proposed ISC stock assessment for blue marlin in 2012 is reviewed during surveillance.

Score: 90

Accurate and verifiable information are available on the amount of all bycatch species affected by the fishery (100)

Information is sufficient to estimate outcome status with respect to biologically based limits, but there is insufficient time series of key indicators of stock status to allow a high degree of certainty (80)

Information is adequate to support a partial strategy to manage main bycatch species, but not sufficient to evaluate with a high degree of certainty (I.e. recent observer information on shark finning levels) whether a strategy is achieving its objective (80).

Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species (100)

Audit Trace References

CMM 2009-04; CMM 2010-04; WCPFC 2007; Kirby, 2006; Clarke & Harley, 2010; WCPFC, 2010; Shelley Clarke, pers. comm., 04 Aug. 2010

⁴⁹ As well as blue shark, mako sharks and thresher sharks

2.3	Endangered, Threatened and Protected (ETP) species
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	PI	SG60	SG80	SG100
2.3.1	<p>Status: The fishery meets national and international requirements for protection of ETP species.</p> <p>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species.</p>	<p>Known effects of the fishery are <u>likely</u> to be within limits of national and international requirements for protection of ETP species.</p> <p>Known direct effects are <u>unlikely</u> to create <u>unacceptable impacts</u> to ETP species.</p>	<p>The effects of the fishery are known and are <u>highly likely</u> to be within limits of national and international requirements for protection of ETP species.</p> <p>Direct effects are <u>highly unlikely</u> to create <u>unacceptable impacts</u> to ETP species.</p> <p>Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.</p>	<p>There is a <u>high degree of certainty</u> that the effects of the fishery are within limits of national and international requirements for protection of ETP species.</p> <p>There is a <u>high degree of confidence</u> that there are <u>no significant detrimental effects (direct and indirect)</u> of the fishery on ETP species.</p>

Scoring Comments	
<p>This assessment has focused on the four key ETP species, as discussed in Section 6.4 (false killer whale, sei whale, whale shark and common dolphin). Of these, false killer whale and whale shark may be significantly affected by the fishery</p> <p>False killer whale: this CITES listed species associates with schools of tuna and other large pelagic species that form its prey. It is not caught with log associated sets, may represent the focus of mis-reported animal sets within the observer-recorded unassociated purse seine fishery. However the incidence is very low and with over 90% recorded survival from 100% discarding, the actual mortality caused to this species by the unassociated unit of certification is very low, possibly limited to 2-3 animals annually. As a result, it is not considered that either fishery causes unacceptable impacts to this species.</p> <p>Whale shark: this species is also CITES listed. It is known as a fecund species, but with very low productivity. This species is caught in unassociated sets (although are in fact likely to be associated with the tuna) and it has been estimated that total whale shark mortality in the purse seine fishery in 2009 of approximately 60 animals, translating into about 36 animals in the unassociated sets, none in the log sets and 24 in other set types. This represents a mortality rate of 1.36 animals per 1,000 sets.</p>	
Unassociated Sets Score: 70	Log Sets Score: 100
<p>False killer whales: given the very low interactions (c. 0.01% of catch volume) there is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of false killer whales (100).</p> <p>Given the observed live condition of released false killer whales of 90%, there is a high</p>	<p>No ETP species affected by this fishery default 100 (FAM 7.4.5)</p>

<p>degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species (100).</p> <p>Whale sharks: the mortality of whale sharks in this fishery are well known from observer programmes (80) and likely to be within limits of the protection of this species (60).</p> <p>The known direct effects have been considered (80) and are unlikely to create unacceptable impacts to this species (60).</p> <p>A Condition (4) is set for this PI (Section 14.1).</p>	
Audit Trace References	
SPC Catch database (Peter Williams, pers. comm., 4 August 2010).	

2.3.2	<p>Management strategy</p> <p>The fishery has in place precautionary management strategies designed to:</p> <ul style="list-style-type: none"> - meet national and international requirements; - ensure the fishery does not pose a risk of serious or irreversible harm to ETP species; - ensure the fishery does not hinder recovery of ETP species; and - minimise mortality of ETP species. 	<p>There are <u>measures</u> in place that minimise mortality, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species.</p> <p>The measures are <u>considered likely</u> to work, based on <u>plausible argument</u> (e.g. general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a <u>strategy</u> in place for managing the fishery’s impact on ETP species, including measures to minimise mortality that is designed to be highly likely to achieve national and international requirements for the protection of ETP species.</p> <p>There is an <u>objective basis for confidence</u> that the strategy will work, based on <u>information</u> directly about the fishery and/or the species involved.</p> <p>There is <u>evidence</u> that the strategy is being implemented successfully.</p>	<p>There is a <u>comprehensive strategy</u> in place for managing the fishery’s impact on ETP species, including measures to minimise mortality that is designed to achieve <u>above</u> national and international requirements for the protection of ETP species.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and a <u>quantitative analysis</u> supports <u>high confidence</u> that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring. There is evidence that the strategy is achieving its objective.</p>
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Scoring Comments
There are a number of specific management actions taken by the CCMs to protect iconic and vulnerable species.

False killer whale: As mentioned above the false killer whale is a CITES Appendix II species in the Solomon Islands, thus restricting (but not stopping) trade of this species in this country. At present, given the low interaction of these fisheries with false killer whales, there are no specific management measures in place to protect these species.

Whale shark: Guidance to PICs on shark conservation as part of the Regional Plan of Action (RPOA) for sharks (Lack & Meere, 2009) suggests that a prohibition of the use of purse seine sets on schools associated with whale sharks would provide a “a high likelihood, in aggregate, of delivering improved conservation outcomes for sharks”. Furthermore the PNA has recently agreed (to be introduced as an amendment to 4th Implementing Agreement, effective from 1 January 2011) a ban on the setting on whale sharks and is in the process of setting the rule parameters to control this (PNA, 2010b).

The objective of the WCPFC is to: “...to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean...”. The WCPFC’s management mandate relates to highly migratory fish species and extends to the management of non-target species taken in fisheries for target stocks, in particular through the WCPFC-2 Resolution on Non-Target Fish Species. Mechanisms to reduce interactions with non-target species, including ETPs, includes the preparation of risk assessments at regional level (e.g. Kirby, 2006; Kirby and Hobday, 2007) as well as within the PICT EAFM reports that allow the identification of management measures if deemed necessary by the Ecosystems and Bycatch Specialist Working Group (EB SWG). This is also supported by the recently increased observer coverage of 100% in the purse seine fisheries.

CMM 2008-03 is applied to turtles, but encounters are extremely rare.

Score: 85

There is a comprehensive strategy in place for managing the fishery’s impact on ETP species, in particular in the form of the PNA ban on whale shark associated sets, that is designed to achieve above national and international requirements for the protection of ETP species. (100)

There is an objective basis for confidence that the whale shark associated set ban will work, based on information directly about the fishery and/or the species involved.(80)

There is not yet clear evidence that the strategy is being implemented successfully, and intended changes are occurring, but the continuing low levels in interaction indicates that the strategy is being implemented effectively. (80)

Audit Trace References

WCPFC-2 Resolution; Kirby, 2006; Kirby and Hobday, 2007; Lack & Meere, 2009; PNA, 2010b

	PI	SG60	SG80	SG100
2.3.3	<p>Information / monitoring</p> <p>Relevant information is collected to support the management of fishery impacts on ETP species, including:</p> <ul style="list-style-type: none"> - information for the development of the management strategy; - information to assess the effectiveness of the management strategy; and - information to determine the outcome status of ETP species. 	<p>Information is <u>adequate</u> to <u>broadly understand</u> the impact of the fishery on ETP species.</p> <p>Information is adequate to support <u>measures</u> to manage the impacts on ETP species</p> <p><u>Information</u> is sufficient to <u>qualitatively</u> estimate the fishery related mortality of ETP species.</p>	<p>Information is <u>sufficient</u> to determine whether the fishery may be a threat to protection and recovery of the ETP species, and if so, to measure trends and support a <u>full strategy</u> to manage impacts.</p> <p><u>Sufficient data</u> are available to allow fishery related mortality and the impact of fishing to be <u>quantitatively</u> estimated for ETP species.</p>	<p>Information is <u>sufficient</u> to <u>quantitatively</u> estimate outcome status with a high degree of certainty.</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives.</p> <p><u>Accurate and verifiable information</u> is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species</p>

Scoring Comments
<p>There is available information on the catch numbers, approximate volume, fate, and condition upon release etc through 100% observer coverage, supported by accurate debriefing and quality control processes is adequate to measure trends and support a comprehensive strategy to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives, however, it is not adequate to quantitatively estimate outcome status with a high degree of certainty, nor the consequences for the status of ETP species because it cannot support species-specific stock assessments.</p> <p>Both quantitative and considerable qualitative information is available on the catches of these ETP species, although there may be the occasional mis-identification between false killer whale and killer whale, <i>Orcinus orca</i>.</p>
<p>Score: 85</p>
<p>Information is <u>sufficient</u> to determine whether the fishery may be a threat to protection and recovery of the ETP species, and if so, to measure trends and support a <u>full strategy</u> to manage impacts (80)</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives. (100)</p> <p><u>Sufficient data</u> are available to allow fishery related mortality and the impact of fishing to be <u>quantitatively</u> estimated for ETP species (80)</p>
Audit Trace References

SPC Catch database (Peter Williams, pers. comm., 4 August 2010).

2.4 Habitat

	PI	SG60	SG80	SG100
2.4.1	Status The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function.	The fishery is <u>unlikely</u> to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is <u>highly unlikely</u> to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is <u>evidence</u> that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.

Scoring Comments

These purse seine fisheries are undertaken in deep oceanic waters and do not physically impact the seafloor during their operation. Therefore the focus of this part of this assessment is mainly upon the possible impact of fishing the communities associated with floating logs (log sets only).

In the case of log sets, the main question is whether fishing and depleting the communities associated with these natural FADs causes “cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function”. A number of factors suggest that depopulation of natural log populations are neither serious nor irreversible impacts, including: (i) the short residency times under FADs; (ii) most fishers pull logs out of the purse seine and encouraging the smaller juvenile reef species to ‘recolonise’ the logs immediately upon release, where the presence of small fish is likely to accelerate the process; (iii) the time needed to aggregate around FADs is quite short and (iv) logs eventually become waterlogged and sink.

Unassociated Score 100	Log Set Score 80
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The unassociated fishery has no impact on habitats that would reduce habitat structure and function to a point where there would be serious or irreversible harm then it meets SG100 for this performance indicator (FAM 7.5.5).	The fishery is <u>highly unlikely</u> to reduce habitat structure and function to a point where there would be serious or irreversible harm based upon the short residency times and rapid recolonisation rates and limited lifespan of logs.
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Audit Trace References

Le Borgne *et al.*, 2002; McPhaden and Picaut, 1990; Lehodey *et al.*, 1997; Leroy *et al.*, 2010; Taquet *et al.*, 2007; Moreno *et al.* 2007; Dagorn *et al.*, 2007

	PI	SG60	SG80	SG100
2.4.2	<p>Management strategy</p> <p>There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types.</p>	<p>There are <u>measures</u> in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.</p> <p>There is some <u>objective basis for confidence</u> that the partial strategy will work, based on information directly about the fishery and/or habitats involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being implemented successfully.</p>	<p>There is a <u>strategy</u> in place for managing the impact of the fishery on habitat types.</p> <p>The strategy is mainly based on information directly about the fishery and/or habitats involved, and testing supports high confidence that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its objective.</p>

Scoring Comments	
<p>For unassociated sets, there are controls on fishing up to a 1 mile radius from any floating object (CMM 2009-02), and rigorous ongoing monitoring is continuing as part of a strategy for insuring that unassociated sets have no ongoing impact.</p> <p>For log sets there is a partial strategy in the form of a spatial and time-bound FAD ban in place, CCM FAD Management Plans and definition rules that prevent natural logs being enhanced (I.e. through tracking beacons or artificial aggregating appendages) and remaining natural logs as well as fisher-based approaches, such as removing the logs with their extrantant / intrantant communities intact. The disaggregation of catches from natural log sets allows detailed quantitative and qualitative monitoring to be undertaken, thus providing evidence around natural log productivity over time and space.</p>	
Unassociated Score: 100	Log Sets Score 80
<p>Limits on setting in proximity to FADs provide a strategy to ensure that unassociated schools continue to have no impact and there is also ongoing monitoring to ensure that no impact occurs, this scores (100).</p>	<p>For log sets there is a partial strategy for identifying what is a natural log set distinguishing them from enhanced logs which then become drifting FADs. Monitoring of catches and characteristics of logs (such as lack of enhancements) provides some objective basis for confidence that the partial strategy will work. There is some evidence in the form of catch composition, biodiversity and species abundance that shows this is being implemented successfully</p>
Audit Trace References	
<p>Leroy <i>et al</i>, 2010; Taquet <i>et al</i>, 2007; Moreno <i>et al</i>. 2007; Dagorn <i>et al</i>, 2007; CMM 2009-01, SPC catch database (Peter Williams, pers. comm., 4 August 2010)</p>	

	PI	SG60	SG80	SG100
2.4.3	<p>Information / monitoring</p> <p>Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.</p>	<p>There is a basic understanding of the types and distribution of main habitats in the area of the fishery.</p> <p>Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear</p>	<p>The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery.</p> <p>Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear.</p> <p>Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).</p>	<p>The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types.</p> <p>Changes in habitat distributions over time are measured.</p> <p>The physical impacts of the gear on the habitat types have been quantified fully.</p>

Scoring Comments	
<p>For the unassociated fishery, the habitat under consideration is the pelagic water column. In this case there is no hard substrate involved as the fishery takes place on the surface in deep oceanic waters. The physical, chemical and biological properties of the WCPO are regularly monitored. The PNA licensed vessels all operate under a VMS scheme and thus there is accurate, near real-time monitoring of the spatial extent of interaction, and the timing and location of use of the fishing gear. There is regular qualitative and quantitative monitoring of key species composition in the Pacific Ocean.</p> <p>Natural logs are more complex, in that they represent a ‘micro-habitat’ within the pelagic ecosystem discussed above. Although the distribution of natural logs is not directly monitored, their distribution is well known through a combination of vessel interaction records, information on terrestrial sources (e.g. location of main watersheds), current systems and oceanic gyres. Likewise the changes in log distribution over time can be measured via vessel interaction records (inc. observer records). As such there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear, esp. VMS.</p> <p>Fish communities around natural logs have been studied (Taquet et al, 2007), although less intensively than drifting FADs and other known or fixed locations, such as oil platforms. However qualitative and quantitative data on species composition of overwhelming biomass of drifting FADs can be regularly assessed via the catch composition and volumes, thus enabling any changes to be detected.</p>	
Unassociated Score: 100	Log Sets Score 85
The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types; the habitats are entirely pelagic, and so are	The distribution of oceanic habitats is known over their range, with particular attention to the occurrence of vulnerable habitat types. The distribution of natural logs is well known through a combination of vessel interaction records information on terrestrial

<p>well known. There are no vulnerable habitats. (100)</p> <p>Changes in habitat distributions over time are measured. Not applicable as fishery is entirely pelagic. (100)</p> <p>The physical impacts of the gear on the habitat types have been quantified fully; observer data would quantify any impacts on habitat, should this occur. (100)</p>	<p>sources, and current systems (100)</p> <p>Changes in habitat distributions over time are measured as recorded in vessel records and measures empirically. There is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear (80)</p> <p>Sufficient qualitative and quantitative data on species composition, etc continue to be collected to detect any increase in risk to habitat. 80</p>
<p>Audit Trace References</p>	
<p>Taquet et al, 2007</p>	

2.5	Ecosystem
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	PI	SG60	SG80	SG100
2.5.1	Status The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function.	The fishery is <u>unlikely</u> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is <u>highly unlikely</u> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	<u>There is evidence that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.</u>

Scoring Comments	
<p>Sibert <i>et al</i> (2006) analysed available data from Pacific tuna fisheries for 1950–2004 to provide comprehensive estimates of fishery impacts on population biomass and size structure. Exploited western Pacific yellowfin and bigeye have declined steadily to levels near the equilibrium biomass that would produce the maximum sustainable yield (MSY) in the fishery. Skipjack tuna and blue shark appear to have increased slightly, whereas albacore have fluctuated in both directions. At that point, current biomass ranges among species from 36 to 91% of the biomass predicted in the absence of fishing, a level consistent with or higher than standard fisheries management targets. Fish larger than 175 cm FL had decreased from 5% to approximately 1% of the total population. The trophic level of the catch had decreased slightly, but the authors concluded that there was no detectable decrease in the trophic level of the population. These results indicated substantial, though not irreversible, impacts of fisheries on these top-level predators and minor impacts on the ecosystem in the Pacific Ocean. WWF’s submission to this assessment also concluded that “There is some evidence that this fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm” (WWF, WWF Submission to Moody Marine Ltd, August 2010).</p>	
Unassociated sets Score: 80	Log Sets Score: 80
There is some evidence in the form of results from ecosystem models and because there has been no major change in trophic structure then the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm (80).	There is some evidence in the form of results from ecosystem models and because there has been no major change in trophic structure that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm (80)
Audit Trace References	
Sibert <i>et al</i> (2006); WWF Submission to Moody Marine Ltd, August 2010	

<p>2.5.2</p>	<p>Management strategy</p> <p>There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function.</p>	<p>There are <u>measures</u> in place, if necessary, that take into account potential impacts of the fishery on key elements of the ecosystem.</p> <p>The measures are considered likely to work, based on <u>plausible argument</u> (e.g., general experience, theory or comparison with similar fisheries/ ecosystems).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.</p> <p>The partial strategy is considered likely to work, based on <u>plausible argument</u> (e.g., general experience, theory or comparison with similar fisheries/ ecosystems).</p> <p>There is <u>some evidence</u> that the measures comprising the partial strategy are being implemented successfully.</p>	<p>There is a <u>strategy</u> that consists of a <u>plan</u>, containing measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem.</p> <p>This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm.</p> <p>The measures are considered likely to work based on <u>prior experience</u>, plausible argument or <u>information</u> directly from the fishery/ ecosystems involved.</p> <p>There is <u>evidence</u> that the measures are being implemented successfully.</p>
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<p>Scoring Comments</p>
<p>The objective of the WCPFC is to: “...to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean...”. The WCPFC’s management mandate relates to highly migratory fish species and extends to the management of non-target species taken in fisheries for target stocks, in particular through the WCPFC-2 Resolution on Non-Target Fish Species. Mechanisms to reduce interactions with both target and non-target species includes the preparation of Ecological Risk Assessments at regional level (e.g. Kirby, 2006; Kirby and Hobday, 2007) as well as within the PICT EAFM reports that allow the identification of management measures if deemed necessary by the Ecosystems and Bycatch Specialist Working Group (EB SWG). This is also supported by the recently increased observer coverage of 100% in the purse seine fisheries. The major potential impacts are associated with the reducing the removal of target and main retained species. There are comprehensive limits on effort targeting major species through CMM 2008-01, with measures including FAD closures and catch retention measures intended to reduce the catch of juveniles of the retained species, as well as the VDS.</p> <p>There are also specific Articles in the WCPFC Convention text that provide provisions for an ecosystem based approach to fisheries.</p>
<p>Score: 95</p>
<p>There is a <u>partial strategy</u> in place based on effort controls with supplementary technical measures including the FAD closure, that takes into account available information (e.g.</p>

stock assessments, catch and landing records, VMS) and is expected to restrain impacts of the fishery (80)

The partial strategy based in effort control (measures) is considered likely to work, based upon previous experience with effort restricted fisheries and information obtained directly from biological and fisheries-dependent sources (100).

There is evidence from the relative stability of the trophic structure that the measures are being implemented successfully (100).

Audit Trace References

CMM 2008-01; Kirby, 2006; Kirby and Hobday, 2007; WCPFC 2, 2005

<p>2.5.3</p>	<p>Information / monitoring</p> <p>There is adequate knowledge of the impacts of the fishery on the ecosystem.</p>	<p>Information is adequate to <u>identify</u> the key elements of the ecosystem (e.g. trophic structure and function, community composition, productivity pattern and biodiversity).</p> <p>Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but <u>have not been investigated in detail</u>.</p>	<p>Information is adequate to <u>broadly understand</u> the key elements of the ecosystem.</p> <p>Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but <u>may not have been investigated in detail</u>.</p> <p>The main functions of the Components (I.e. target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are <u>known</u>.</p> <p>Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred.</p> <p>Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).</p>	<p>Information is adequate to <u>broadly understand the key elements</u> of the ecosystem.</p> <p>Main <u>interactions</u> between the fishery and these ecosystem elements can be inferred from existing information, and <u>have been investigated</u>.</p> <p>The impacts of the fishery on target, Bycatch, Retained and ETP species and Habitats are identified and the main functions of these Components in the ecosystem are <u>understood</u>.</p> <p>Sufficient information is available on the impacts of the fishery on the Components <u>and elements</u> to allow the main consequences for the ecosystem to be inferred.</p> <p>Information is sufficient to support the development of strategies to manage ecosystem impacts.</p>
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<p>Scoring Comments</p>
<p>SPC is developing existing EcoPath models by incorporating Trophic Diet Matrix (TDM) analyses to build predator-prey relationships. As well as the TDM, there has been the incorporation of catch and discard information and this model is now being validated. The move into EcoSim provides a non-static approach (EcoPath is mainly 2005 data) to add 2005 – 2007 data series and allow cross-checking against actual catches. Validation is expected to be completed by Oct 2010. The model includes 5-6 fisheries, including the associated and unassociated PS catches (all flags). This will give the ability to simulate the impact of FAD closures and other management approaches. The accuracy depends upon robustness of the bycatch data, which has been historically patchy but with new 100% observer coverage (for purse seines) will be much improved.</p> <p>SEAPODYM is a model developed initially for investigating spatial tuna population dynamics under the influence of both fishing and environmental effects. The main features of this model are: (i) forcing by environmental data (temperature, currents, primary production and dissolved oxygen concentration), (ii) prediction of both temporal and spatial</p>

distribution of mid-trophic functional groups, (iii) prediction of both temporal and spatial distribution of age-structured predator (tuna) populations, (iv) prediction of total catch and size frequency of catch by fleet when fishing data (catch and effort) are available, and (v) parameter optimization based on fishing data assimilation techniques (see Senina et al., 2008). A recent enhanced version (Lehodey et al., 2008) has been developed that includes a better definition of habitat indices, movements, and accessibility of tuna and tuna-like predators to different vertically migrant and non-migrant micronekton functional groups (Lehodey et al., 2009). The associated modelling of sea temperature rise, its pattern within natural cyclical variability and the impact on the recruitment, growth and distribution of tunas has received increasing attention and is one of the main applications of SEAPODYM. Results of SEAPODYM simulations allow realistic prediction of the large-scale distribution of tuna species (Lehodey, 2001; Lehodey et al, 2008). A NOAA-funded project (Climate and Fishing Impacts on the Spatial Population Dynamics of Tunas (Project no. 657425) is running two spatial bio-physical models for several tuna species concurrently with different long-term (up to 50 years) climate regime datasets (Weng et al, 2009). It is anticipated that the models will enable researchers to evaluate potential alternative system states due to physical and anthropogenic forcing and to help determine if the impacts of natural climate variability could be anticipated in such a way as to help establish a management regime that accommodates exploitation pressures and natural variability to build sustainable tuna fisheries.

Score: 95

Information is adequate to broadly understand the key elements of the ecosystem (100).

Main interactions between the fishery and these ecosystem elements including impacts of removals, large scale oceanographic events, change of variability, climate change can be inferred from existing information, and have been investigated (100)

The main functions of the Components (i.e. target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are well known (80).

Sufficient information is available from extensive ecosystem modelling and analysis on the impacts of the fishery on the Components (esp. retained tuna and non-tuna discarded components) and elements (esp. trophic structure) to allow the main consequences for the ecosystem to be inferred (100).

Information on removals, especially keystone tuna species and from ecosystem modelling and analysis is sufficient to support the development of strategies to manage ecosystem impacts (100).

Audit Trace References

V Allain, pers. comm., 3 August 2010; Lehodey et al., 2009; Lehodey, 2001; Lehodey et al, 2008 Weng et al, 2009; Senina et al., 2008

Principle 3	The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable
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3.1	Governance and Policy
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	PI	SG60	SG80	SG100
3.1.1	<p>Legal and/or customary framework</p> <p>The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"> - Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; - Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and - Incorporates an appropriate dispute resolution framework. 	<p>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</p> <p>The management system incorporates or is subject by law to a <u>mechanism</u> for the resolution of legal disputes arising within the system.</p> <p>Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.</p> <p>The management system has a mechanism to <u>generally respect</u> the legal rights created explicitly or established by custom of people dependent on fishing</p>	<p>The management system incorporates or is subject by law to a <u>transparent mechanism</u> for the resolution of legal disputes which is <u>considered to be effective</u> in dealing with most issues and that is appropriate to the context of the fishery.</p> <p>The management system or fishery is attempting to comply in a timely fashion with binding judicial decisions arising from any legal challenges.</p> <p>The management system has a mechanism to <u>observe</u> the legal rights created explicitly or established by custom of people dependent on fishing for food</p>	<p>The management system incorporates or is subject by law to a <u>transparent mechanism</u> for the resolution of legal disputes that is appropriate to the context of the fishery and has been <u>tested and proven to be effective</u>.</p> <p>The management system or fishery acts proactively to avoid legal disputes or rapidly implements binding judicial decisions arising from legal challenges.</p> <p>The management system has a mechanism to <u>formally commit</u> to the legal rights created explicitly or established by custom on people</p>

		for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.
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Scoring Comments
<p>The WCPFC Convention, FFA Convention, the Nauru Agreement and associated arrangements and applicable national fisheries laws and plans are consistent with the principles and provisions of UNCLOS, UNFSA & CBD, to which all PNA Members are Parties, as well as a range of other relevant international and regional fisheries instruments, and to relevant local, national and regional laws and standards. The precautionary approach is incorporated into national laws and tuna management plans. All WCPFC Members (including PNA members) are legally bound to apply the precautionary approach as parties to the WCPFC Convention (with its Art. 5 & 7).</p> <p>The WCPFC dispute settlement mechanism is set out in Article 31 of the Convention. The Palau Arrangement sets out a dispute settlement mechanism in Art 8 for issues related to the purse seine fishery and the VDS based on a Pacific way of negotiation, compromise and consensus. The UNFSA dispute settlement mechanism applies to the Nauru, Agreement, the Palau Arrangement and the VDS</p> <p>Functioning national legal systems provide recourse for settlement of disputes.</p> <p>The WCPFC Convention provides for recognition of the interests of small scale and artisanal fishers within the overall framework for sustainability in the WCPFC Convention. National fisheries legislation and management strategies and plans have strong mechanisms to protect the interests of traditional and small-scale fishers.</p> <p>This PI was the subject of a remand as part of the Objection Process (Appendix K). The IMM response to the remand is as follows:</p> <p>The objectors considered that there should be no passing score as the first element of PI SG60 is not met. The Decision finds that the score for this PI cannot be said to be unreasonable or arbitrary at the SG60 level. However, the PI is remanded because the leverage assumption, and therefore the PNA's ability to fulfil its management role across the whole stock under this PI is unsupported by scientific analysis.</p> <p>In reconsidering the score allocated to this PI in light of these catch distributions, we note the following:</p> <ul style="list-style-type: none"> • The requirement for the first scoring issue of SG 60 is that the management system is generally consistent with laws or standards that are aimed at achieving sustainable fisheries. • The approach used in the assessment for this PI was the same as for other PIs in the P3 Governance and Policy Component – applying the requirements for sustainable fisheries separately at the WCPFC, PNA and national levels, noting that the same approach has been used in other MSC assessments on WCPO tuna stocks. On this basis, the assessment found the legal and policy framework was generally consistent with relevant international laws and standards, particularly because the WCPFC Convention and national laws and plans (with some exceptions noted in the CB response to objections on PI 3.1.3) include the key principles from UNCLOS and the UN Fish Stocks Agreement, including the precautionary approach. • In addition, sections 7.1.1, 7.1.2 and 7.1.5 with section 7.2 of the Final Report, describe sets of arrangements to control fishing under relevant terms and conditions and to monitor fishing activity and its impacts, with compliance and enforcement including sanctions, at the WCPFC, PNA (with FFA and SPC) and national levels, thus providing the essential features for effective management. • With respect to the query in para 89 of the Decision, PNA advise that the various PNA Implementing Arrangements are binding instruments on PNA Parties.

Taking into account the extent of control over fishing for the WCPO skipjack stock through the WCPFC and its Members, together with the extent of control by PNA, it is reasonable to conclude that the fishery can be managed to meet the requirements of Principles 1 and 2, recognising that there will likely be a range of appropriate harvest strategies and harvest control rules attaching different relative roles to the WCPFC and PNA in meeting management objectives.

Therefore the scoring of this PI was not affected by the mistake in the PNA share of WCPO skipjack catches.

We do not propose to change the score of this PI. The score is confirmed at 95.

Score: 95

The management system is generally consistent with local (e.g. island council), national, regional (PNA, FFA & WCPFC) and international agreements (e.g. UNCLOS, UNFSA, CBD) or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2. The system includes specific provision for dispute settlement at the WCPFC and PNA levels and appropriate legal recourses at national level which are considered to be effective and transparent in dealing with most issues and appropriate to the context of the fishery, but have not been tested (80).

No evidence can be found of any failure to comply with binding judicial decisions. Processes are in place to allow such challenges to take place, but the system has a record of acting appropriately to avoid legal disputes. (100).

The WCPFC Convention and measures, and national laws, strategies and plans have mechanisms to observe the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2 (100).

Audit Trace References

UNCLOS (Part V), UNFSA, WCPFC Convention, FFA Convention, Nauru Agreement and associated Arrangements, national plans and laws

	PI	SG60	SG80	SG100
3.1.2	<p>Consultation, roles and responsibilities</p> <p>The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <u>generally understood</u>.</p> <p>The management system includes consultation processes that <u>obtain relevant information</u> from the main affected parties, including local knowledge, to inform the management system.</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <u>explicitly defined and well understood</u> for <u>key areas</u> of responsibility and interaction.</p> <p>The management system includes consultation processes that <u>regularly seek and accept</u> relevant information, including local knowledge. The management system demonstrates consideration of the information obtained.</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <u>explicitly defined and well understood</u> for <u>all areas</u> of responsibility and interaction.</p> <p>The management system includes consultation processes that <u>regularly seek and accept</u> relevant information, including local knowledge. The management system demonstrates consideration of the information and <u>explains how it is used or</u></p>

	individuals who are involved in the management process are clear and understood by all relevant parties.	The consultation process <u>provides opportunity</u> for all interested and affected parties to be involved.	<u>not used</u> . The consultation process <u>provides opportunity and encouragement</u> for all interested and affected parties to be involved, and <u>facilitates</u> their effective engagement.
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Scoring Comments
<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <u>explicitly defined and well understood</u> for <u>all areas</u> of responsibility and interaction at the WCPFC, PNA and national levels as well as support organisations FFA and SPC.</p> <p>There are extensive, regular formal and informal consultation processes at the WCPFC, PNA, and FFA and other regional & international fora and national levels, including consultation with bilateral partners and domestic stakeholders. These processes seek and accept information, and demonstrate consideration of the information but while the WCPFC process explains how information is used or not used, other components of the management system do not.</p> <p>The consultation process provides opportunity for involvement and no information was found indicating difficulties for parties wishing to be involved. A particular shortfall is demonstrating how information is used or not used.</p>
Score: 95
<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction, (100).</p> <p>There are formal and informal consultations including consultation with bilateral partners and domestic stakeholders. Other organisations have access to all the main management bodies as formal observers or informally. Opportunities are provided for involvement, but the process falls short of facilitating engagement by all affected parties, and demonstrating how information is used or not used. (80).</p> <p>The consultation process <u>provides opportunity and encouragement</u> for all interested and affected parties to be involved, and <u>facilitates</u> their effective engagement. (100)</p>
Audit Trace References
PNA/Aqorau pers com I14), Palau Arrangement, WCPFC meeting records, WCPFC Rules of Procedure, VDSC records, PNA 2005, PNA, 2009, PNA, 2010

	PI	SG60	SG80	SG100
3.1.3	<p>Long term objectives</p> <p>The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.</p>	<p>Long-term objectives to guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are <u>implicit</u> within management policy.</p>	<p><u>Clear</u> long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are <u>explicit</u> within management policy.</p>	<p><u>Clear</u> long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are <u>explicit</u> within <u>and required by</u> management policy.</p>

Scoring Comments
<p>There are clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, and these are explicit within applicable WCPFC CMMs, and management policy as set out in the Palau Arrangement, the VDS and national laws and plans. The WCPFC Convention and national laws and plans (except for Kiribati) require the application of objectives reflecting these principles. However, the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention. The application of the precautionary approach and the priority for environmental sustainability is not undermined in the national acts by other goals, such as economic development requirements.</p>
<p>Score: 90</p>
<p>Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within management policy: the fishery does not score a hundred because these are required in some elements of the management system, especially within the PNA framework (90).</p>
<p>A Recommendation (5) is set (See Section 14.2).</p>
Audit Trace References
<p>National laws and plans as analysed in the text, WCPFC Convention, Nauru Agreement</p>

	PI	SG60	SG80	SG100
3.1.4	<p>Incentives for sustainable fishing</p> <p>The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing.</p>	<p>The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.</p>	<p>The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that perverse incentives do not arise.</p>	<p>The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and <u>explicitly considers</u> incentives in a <u>regular review</u> of management policy or procedures to ensure that they do not contribute to unsustainable fishing practices.</p>

Scoring Comments
<p>The rights-based management framework of the VDS creates incentives for sustainable fisheries at the PNA and national government level and provides for the creation of a system of positive incentives at the enterprise level that is only partially in place at this point. The VDS includes elements designed to address the inherent tendency of effort limits to encourage effort creep. There are subsidies that undermine fairness rather than sustainability. There is evidence that the incentive effects are considered, sometimes explicitly, within the management system to ensure that they do not undermine sustainability. But the weaknesses in VDS reviews and the clarity in the way that VDS decisions are linked to scientific advice falls short of <u>ensuring</u> that these incentive effects do not contribute to unsustainable fishing practices in future.</p>
<p>Score: 80</p>
<p>Overall the management system, particularly the rights-element of the VDS, provides for the creation of incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and there is evidence that the management system seeks to ensure that perverse incentives do not arise. However, there is no consideration of incentives in a regular review to ensure that they do not contribute to unsustainable fishing practices required for SG100, (80).</p>
Audit Trace References
<p>PNAO (2010), ADB (2009), PNAO (I14)</p>

3.2	Fishery- specific management system
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	PI	SG60	SG80	SG100
3.2.1	<p>Fishery- specific objectives</p> <p>The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC’s Principles 1 and 2.</p>	<p><u>Objectives</u>, which are broadly consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are <u>implicit</u> within the fishery’s management system.</p>	<p><u>Short and long term objectives</u>, which are consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are <u>explicit</u> within the fishery’s management system.</p>	<p><u>Well defined and measurable short and long term objectives</u>, which are demonstrably consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are <u>explicit</u> within the fishery’s management system.</p>

Scoring Comments

Objectives relating to P1 and P2 Outcomes are set out in various WCPFC CMMs, especially 2008-01 (bigeye and yellowfin), and CMMs relating to shark and sea turtle turtles as well as national plans, the Palau Arrangement and the VDS. These include short and long term objectives, but the objectives are not all well defined and measurable, especially for the CMMs related to P2 outcomes. Hence the fishery SG does not meet the SG 100 requirements.

This PI was the subject of a remand as part of the Objection Process (Appendix K). The IMM response to the remand is as follows:

The objectors consider that the short term objectives do not meet the SG80 requirements, that ‘short term objectives which are consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2 are explicit within the fishery’s management system’. The Adjudicator’s Decision was that the score awarded is considered arbitrary or unreasonable.

Factors contributing to this finding include:

- i) CMM 2008-01 is not expressly concerned with skipjack tuna
- ii) the Final Report casts doubt on the linkage between the VDS Scheme and the scientific advice (noting also that there is a lack of openness with regard to the decision making processes in this regard); and
- iii) the lack of mention in the Palau Agreement, taken to be the “VDS text”, of objectives consistent with the outcomes required under Principles 1 & 2 of the MSC Standard.

There is some misunderstanding on this issue in that the Palau Arrangement is not the VDS Text, (which is a separate document). The VDS Text does include more specific objectives in Article 2 than the Palau Arrangement. However these objectives in the VDS Text are also more general and longer term, contributing to meeting the requirement of SG80 in respect of explicit long term objectives, but not short term objectives.

Regarding the reference to para 30 of CMM 2008-01 in para 111 of the decision, WCPFC documentation (see WCPFC6-2009/IP06 (Rev.1), page 7) reports that this applies only to Australia.

Accepting the IAs decision in this matter, we consider that the rationale provided in the Final Report meets the SG60 requirement for this PI, that appropriate objectives are

implicit within the fishery's management system. and goes some way to meeting the SG80 requirement for appropriate explicit short and long term objectives in that long term objectives are explicit but short term objectives are not. We therefore consider a score of 70 to be appropriate.

We shall include the text above as additional justification for the score awarded to this PI. We propose to change the score of this PI to 70.

A condition will be raised (Condition 6) with PNA and/or WCPFC to establish explicit short term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, within the fishery's management system within the term of the certification.

Initial Client responses to such a condition are that "PNA will formerly incorporate into the Palau Arrangement, and VDS text, Short and long term objectives, which are specific to the management of the skipjack stocks. These objectives will incorporate elements of Condition 1 and 2; through the adoption of fishery specific reference points and a harvest strategy that also take account of catches outside PNA waters, and interactions with other retained species. As a result, management measures that reflect principles 1 and 2 will be explicitly incorporated the fishery's management system".

Score: 70

Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system. (80)

Audit Trace References

WCPFC CMMs, Palau Arrangement, VDS, national plans

	PI	SG60	SG80	SG100
3.2.2	<p>Decision-making processes</p> <p>The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives.</p>	<p>There are <u>informal</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>serious issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take <u>some</u> account of the wider implications of decisions.</p>	<p>There are <u>established</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>serious and other important issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.</p> <p>Decision-making processes use the precautionary approach and are based on best available information.</p> <p><u>Explanations</u> are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.</p>	<p>.</p> <p>Decision-making processes respond to <u>all issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.</p> <p><u>Formal reporting</u> to all interested stakeholders describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.</p>

Scoring Comments

At the WCPFC level, there are established decision-making processes in the Convention and these are operationalised in the processes of the SC, the TCC and the Commission itself. Those decision-making processes have resulted relatively quickly in a comprehensive set of CMMs and strategies to achieve the specific objectives in the purse seine fishery. WCPFC decision-making processes are open, use the precautionary approach and best available information and are well documented.

Proactive PNA decision-making over a long period has resulted in measures and strategies contributing to, and in important respects, underpinning effective management of the WCPO purse seine fisheries.

These decision-making processes use the precautionary approach, and are based on best available scientific information, but do not clearly respond to all issues, nor provide formal reporting etc, so meeting only some of the SG 100 requirements

Score: 70

1. There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives (80).
2. Decision-making processes respond to serious and other important issues, *but not all issues*, identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions (80).
3. At the WCPFC level it is clear that the precautionary approach is used, and decisions are based on the best available information. At the PNA level it is clear that the best available information is used for decision-making but there is a lack of clarity in the links between decisions on the VDS and the requirements of WCPFC CMM 2008-01 and the best available scientific information (60) See Condition 4
4. Explanations are provided at the WCPFC level but not always at the PNA level for actions, or lack of action associated with relevant findings and recommendations (60). See **Condition 5** (Section 14.1)

Audit Trace References

WCPFC Convention, Rules of Procedure and Meeting Records, PNA Working Papers

	PI	SG60	SG80	SG100
3.2.3	<p>Compliance and enforcement</p> <p>Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.</p>	<p>Monitoring, control and surveillance <u>mechanisms</u> exist are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.</p> <p>Sanctions to deal with non-compliance exist and there is some evidence that they are applied.</p> <p>Fishers are <u>generally thought</u> to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.</p>	<p>A monitoring, control and surveillance <u>system</u> has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.</p> <p>Sanctions to deal with non-compliance exist, <u>are consistently applied</u> and thought to provide effective deterrence.</p> <p><u>Some evidence exists</u> to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.</p> <p>There is no evidence of systematic non-compliance.</p>	<p>A <u>comprehensive</u> monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.</p> <p>Sanctions to deal with non-compliance exist, are consistently applied and <u>demonstrably</u> provide effective deterrence.</p> <p>There is a <u>high degree of confidence</u> that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.</p>

Scoring Comments
<p>The combination of MCS and compliance mechanisms at WCPFC, PNA and national levels creates a system that has been demonstrated to be comprehensive and effective in the purse seine fishery in PNA waters. Penalties are appropriate and applied, and are an effective deterrent. The 100% observer scheme is proven to have worked effectively, with a number of safeguards in place to ensure that non compliance and inaccurate reporting are identified. There are generally good levels of compliance by fishers. There are some capacity differences between PNA Parties, but weaknesses are addressed through Joint Initiatives, and support from FFA Regional coordination. There are also some issues relating a small number of party WCPFC reporting weaknesses. Identified weaknesses are continually being addressed.</p>
<p>Score: 85</p>
<p>A <u>comprehensive</u> monitoring, control and surveillance system has been implemented in the fishery under assessment as justified by a strong human and asset base and has demonstrated an ability to enforce relevant management measures, strategies and/or rules, but there are some inconsistencies in the abilities of PNA Members to apply</p>

management measures; these weaknesses are addressed through the provision of support services in data monitoring, law and other compliance issues including joint operations, observer support and provision of VMS. (100).

Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence (80).

Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery. (80).

There is no evidence of systematic non-compliance. (80)

Recommendations (6) is set (See Section 14.2.

Audit Trace References

MRAG (2009). National Government Interviews (I2, I3, I6 to I9, I12), WCPFC (I 11/I13), Fishing industry (I 5, I15, I18), Observers (I16/I17), FFA I19, NFA I25, FFA Strategic MCS Plan (2010)

	PI	SG60	SG80	SG100
3.2.4	<p>Research plan</p> <p>The fishery has a research plan that addresses the information needs of management.</p>	<p><u>Research</u> is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2.</p> <p>Research results are <u>available</u> to interested parties.</p>	<p>A <u>research plan</u> provides the management system with a strategic approach to research and <u>reliable and timely information</u> sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.</p> <p>Research results are <u>disseminated</u> to all interested parties in a <u>timely</u> fashion.</p>	<p>A <u>comprehensive research plan</u> provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and <u>reliable and timely information</u> sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.</p> <p>Research <u>plan</u> and results are <u>disseminated</u> to all interested parties in a <u>timely</u> fashion and are <u>widely and publicly available</u>.</p>

Scoring Comments
The WCPFC Strategic Research Plan addresses four overall research and data collection priorities - collection and validation of data from the fishery, monitoring and assessment of stocks, monitoring and assessment of the ecosystem, and evaluation of management options. The WCPFC Strategic Research Plan is supplemented by the SPC, FFA and national Strategic Plans to provide a comprehensive research plan for the fisheries under assessment across P1, P2 and P3. The WCPFC and SPC Plans and results are widely and publicly available, but the FFA and national research results are not all fully accessible.
Score: 90
A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2 (100)
Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available (80)
Audit Trace References
WCPFC Strategic Research Plan 2007–2011, Scientific Committee, 2006; SPC Division of Fisheries, Aquaculture and Marine Ecosystems (FAME): Strategic Plan 2010-2013 , SPC 2010; FFA Strategic Plan 2005 – 2020, FFA Secretariat, 2005

	PI	SG60	SG80	SG100
3.2.5	<p>Monitoring and management performance evaluation</p> <p>There is a system for monitoring and evaluating the performance of the fishery-specific management system against its objectives.</p> <p>There is effective and timely review of the fishery-specific management system.</p>	<p>The fishery has in place mechanisms to evaluate <u>some</u> parts of the management system and is subject to <u>occasional internal</u> review.</p>	<p>The fishery has in place mechanisms to evaluate <u>key</u> parts of the management system and is subject to <u>regular internal</u> and <u>occasional external</u> review.</p>	<p>The fishery has in place mechanisms to evaluate <u>all</u> parts of the management system and is subject to <u>regular internal</u> and <u>external</u> review.</p>

Scoring Comments
<p>WCPFC has not undertaken an external review. It has committed and agreed to an independent performance review, consistent with the Kobe Course of Actions for the period 2011 to 2013.</p> <p>The VDS is overseen and regularly reviewed internally by a VDS Committee and externally with advice and reviews of performance by the FFA. There have been a series of internal and external reviews of other key parts of the PNA processes, including the VDS. There are regular internal reviews of national fisheries administration performance, and frequent, but ad hoc, external reviews of key features of national performance.</p> <p>A Recommendation (7) is set (See Section 14.2).</p>
Score: 80
Key parts of management system subject to regular internal and occasional external review, but not regular external review (80).
Audit Trace References
WCPFC Records, (WCPFC4-6), VDSC Records, VDS text, Geen Report, FFA Performance Review

15.3 APPENDIX C: PEER REVIEW REPORTS

15.3.1 Peer Reviewer Biographies

Brief details of each reviewer are provided below.

A. Ian Cartwright:

Ian Cartwright has had extensive experience of fisheries management from a wide range of perspectives. These include 10 years as a fisherman and vessel operator in the North Sea, to working as a fisheries officer in the Pacific (Tonga) and later as Deputy Director of the Forum Fisheries Agency in the Solomon Islands. Ian has been a Director/Commissioner of the Australian Fisheries Management Authority for the last 5 years, and chairman of numerous fisheries management and related ministerial committees at State level in Australia. For the last 10 years, Ian has been Director of Thalassa Consulting Pty Ltd., specializing in the delivery of independent fisheries management services for government and other agencies, working mainly in the Pacific and Australia. Ian has an honors degree in fisheries science and a masters degree in Economics from the LSE.

B. Kevin Stokes:

Kevin Stokes is a fisheries management science specialist with wide international experience across a range of fisheries regimes and fisheries types. Kevin has over 25 years experience in fisheries management and fisheries science, having worked for government and industry as well as providing consultancy services to a wide range of international clients. Kevin is experienced in strategic and operational policy, and in science process and governance design, but has specialised experience in the delivery, management and review of fisheries management science. He is experienced in stock assessment and harvest strategy design, evaluation and implementation for a wide range of fish stocks. Kevin participated in the development of the current MSC Fishery Assessment Methodology and has been involved in certification assessment and pre-assessment of a wide range of fisheries/stocks, covering all MSC Principle areas. He has wide experience in assessment and harvest strategy review and delivery of advice in Europe, the USA, New Zealand and Australia. Kevin holds a degree in Biology and Psychology (University of Stirling) and a PhD in Applied Physics (Strathclyde University, Glasgow). He is based in Wellington, New Zealand, and is the Director of stokes.net.nz Ltd.

15.3.2 Peer Reviewer Reports

Peer Review Report A

Within the time allocated, this review considers all aspects of the Assessment Report (the Assessment) and scoring, but as requested by the certifying body, provides focus on P 1.2 issues relating to harvest control strategy (1.2.1), harvest control rules and tools (P 1.2.2), as well as the parallel management strategy P 2.2.2, and all of P 3 (Governance issues).

Summary:

1. Sufficient justification has been provided to certify the unassociated purse seine fishery for skipjack in the EEZs of FFA parties, subject to the conditions specified in the assessment.

The conditions attached to the certification are considered appropriate. Reasoning for this conclusion is provided in comments in the section below: *Application of information to the scoring indicators*.

2. Sufficient justification has been provided to fail the log set purse seine fishery for skipjack in the EEZs of PNA parties.

The accuracy of information quoted in the report

The skipjack assessment report is very comprehensive, well structured and, other than in the areas identified below, accurately describes the context, biology and management of the Western and Central Pacific purse seine fishery. The assessment team have the necessary expertise and experience, and include Pacific tuna specialists of the highest calibre. It is noted that Mr Les Clarke has been instrumental in driving fisheries management reform at the WCPFC Commission and within the Pacific Islands region, through his work in FFA and PNA member countries. In the case of the last-mentioned, it is further noted that Mr Clarke was a key architect of the vessel days scheme (VDS). The team undertook widespread and appropriate consultation with stakeholders both through one-on-one and group meetings in a number of locations in the Pacific.

The scientific information used to support the sections on catches, species composition and stock assessments is mainly taken from SPC/WCPFC papers and is well referenced, comprehensive and appears accurate. Where areas of uncertainty exist, these are identified together with a description of planned efforts to resolve those uncertainties through additional research effort.

The management sections of the Assessment are, understandably, more subjective. As noted, the VDS system, which underpins PNA initiatives towards the future management of the fishery, has not been fully implemented and there are references in the Assessment of the need to 'harden' the VDS with respect to limits (Section 7.1.3). There is very limited information in the Assessment concerning the operation of the VDS to date, given that the scheme is coming to the end of the first three year management period. The Assessment could usefully provide more information on such issues as: how the scheme has evolved from the original concept (which set a limit including archipelagic waters); if individual parties have remained within allocated PAEs/traded days; the operation of the VDS Committee (which oversees the VDS Scheme); and the reasons for parties not reducing the PAE (vessel days) to accommodate the increased effort caused by the expansion of effort under the US Treaty and FSMA (under which effort is capped). The assessment team appears to have encountered difficulty with this aspect and the proposed condition on greater transparency is paramount.

The difficulties associated with achieving solidarity between PNA members with respect to ongoing allocation and other key issues associated with the VDS and effort control are

somewhat underplayed. Some the statements by PNA members (RMI, FSM) during interviews with the certification team indicate that there have been difficulties in establishing (allocating) vessel days and operating within PAE limits. Carry-over provisions under the VDS scheme are unusually high, relative to other TAE/TAC systems. In summary, the assessment should show more clearly how the VDS will effectively manage the catch of skipjack in the long term, and address the shortfalls in the system identified to date. Condition 4 deals effectively with requirements for comprehensive reporting in respect of VDS operations, and, based on the current commitment by members of the PNA to tighten practices, it is reasonable to anticipate the proposed improvements to the VDS will be effective within the period of the assessment.

Moody Marine comment: Additional details on the operation of the VDS have been included in Section 7.1.3. The shortfalls in the implementation of the VDS as a tool for controlling skipjack exploitation have been taken into account in the scoring for PIs 1.2.2 and 3.2.2, and the associated conditions.

Much is made in the Assessment of the effectiveness of the Commission in respect of the management of the purse seine fishery, relative to other RFMOs and in particular, through the agreement and implementation of CMM 2008-01. While this statement of relativity is undoubtedly accurate, the Assessment should support this with a more explicit analysis of the performance of 2008-01 under section 7.1.1 including the degree it is meeting its objectives in relation to the purse seine fishery.

Moody Marine comment: The performance of CMM 2008-01 with respect to its objectives is explicitly reviewed in Section 6.2.3., which quotes the SPC conclusions that “CMM 2008-01 is highly unlikely to meet its objectives of a 30% reduction in bigeye tuna fishing mortality from the 2001-2004 level, or maintenance of the bigeye tuna stock at a level capable of producing MSY over the long term. The measures are predicted to result in little if any reduction in bigeye tuna F/F_{MSY} from the high levels in excess of 2.0 estimated for 2007-2008, and accordingly, SB is predicted to fall to around 0.4-0.6 of SB_{MSY} . The main reasons for the lack of effectiveness of the measure are (i) the reductions in longline catch do not result in the required reduction in fishing mortality on adult bigeye tuna; (ii) the increase in purse seine effort allowed under the measure, and the increase in purse seine catchability (fishing mortality per unit effort) that has occurred since 2001-2004, is not sufficiently offset by the FAD and HSP (high seas pockets) closures to reduce purse seine fishing mortality below 2001-2004 average levels; and (iii) the exclusion of archipelagic waters, which encompasses most of the fishing activity of the Indonesian and Philippines domestic fleets and significant amounts of purse seine effort in Papua New Guinea and Solomon Islands, from the measure effectively quarantines an important source of fishing mortality on juvenile bigeye tuna”. Some additional information from analysis provided by SPC-OFP to WCPFC7 on the performance of CMM 2008-01 has been included in Sections 6.2.3 and 7.1.1, and a cross-reference to the discussion in Section 6.2.3 has been included in Section 7.1.1. These issues are taken into account in the scoring, and the low levels of BET interactions in unassociated sets demonstrate that the BET impacts are low, whilst, for associated, they remain unacceptable, which results in a score below SG 60.

Overall, purse seine effort was to have been held at the higher of 2001-2004 or 2004 reference levels. Latest SPC data shows that effort will, based current projections, increase in 2010 by approximately 30-37% compared to effort in 2004, and by 36-42% compared to the 2001-2004

average effort⁵⁰. While the high seas closures have been respected, it would appear that they have been ineffective in reducing effort. This contrasts with reference in the Assessment tables to ...' evidence that effort restrictions (in the purse seine fishery) are being implemented successfully'. While this increase has been largely the result of increasing effort under the US Treaty, the point is made here to illustrate the apparent difficulties that CMMS (including the PNA) are experiencing in reining in effort to agreed levels.

Moody Marine comment: CMM 2008-01 allowed for an increase in purse seine effort in that the 2004 reference levels included effort committed under existing agreements but not yet taken up, effort by fleets of Small Island Developing State Members was exempt from the limits, and the limits only applied in EEZs and high seas between 20N and 20S. In the period from 2006 until 2009 it seems that actual effort limits were generally within the agreed levels. (P3 Ref: WCPFC, 2010b). This is the basis for the statement in the scoring comments on 2.1.2 that there is "some evidence that effort restrictions are being implemented successfully". The SPC estimate of the increase in effort in 2010 from 2004 level quoted has been revised downwards by SPC (P3 Ref: SPC-OFP, 2010), but it is still substantial. The increase is largely due to the allowed increase in effort noted above, including US Treaty effort as noted by the reviewer, and to effort being transferred from the closed areas of high seas. Section 7.1.1 has been amended to provide further information on the application of the purse seine effort limits.

The FAD closure in 2009 also seems to have been largely respected but the proportion of associated sets in the ten months of 2009 that were not closed to FAD fishing was high, with the total number of associated sets in 2009 being the highest since 2004 and the second highest ever⁵¹.

Moody Marine comment: Some updated results from analysis of the FAD closure presented to WCPFC7 have been included in a footnote in Section 6.2.3.

Effort in the archipelagic waters of PNG and Solomon islands, which is not limited by CMM 2008-01, has increased from 2,827 days in 2004 to 6,168 days in 2009 more than compensating for the reduction in effort due the pocket closure and, presumably, with a concomitant increase in bigeye fishing mortality. Purse seine effort in PNA EEZs (excluding archipelagic waters) in 2004 was 27,960 days and has now increased 31,555 days, an increase of 13% due, as stated in Assessment, to the blow-out of effort by US Treaty vessels⁵².

Moody Marine comment: In a revised version of WCPFC-2010/15, the 2004 effort level for PNA EEZs was revised to 30,586 days, an increase of 3%, not 13%, consistent with the data shown in Table 2 and Figure 1 in the Assessment Report.

While archipelagic waters and catches taken under the USMLT are not part of the assessment, any large scale increases in fisheries outside the assessment scope need to be accounted for in the overall harvest strategy for the fishery. In this respect, the relevant section of Condition 1 could be strengthened beyond *assessing* the fishing mortality in archipelagic waters to specifically include the *implementation* of equivalent measures to ensure that the exploitation rate is reduced as limit reference points are approached.

⁵⁰WCPFC (2010). WCPFC7-2010/15. Review of the Implementation and Effectiveness of CMM 2008. Sixth Regular Session, Honolulu, Hawaii, USA 6-10 December 2010

⁵¹ *ibid*

⁵² *ibid*

Moody Marine comment: The intention of the requirement in Condition 1 for assessing fishing mortality in archipelagic waters was to capture precisely the point raised by the reviewer that all fishing mortality in archipelagic waters needs to be accounted for in the overall harvest strategy for the fishery. Condition 1 has been revised to clarify that the HCR must apply to all fishing in PNA waters, including archipelagic waters, and take into account all fishing mortality outside PNA waters.

Significantly, data from the Assessment shows that purse seine effort levels in PNA EEZs, by vessels covered under the VDS and excluding USMLT vessels, has not increased since it was introduced in December 2007. While the increase in overall purse seine effort is significant in terms of its impact on bigeye (and to a lesser extent yellowfin), given the status of skipjack and the high degree of certainty that the stock is above the point where recruitment would be impaired, current effort levels are highly unlikely to lead to skipjack approaching the default limit reference point in the foreseeable future. The conditions placed on the unassociated fishery provide appropriate incentives to increase transparency and develop and implement a more appropriate harvest strategy and associated control rules.

The VDS was designed to remove the flag-based vessel limits applying under the Palau arrangement (205 vessels), which arguably provided DWFNs with a form of de facto allocation. By building a flexible effort-based system, with a hard limit of fishing days to allocated to coastal states for subsequent use by unspecified and unlimited fleets, the VDS was seen as a means of increasing competition for fishing opportunities. It was also seen as the key control mechanism for effort. Since the introduction of VDS, the numbers of purse seiners licensed by PNA members has increased steadily and according to PNAO data now stands at 227, excluding USMLT vessels (of which there are currently 38). The FFA register records 250 purse seiners. Whatever is the precise number, it is substantially greater than 205 and there is ongoing pressure to increase this number. In theory the VDS should contain effort irrespective of the number of vessels operating in PNA waters; it is apparent however that increasing (and currently unlimited) vessel numbers will continue to place pressure on the integrity and operation of the VDS scheme and that some consideration should be given to re-introducing some form of vessel limits.

Moody Marine comment: WCPFC7 decided on a process for development of an enhanced conservation and management measure for tropical tunas. From the WCPFC7 report, a range of options is under consideration to enhance the conservation and management of tropical tunas, including capacity limits. The assessors have assessed the impact of current management tools. We are however aware that capacity limits are under review as referenced in the Client Action Plan.

Traceability issues will be significant, given that a single vessel operating in the purse some fishery may make sets of three different types (log, FAD and unassociated) in waters under three forms of jurisdictional arrangements (archipelagic waters, EEZ and high seas). As noted, traceability will need to start at the set level, emphasising the importance of full and effective observer coverage. The Assessment correctly points to the strength of the existing observer programme and provides useful and clear commentary on the key issues that will impact on chain of custody considerations.

The Assessment could be more explicit concerning the emerging issue of sampling error as it applies to estimation of the bigeye catch and how it was treated in the assessment. Depending on the sampling method, the proportion of bigeye tuna may be significantly higher than previous estimates. While this is largely an issue for the log (and FAD) fishery, which us already covered by the 'fail' under P2, these uncertainties will also impact on the stock assessments for skipjack and yellowfin. While those impacts are unlikely to be large enough to change the outcome of the unassociated fishery assessment, the issue should be highlighted.

Moody Marine comment: *Additional information on the uncertainties associated with estimation of the purse seine species composition has been included in Section 5.1.*

While the Assessment usefully tackles the three levels of management, it should be emphasised that while the PNA is the client fishery, the management arrangements, including licensing, compliance and so forth will be the responsibility of the coastal state, under its management plans. These management arrangements will need to be implemented through national regulations and measures, to legally bind boat owners and operators. The degree to which broad strategies such as ‘the precautionary approach is included in national plans’ (analysis under 3.1.1 in the Assessment scoring tables) are given effect in national management plans through national catch and effort limits and other provisions is unclear.

Moody Marine comment: *Information on the application of effort limits by PNA Parties has been included in Section 7.1.3. These are generally applied through access agreements and licence conditions, rather than management plans, because management plans are generally medium-term instruments with a 3-5 year time horizon, while catch and effort limits may be required to be changed more frequently.*

PNA members as CCMs have a number of reporting requirements under Part 2 of the Annual Report (to the Commission). From the latest (TCC6) information it would appear that only 2 of the 8 members of PNA are submitting the necessary information to assess progress with the implementation of CMMs to the Commission⁵³. The degree to which this is an issue of capacity or an unwillingness to provide in-zone information to the Commission Secretariat is unclear in the Assessment although I understand it has been discussed in meetings of the Commission and its compliance committee. It is an issue that should be included in the Assessment and possibly be the subject of a recommendation.

Moody Marine comment: *This appears to be part of a WCPFC-wide issue of late reporting and failure to report. As reported to WCPFC7 (see WCPFC7-2010/19), 9 of 35 Part 2 Reports for 2009 were still not submitted by CCMs, including 2 from PNA CCMs. As the reviewer notes, these difficulties are under consideration within the WCPFC, and WCPFC7 approved initiatives taken to streamline and automate reporting systems for the Part 2 Reports.*

Application of information to the scoring indicators

The information provided in the Assessment Report has been generally applied appropriately to the scoring indicators in the table, although some of the scores appear a little optimistic. Some comments are provided below which the assessors may consider warrant inclusion in the body of the report and assessment tables.

1.1.1 Stock Status. While there is a high degree of certainty that the stock is above the default reference points, catch and effort have been successively been increasing and are now at record levels at ~1.8 million mt. which is significantly above the estimated MSY of ~1.35 million mts. While the stock assessment continues to show that the stock is currently only moderately exploited and fishing mortality levels are sustainable, catch rate levels are likely to decline and catch should decrease as stock levels are fished down to MSY levels. Further emphasis in the assessment should be placed on the rapid change of the fishing mortality and biomass indicators relative to MSY in skipjack in recent years.

⁵³ WCPFC (2010). WCPFC-TCC6-2010/20. Summary of Part 2 Annual Report and Revised Template for the Annual Report Part 2. Technical and Compliance Committee, Sixth Regular Session, Pohnpei, Federated States of Micronesia 30 September - 5 October 2010.

Moody Marine comment: Section 5.2 has been revised to describe the implications of the most recent skipjack assessment more comprehensively in the report, including the rapid change of the fishing mortality and biomass indicators relative to MSY in skipjack in recent years.

1.2.1 Harvest strategy. A broad harvest strategy framework is in place at the Commission. It is questionable if the current PNA framework is fully responsive to the state of the skipjack stock and the elements of the harvest strategy demonstratively work together towards achieving the management objectives reflected in the default target and limit reference points. At the PNA management level the VDS, in the words of the assessors, is “... *in the early stages of implementation, and therefore has not been fully tested, and does not address the transfer of effort to archipelagic waters, nor how to balance and assess the VDS TAEs against the increasing effort by the USMLT*”.

Moody Marine comment: Additional information has been included in Section 5.4.2 describing how the elements of the harvest strategy, defined as including monitoring, assessment and WCPFC and PNA management actions are linked to support the conclusion that the elements of the harvest strategy “work together“. Additional information has also been included in Section 5.4.2 describing the management actions in place, including the VDS as a response to the skipjack stock status, and the response of the WCPFC to the changes in the 2010 assessment to support the conclusion that the strategy is responsive to the state of the skipjack stock.

There are no explicit target or limit reference points adopted within either PNA or WCPFC management arrangements and the Assessment deals with this through a recommendation. While current arrangements fall within the default reference points as defined in the FAM (SG 80), it would be appropriate for the client to include the development and implementation of limit and target reference points as an action into its response to the Conditions. This would complement the existing Assessment condition on the establishment of control rules and be explicit in terms of expressing the PNA objective of capping and reducing effort under the VDS in pursuit of optimal long term economic outcomes. This would also better define management objectives so that progress towards them can be measured and assessed in the future. I would note, as one not entirely familiar with the MSC scoring guidelines, that there appears to be some inconsistency between i) the harvest strategy (which makes reference to ... ‘elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points’) and ii) the harvest control rules and tools (which only makes reference to those rules and tools that ...’ ensure that the exploitation rate is reduced as limit reference points are approached’.)

Moody Marine comment: The Client Action Plan refers to implementation of both conditions and recommendations.

1.2.2 Harvest control rules and tools:

Moody Marine comment: As noted above, the comments on page 1 of the review about the effectiveness of the VDS have been taken into account in the scoring for PI 1.2.2, especially the 2nd scoring issue relating to the effectiveness of management tools on controlling exploitation. The scoring comments have been revised to address this issue more clearly. PI 1.2.2 has been scored at 60 accordingly and Condition 4 has been tightened to refer more explicitly to the effectiveness of the tools in use for controlling skipjack exploitation.

2.1.1 Status of retained non-target species. Both yellowfin and bigeye stocks are not currently classed as being overfished with both biomass and spawning biomass above MSY levels. However, overfishing of bigeye is occurring and assessment of the current partial strategy of

management measures in place, including CMM 2008-01, suggests that current arrangements will not halt this overfishing and will hinder the recovery and rebuilding of the bigeye stock. The 'Fail' for log sets under section 2.1.1 in the Assessment addresses the inadequacy of management arrangements for retained bycatch in relation to this fishery. The 'Pass' afforded to unassociated sets is justified, noting that Recommendation 3 suggests that PNA provides documented evidence that the partial strategy is being implemented successfully for both yellowfin and bigeye. Given the significance of this issue, it is suggested that a response to this point be included in the client action plan.

Moody Marine comment: The Client Action Plan refers to implementation of both conditions and recommendations.

2.2.2 Management strategy, bycatch species. In consideration of the vulnerabilities and percentage dependencies of key bycatch species, the suggested management strategy and the imposition of Condition 2, neither fishery will pose a risk of serious or irreversible harm to bycatch populations. It will be possible, using observers and evolving technology, to review the data to assess level of impact (Condition 2.1) and introduce additional measures as necessary, noting that the impact of log sets on bycatch relative to unassociated sets is much higher. CMM 2009-04 is a reporting rather than a conservation measure for sharks, and if stock assessments and/or the review under Condition 2.1 suggest serious or irreversible harm, appropriate measures will have to be put in place in the form of a binding CMM, as required under Condition 2.2.

Moody Marine comment: the reporting provisions of CMM 2009-04 are non-binding, but the other provisions of the CMM are binding, including the requirement for full utilization of retained shark catches, aimed at deterring finning, and encouragement of live release. The Condition requires a review to provide the necessary level of confidence that the shark bycatch management strategy will work. The Condition also requires the tightening of the existing measures if information including the required review, indicates that the unassociated sets fishery has a significant impact.

3.1.1 Legal and/or customary framework. The assessment team has chosen to combine the three key legal frameworks that apply to this fishery (national, regional or PNA and international or Commission), together in the assessment table. It concludes that collectively, they result in a very high level of capability of delivering sustainable fisheries in accordance with MSC Principles 1 and 2. As raised earlier, the VDS is evolving, the PNAO as an administering body is relatively new and there appear to be issues with allocation and the control of effort, especially of the FSMA and USMLT vessels, noting that the last mentioned is outside the scope of the certification.

Moody Marine comment: The assessment and scoring of PI 3.1.1 has been based on the features of the legal framework of the overall management system in relation to the scoring guideposts for 3.1.1. The VDS-related aspects have been taken into consideration within the Harvest Strategy (1.2) and Fishery-Specific Management (3.2) PI categories.

Final implementation of Commission/PNA agreements and measures will occur at the national level. While some limited evidence is provided in the body of the report of how the precautionary approach is incorporated into national laws and tuna management plans, it is not clear how (and if) zone based catch and effort limits have been applied and complied with.

Moody Marine comment: Information on the application of zone-based effort limits by PNA Parties has been included in Section 7.1.3.

It is agreed that there has been little evidence of ...'avoiding binding judicial decisions', but there has been past evidence of limited compliance with some regional agreements, (including the

MTCs as evidenced by the MRAG MCS study⁵⁴), and licensing arrangements under the Palau Arrangement.

Moody Marine comment: Information on compliance with MTCs has been provided in Section 7.1.2.

The current dispute mechanism in the Palau Arrangement is relatively weak, and, while appropriate at the time the Arrangement as negotiated, could be drafted to explicitly include other avenues for the resolution of disputes such as arbitration, conciliation, mediation, or any other peaceful means that the parties choose.

Moody Marine comment: Section 7.1.2 has been amended to clarify that the dispute settlement provisions of the UNFSA and UNCLOS apply to the PNA instruments, including the Palau Arrangement.

3.1.2 Consultation, roles and responsibilities. As indicated in the Assessment, there is comprehensive and widespread consultation between governments, the PNAO, the Commission and its subsidiary bodies and the regional technical agencies (FFA/SPC). Consultation and decision making at the national level, while improving, has some way to go, particularly with setting and agreeing hard limits to catch and effort.

Moody Marine comment: The evidence from stakeholders indicated that there was consultation in existence of varying degrees of complexity. Where affected, fishing companies are also active participants at PNA meetings, as part of the country delegations.

3.1.3 Long term objectives. Management arrangements at all three levels have broad objectives. There is, however, a shortage of defined objectives to guide decision making. At a number of places in the Assessment, including interviews held with the PNA members, the desire by PNA to cap effort in terms of days, then progressively reduce this to increase value, are highlighted. To date however, the reverse has occurred, with substantial increases in effort, albeit apparently excluding those vessels under the VDS scheme.

Moody Marine comment: The assessment team found appropriate long term objectives in place within the management system, noting weaknesses within the PNA system in requirements for objectives consistent to be with the precautionary approach and the other important principles required to be applied by the WCPFC Convention, The contradiction noted by the reviewer between the objectives of capping effort and creating scarcity, and the outcome of increased effort, was considered by the team as a fishery-specific issue addressed under PI 3.2 categories, particularly 3.2.2, as well as PIs 1.2.2 and 2.2.2.

3.1.4 Incentives for sustainable fishing. It agreed that the VDS and associated PNA polices to cap and reduce effort, create scarcity and increase economic benefit through market-based trading of effort units provides a clear incentive for sustainable fishing. Conversely, there is an incentive for individual Parties, under the claim of sovereign rights and exemptions, to seek individual increases in vessel days/various exemptions at the margin, which, given the relatively weak allocation process, has the potential to undermine management outcomes. This issue

⁵⁴ MRAG (2009). Safeguarding the Stocks: A report on analytical projects to support the development of a

Regional MCS Strategy for Pacific oceanic fisheries. FFA, Honiara, Solomon Islands.

should be made clearer in the Assessment. It is noted that reporting under Conditions 3-5 will provide information on how effective PNA members are at managing effort.

My understanding is the subsidies to the purse seine sector from aid donor and other sources have been minimal.

Management of the fishery is based primarily on input controls. All input controls provide two key incentives that, if unmanaged, will lead to the erosion of management outcomes - the substitution of inputs and the use of new and improved technology. The tendency to construct vessels as 'rule beaters' to undermine a length restriction such as the one in place as a proxy for fishing effort under the VDS is well known, and technological creep will inevitably occur with existing vessels. The additional '*appropriate mechanisms to adjust for effort creep*', other than the length measure, which alone will be inadequate in the long term, should be briefly described in the assessment to support this statement.

Moody Marine comment: Section 7.3 and the scoring comments for 3.1.4 have been amended to take these effects more clearly into account.

While not strictly a conservation issue, the incentive to target unassociated schools of tuna will encourage a fishing method that generally has lower catch rates higher costs of fishing due to fuel use. It is to be hoped that there will be a long term incentive to address the bycatch issues associated with FAD fishing, using, for instance, the technical approaches that are being trialled in the Eastern Pacific.

Moody Marine comment: Sections 5.4.1, 6.2.2 and 7.1.1 have been amended to provide information on this point, including the alternative incentive arrangement currently included in CMM 2008-01.

3.2.1 Fishery specific objectives. As discussed previously, there is a lack of explicit long (and short) term fisheries management objectives linked to a harvest strategy/management strategies and targets under P1 and P2. That said, they are generally consistent with those strategies.

Moody Marine comment: The assessment found that there are explicit objectives for the purse seine fishery set out in various WCPFC CMMs as well as national plans, the Palau Arrangement and the VDS, but they are not well-defined and measurable and PI 3.2.1 was assessed accordingly.

3.2.2 Decision making processes. The Commission decision making process and outcomes relative to other RFMOs has been good. The degree to which the pace and substance of these decisions has been sufficiently precautionary and kept pace with the impact of fishing mortality on bigeye and possibly yellowfin is a moot point. The PNA has been instrumental in driving more timely decision making at the Commission, making full use of compatibility provisions and the well-structured decision making process that applies there. Condition 1 requires explicit consideration of the precautionary approach in designing harvest control rules. While the PNA decision making process lacks transparency and links to existing measures, Conditions 3 and 4 will effectively address the issue, and are a critical requirement, give the status of the VDS scheme.

Moody Marine comment: This is the intention of the Condition relating to PI 3.2.3

3.2.3 Compliance and enforcement. The MRAG regional MCS study notes that the reason for purse seine being low risk (relative to longlining) was due to requirement for 100% observer coverage in the PS fishery, as well as the higher VMS polling frequency required under the VDS.

So far, implementation of the ROP has exceeded many expectations. There are now around 550 authorised observers available for ROP trips and 100% coverage for purse seiners was achieved

in August/Sept of 2009⁵⁵. Quality control and quality assurance of observer data and effective observer debriefings will be necessary to provide assurance that measures are being complied with⁵⁶, particularly as pressure for increased fishing opportunities increases, and the incentive for misreporting (days, catch, bycatch, set type) increases.

Consideration should be given to a biennial review of MCS arrangements in the purse seine fishery, using the MRAG national/regional study as a benchmark. This could be a standalone recommendation or merged with Condition 4 and made explicit. It is noted that the Commission managed ROP programme has an audit report system that is a part of authorising national programmes.

Moody Marine comment: Recommendation for the proposed biennial review has been included.

3.2.4 Research plan. The current management plan is WCPFC-wide and is focussed, appropriately, on biological/stock assessment research and management options. PNA countries, collectively and individually will have their own range of research issues including mechanisms for improved economic and compliance outcomes from management measures. One area that may be worth exploring is the use of video technology (electronic monitoring) to provide observer quality control/quality assurance; these systems are being used in a number of fisheries in Canada and the Australian East Coast tuna longline fishery is looking to implement electronic monitoring.

Moody Marine comment: The assessors undertook an extensive review of the observer de-briefing process. This is also subject to independent review by WCPFC, but such reviews had not been undertaken by WCPFC for PNA countries. Nevertheless, the assessors accepted that review process contains the mechanisms to test the robustness of the observer scheme, and until such time as faults are identified, it is felt that additional actions such as video technology would be premature. It is however noted, that PNAO are examining the prospects of use of video technology as part of their Chain of Custody validating processes.

3.2.5 Monitoring and management performance evaluation. The condition attached here is critical and appropriate. As many stakeholders and PNA members have pointed out during interviews with the Assessment Team, the VDS scheme is in the very early stages of introduction and will require considerable effort on behalf of the PNAO and individual parties for it to operate effectively.

Moody Marine comment: Comment accepted. No response required

The suitability of the conditions attached to certification.

The conditions attached to the certification are considered appropriate. Reasoning for this conclusion is provided above in comments on the scoring tables.

Justification of the decision to certify the fishery

Sufficient justification has been provided to certify the unassociated purse seine fishery for skipjack in the EEZs of FFA parties.

⁵⁵WCPFC (2010). WCPFC-TCC6-2010/08. Annual Report, Regional Observer Programme. Technical and Compliance Committee, 6th Regular Session Pohnpei, Federated States of Micronesia, 30th September – 5th October 2010.

⁵⁶ *ibid*

The status of the skipjack stock, as evidenced by high quality data, research and assessment provides a sufficient buffer to cover the risk that the PNA is unable to address the conditions and recommendations provided in the Assessment, within the period of accreditation.

The Commission will be responsible for the development of overall management arrangements for skipjack in the WCPO. However, it is the PNA, as delegated management authority for the VDS, and PNA national fisheries administrations that will implement the management arrangements to meet the current and ongoing requirements of the proposed MSC certification. The FFA, PNAO and other organisations are currently providing the technical and policy support that will be necessary for national administrations to effectively implement the VDS and other management strategies in their waters

The Assessment provides adequate justification, based on part performance and current actions, that there is now the political will within the PNA group to effectively manage the fishery sustainably and meet the conditions of assessment.

Sufficient justification has been provided to fail the log set purse seine fishery for skipjack in the EEZs of FFA parties.

Other issues

Additional purse seine effort in the EEZs and archipelagic waters. This issue has been outlined above, but is drawn out in more detail here. The Nauru Agreement and its implementing agreements, the FSMA and Palau Arrangement and the VDS scheme, appear to variously refer to fishing in the EEZ, or ‘fisheries zone’ or ‘waters of the parties’ with some exclusions possible. Clearly, if more effort is shifted under these agreements into archipelagic waters to meet VDS limits in the EEZ, this will further undermine the status of bigeye tuna (*note that this has minimal impact on unassociated skipjack certification issues*). Some clarity around these issues would be helpful, given that the body of the assessment refers to both log and unassociated sets. Appropriately, Condition 1 refers to ‘uncertainties’ surrounding archipelagic waters.

Moody Marine comment: As noted above, Section 6.2.3 reports the identification of the exclusion of archipelagic waters from the CMM 2008-01 effort limits, as one of the main reasons for the lack of effectiveness of the measure in removing bigeye tuna fishing mortality. Section 6.2.3 has been amended to include SPC advice on the need for measures to be implemented across all fishery sectors with significant bigeye tuna catches to provide additional clarity on these issues.

The Assessment also indicates that the management regulations under 2008-01 and the 3rd Implementing Arrangement or are implemented through a set of *parallel national and archipelagic measures*. The Assessment does not make clear what these parallel measures are.

Moody Comment. Parallel national and archipelagic measures are referenced in 5.4.1 (2), (3) and (4).

Peer Review Report B

BACKGROUND

I have been provided with a “Client Draft” (Moody Marine Ltd Ref: 82122/v2) on the assessment for the Parties to the Nauru Agreement (PNA) Western and Central Pacific Skipjack Tuna unassociated and log set purse seine fishery. The report is comprehensive and well-structured, following a now standard format used by Moody Marine Ltd. The report describes the assessment team, schedule and general approach to the assessment, as well as providing an overview of the fishery, stock assessment, ecosystem considerations and governance/fishery management. The report clearly describes the Marine Stewardship Council (MSC) standard, the evaluation process and stakeholder consultation. Most importantly, the report lays out clearly the scoring methodology, actual scoring and resulting conditions and recommendations.

I have been tasked with a peer review of the Client Draft. The time available for peer review is limited and the report is extensive. Moody Marine Ltd has therefore asked specifically that peer review should concentrate primarily on aspects relating to Principles 1 and 2 (and not at all on Principle 3 issues). More specifically, the identified task is to check the scoring against the MSC Fisheries Assessment Methodology and Guidance to Certification Bodies (the FAM), particularly checking interpretation in specific areas (P1.1 and P2.1).

For simplicity, the peer review is structured to follow the scoring sequence. I have concentrated on i) whether the materials presented in the initial overview (sections 5 and 6 for P1 and P2 respectively) and particularly within the Scoring Table (Appendix B) are sufficient to explain and support the intermediate scoring of each Scoring Guidepost (SG), and ii) whether final Performance Indicator (PI) scoring flows appropriately from the component SG scores (i.e. is consistent with the FAM guidance at section 4.2).

Given the time available and task at hand, I have not comprehensively reviewed the report or attempted to read background material. Any review is therefore predicated on the assumption that the material presented in the report is comprehensive and sound. I am aware of the importance of management measures such as the Vessel Days scheme (VDS) and other measures implemented through various Commission Management Measures (CMM) decisions. I have taken at face value comments on these and have made no attempt to delve in to aspects that may be contentious.

COMMENTS

PI 1.1.1

The description of the stock assessment in section 5 is sufficient to support scoring. However, on p30 (final paragraph) I am unclear about some of the language (and am unsure if it derives directly from assessment reports). I am also unclear (due to graphic quality of Figure 4) as to some of the details of stock trajectory and history.

The graphic seems to suggest a stock moving upwards to the left on the plot (i.e. B/Bmsy decreasing and F/Fmsy increasing). However, looking at the abscissa, the current B/Bmsy at 2.4 would lie in the centre of the cluster of points. The horizontal bar appears to show colour coding of dates, and again suggests the most recent points are in the upper left hand corner. The plot needs to be at a higher resolution (to be readable) and may need some further explanation.

Moody Marine comment: The original was unclear. Section 5.1 has been amended to clarify that B_{current} refers to the average 2005-2008 biomass, estimated at 2.4, but the latest value of B, which is B₂₀₀₉ is 1.9. This approach uses the language of the assessment report.

The comments in the paragraph below the plot suggest a story not wholly consistent with the phase plot interpretation and imply areas of uncertainty, especially spatial, which may not have been fully represented in the assessment output or in the Client Draft report.

Moody Marine comment: The original comments regarding uncertainty in the assessment have been removed, as they did not add anything to the interpretation, and have been paraphrased elsewhere in a more appropriate setting.

In the Scoring Comments the statement that there is “virtually 100% probability that the SB is twice Bmsy...” is referenced but does not follow from the presentation in section 5. Indeed, it is slightly different to the comment in that section which suggests the best estimate of current stock status is of the order of 2.4Bmsy “with a high degree of certainty” – there will be error associated with that estimate (not shown) and the Scoring Comment is unlikely to be correct. It would be better to reflect that the best estimate of Bcurrent/Bmsy is 2.4 and has been above X for the past Y years (I can’t read the details from the phase plot to give values of X and Y). It would be especially useful to note (as in section 5) that the probability of the stock being below Bmsy is estimated to be zero. This latter point is the key one for 100 scoring at each of the P1.1.1 SG components.

Moody Marine comment: The Scoring Comment has been amended to refer to the probability that B/ BMSY, rather than SB/ SBMSY, is below 1.

Overall, although I think some amendments are needed to the text, I agree with the scoring of SG100 for both components and the overall score of 100 for the PI.

PI 1.1.2

The Scoring Comments (and section 5) usefully traverse the international agreement requirements, the nature of the outputs from the stock assessment, and that those outputs are used (“considered”?) by the SC when providing advice. It is also correctly pointed out that no explicit target and limit reference points (TRP, LRP) have been adopted by the PNA or WCPFC. The weak link (not stated) is that no mention is made in section 5 or in the Scoring Comments as to how the management bodies receive, review, react, plan, etc based on the SC advice relevant to reference points, current and possible future status. Nor is any mention made of whether or not SC advice includes any indication as to potential recruitment impairment and how reference points might relate to this.

If at all possible, it is important to highlight any examples/evidence that the management bodies consider the SC advice in such a way as to demonstrate that the MSY-related quantities are regarded as de facto reference points. It is not that they can be estimated and advised that matters but rather that they are used as default reference points. Most importantly, given the SG structure, is there any evidence to bring to bear not just on a generalized acceptance of maintaining the stock at or above Bmsy, but also protecting against recruitment impairment of reproductive capacity (i.e. the LRP)? In other words, is it possible not just to infer a default TRP but also a default LRP (again, meaning used as a default, not just able to be estimated)?

Moody Marine comment: The assessment team has given substantial consideration to the very helpful analysis relating to PI 1.1.2 in the review. In considering whether it is possible to infer a default LRP, the team has found FAM sections 6.2.21 and 6.2.22 useful. In particular, Section 6.2.21 includes the observation that: “For example, if a management strategy is based solely around a target reference point, the harvest control rule, when combined with the target reference point shall ensure that the stock will remain well above the level where there is an appreciable risk that recruitment would be impaired and ensure that the exploitation rate is reduced as this point is approached. This is an implied limit reference point.” It seems to the team that this is the position with the WCPO skipjack stock. The stock is managed with BMSY or above as a TRP.

The strategy of the WCPFC and PNA observed for example in bigeye tuna management is to reduce fishing mortality when F exceeds F_{MSY} , which should ensure that the stock will remain well above the level associated with an appreciable risk of recruitment being impaired and that the exploitation rate is reduced as the level associated with an appreciable risk of recruitment being impaired is approached. Section 5.4 has been amended to cover this point.

The Scoring Comments and justification both suggest a default LRP at 75%Bmsy and quote FAM 6.2.19d. However, this assumes i) a technical basis only rather than evidence of usage, and ii) a Bmsy estimate less than 27%B0 – I can see no reference to any Bmsy estimate in section 5 or elsewhere. Does an estimate exist? If yes, it needs to be given. If no, then use of the 75%B0 default may be inappropriate.

Moody Marine comment: BMSY is estimated as 31%B0, and so the relevant default LRP applying FAM 6.2.19d should be 20%B0 – the latest assessment estimated Bcurrent at 75%B0. This information has now been included in Section 5.2.

Moving to the SG and assuming for now that a default LRP can reasonably be inferred, the first SG at the 80 and 100 levels is the same. This is a quaint aspect of the default scoring tree that means in effect it is (almost) impossible to score 80 on the PI – if all the SG80 conditions are met then the minimum score becomes 85 given scoring guidance at 4.2.7.

Moody Marine Comment: Subsequent to the Peer Review, in Policy Advisory 18, MSC has advised that “where identical scoring issues are repeated at different SG levels (in PIs 1.1.2, 1.2.2, 3.1.1, 3.2.2, 3.2.3), the text at the higher SG level/s is hereby deleted, leaving the text to appear only once at the lowest current SG level”. This removes the anomaly noted by the Reviewer.

The scoring justification for the limit reference point refers to 75%B0 (see above). I think this is a red herring. Whether the LRP is 50% or 75% Bmy does not matter at this time when stock status is well above Bmsy – what matters is whether or not there is any evidence that the management system recognizes the need for a LRP to protect against impairment of reproductive capacity. Note also that for the justification of both the LRP and TRP, the phrases “and the stock is above this level” are misplaced (they are the stuff of P1.1.1). I would remove these phrases as they highlight that the scoring may be based on what is estimable rather than what is used as de facto reference points.

Moody Marine Comment: The Scoring Comments have been rewritten along the lines suggested by the reviewer.

The Scoring Comments and justification about trophic position and ecological role appear appropriate.

Overall, I would agree the SG60 level is reached. At SG80, the first SG is met (and therefore also at SG100). At SG80, the second SG (re LRP) is debatable. That the stock is well above any reasonable choice of LRP is not the issue. At SG80, the third SG (re TRP) is met. The fourth SG80 level component (re trophic level) is reasonably scored. I think that more consideration needs to be given to the overall score. If justification is given to support that a default LRP exists, then I would agree the component scores of 80/100, 80, 80, 80 and an overall score of 85. My inclination, however, if the justification re LRP is not strong, is not to include the second SG80 level component. The scoring would then be more complicated – it would be based at the 60 level but would recognize 2 SG80 component scores and 1 SG80/100 score. The overall score would then be 75 and a condition rather than recommendation would be required.

Moody Marine Comment: On the basis of the application of the example in FAM 6.2.21 to indicate that there is an implied LRP, and taking into account the advice in PA18 to

remove repeated scoring issues at the higher SG level, SG80 is met for the first scoring issue (which no longer applies at SG100); SG80 is met for the other scoring issues and the overall score has been reduced to 80. If the team had not found FAM 6.2.21 applicable, the second scoring issue would not have met SG80, and the overall score would have been 75. The Scoring Comments have been reworded accordingly.

PI 1.1.3

N/A

PI 1.2.1

Harvest Strategy is defined in the FAM Glossary as the “combination of monitoring, stock assessment, harvest control rules and management actions...” According to the FAM guidance (6.3.2), PI1.2.1 “scores the overall performance of the harvest strategy, particularly the way that the different elements [in PI1.2.2-4] work together to keep the stock at levels consistent with reference points.” As will emerge, there are no explicit control rules, and scoring of this PI therefore needs to take account of how well the monitoring, assessment and management actions work together to keep the skipjack stock above the default (see P1 1.1.2) reference points, especially Bmsy. I would expect to see clear reference to how monitoring and assessment support the stated management measures, and whether measures are varied in response, as well as to current and expected stock performance relative to Bmsy.

Section 5 and the main Scoring Comments refer primarily to WCPFC management measures and to PNA zonal measures. The WCPFC measures are not aimed at skipjack tuna although they apply to a percentage (75) of the skipjack catch area. No explicit linkage is made in Section 5 or the Scoring Comments to explain how those measures might impact the skipjack tuna stock and, importantly, no clear linkage is made between how the skipjack tuna assessment and monitoring feed back in to those management provisions, if at all. Similarly, for the PNA zonal measures, it is unclear how the assessment and monitoring feed back to management measures. Given referenced concern about region 2 and as current removals are well in excess of the estimated MSY (and given low recruitment and an expectation of stock decline), what measures are in place, and what responses might be possible, dependent on monitoring and assessment?

Moody Marine Comment: The draft report did not adequately consider the issues raised by the reviewer, in large part because it relied substantially on the conclusion that the robust status of the skipjack stock showed that the strategy was effective. Additional information has now been included in Section 5.4.2 linking the skipjack assessment and monitoring to the management actions.

The scoring justification states that the harvest strategy “is responsive to the state of the skipjack stock and is designed to achieve...” As written, the words follow the SG100 first scoring component language although a score of 80 is given. As presented, however, I see no evidence that even the actual SG80 first SG component language is justified (i.e., that the elements “work together towards achieving...”)

Moody Marine Comment: Information describing the management actions in place as a response to the skipjack stock status, and the response of the WCPFC to the changes in the 2010 assessment has been included in Section 5.4.2 to support the conclusion that the strategy is responsive to the state of the skipjack stock. Information on how the assessments, monitoring and WCPFC and PNA management actions are linked has been provided to support the conclusion that the elements of the harvest strategy “work together”.

The harvest strategy has clearly not been tested. Monitoring is in place – however, considering the SG80 second component requirements, what evidence exists that the “strategy” is “achieving

its objectives”? The stock remains at a high level, though may be declining, but the objectives are wider than just stock size and relate (s I infer) to a range of political, social and particularly economic aspects.

Moody Marine Comment: Information from 2010 skipjack stock projections of MSY-related reference points has been included in Section 5.4.2 to support the conclusion that the strategy is achieving its objectives.

I do not doubt that the SG80 level might be reached for this PI but I do not find the text sufficient to support the conclusion. As written, I would score at the SG60 level. More work is needed on scoring this PI and there may be a need for a condition to be raised. If that is the case, it is worth considering a unifying condition to link issues raised at P1.1.2, P1.2.1 and P1.2.2.

Moody Marine Comment: Notwithstanding the strengthening of the text described above, the score for this PI 1.2.1 has been reduced from 85 to 80

PI 1.2.2

The score seems to be appropriate but care is needed not to mix the tools in use (as harvest control rule surrogates) with their consideration as the management actions under PI1.2.1.

PI 1.2.3

Agree.

PI 1.2.4

Agree

PI 2.1.1

I have no difficulty with the choice of YFT and BET for inclusion in P2.1. I note, however, that “unidentified tunas” also make up greater than 5% of the catch and are not included. This has potential implications for the scoring as the SG100 scoring for P2.1.1 explicitly drops the qualifier “main” which appears at SG60 and SG80 (see FAM 7.2.3).

Moody Marine Comment: Unidentified tunas here comprise exclusively skipjack, yellowfin and bigeye, which were not identified to species during the visual observation process, supporting the choice of bigeye and yellowfin tuna as main retained species for the purpose of P2.

There is some confusion between section 6 and the Scoring Comments here and in P2.1.2. In section 6 the presumed status LRP (referred to as “Blim”) is repeatedly given as 0.5Bmsy. In the Scoring Comments for P2.1.1, Blim is suggested as 0.75Bmy for both BET and YFT. In the Scoring Comments for P2.1.2 Blim is again indicated as 0.5Bmsy.

Moody Marine Comment: With BMSY below 40%B0 but above 27%B0 the default LRP should be 20%B0 (the previous decisions were wrongly based on applying the criteria in FAM 6.2.19 to SB, not B)

The assessment appears to be clear that for YFT, biomass is well above Bmsy and fishing mortality well below Fmsy. The picture for BET is of greater concern as although the biomass is estimated to be above Bmsy, fishing mortality exceeds Fmsy (NB no Flim is defined but would also likely be exceeded based on Figure 7) and biomass is predicted to decline in the coming decade, presuming either average recruitment or a stock recruitment relationship.

For P2, the definitions of probability and risk are different to those used for P1 (see FAM 7.1.18). The use of precise phrases in the SG wording reflects specific requirements as to probabilities. The stock assessment outputs may include such probabilities but they are not given in section 6 or in scoring Comments. Even for YFT, therefore, it is difficult to be sure that the

SG100 level of the first SG component is actually reached (it may be but I cannot tell from the information provided). For BET the same applies, but from Figure 7 and general knowledge about errors on estimates of $B_{current}$ or $B_{current}/B_{msy}$ in stock assessments, I would not expect the SG100 condition to be met. I suggest that the stock assessment reports are used to determine more precisely the probabilities of being within limits and that these be used directly to assign scores for the first SG component.

Moody Marine Comment: Information from the assessments on the probabilities that the bigeye and yellowfin tuna biomasses exceed BMSY, and therefore 20%B₀, have been included in Section 6.2.1 and the Scoring Comments.

For YFT it is possible that both SG100 conditions will be met, but it needs to be checked.

For BET, I doubt the SG100 first condition will be met. If it is not then the SG80 condition first element may also not be met. If it is then the component score can be 80. If it is not then the lack of demonstrably effective management measures to constrain fishing mortality is problematic.

In any case, the way in which the scoring currently seeks to average 4 scoring components (2 each for YFT and BET) may not be appropriate (see para 1 of this review section and FAM 7.2.3). My understanding of the scoring requirement for the first SG100 condition is that the SG100 level is not reached because only the main, not all, species are considered. At best, therefore, on this condition, S80 can be scored. At SG80, difficulty then perhaps arises because of the probability definitions at FAM 7.1.18, at least for BET and possibly also for YFT (this needs to be checked in the source assessment documents).

Moody Marine Comment: The probability information noted above indicates that the SG100 condition is met for bigeye tuna, and for yellowfin tuna.

PI 2.1.2

Section 6 and the Scoring Comments refer to CMM 2008-01 but no specific details are given. In particular, no details are provided as to how specific management of the skipjack tuna fisheries will take place to ensure that the fishery under assessment does not pose a risk of serious or irreversible harm to the retained bycatch species. CMM 2008-01 provides general management measures for YFT and BET but the skipjack fishery-related aspects are not drawn out. In section 6 (6.2.2, page 43) reference is made to Section 8.1.1 but no such section exists. It may need to refer to 7.1.1 (Table 15) but this is unclear.

I have read the relevant section carefully and the scoring Comments and justification. I have a general difficulty with claims of “strategy” in many fisheries (as judged against FAM 7.1.22). In this case, so long as the measures in place due to CMM 2008-01 reflect the wording for a partial strategy at FAM 7.1.23, I agree with the comments, justification and split scoring. Specifically, I would note for the unassociated set fishery, all three SG80 conditions would then be met for both YFT and BET. For the log set fishery, while YFT would again meet all SG80 conditions, BET would fail on the second SG60 condition, based on evidence from the reported projections by Harley et al. I think it is worth being explicit that the SG60 level is not met because that work provides an objective basis for confidence that the partial strategy will not be successful.

Moody Marine Comment: Section 6.2.2 has been amended to reference Sections 5.4.1 which describes the elements of the strategy for bigeye and yellowfin tuna conservation and management, and Section 7.1.1 which describes the process of development of the package of measures from 2005 in response to scientific advice that the effectiveness of the measures needed to be improved. The team consider that this information supports the conclusion that a partial strategy is in place.

I note that as a likely fail (<60), there is no condition set.

PI 2.1.3

Agree.

PI 2.2.1

Agree.

PI 2.2.2

The justification for scoring under Silky Shark is unclear. For both Unassociated and Log Sets (note the Log Set heading is wrongly labelled as “Unassociated”) an 80 score is given for component 1 and a 70 score for the second SG80 level component. I find this difficult on a number of counts. 1) there is no 70 level intermediate score available; 2) the justification given for the 70 score on the second scoring component relies primarily on the fact that 100% observer coverage has been implemented – but this is primarily covered under P2.2.3. The 70 score is indicative that the justification is insufficient to pass the condition set at the SC80 level component 2. Overall, therefore, for Silky Shark, the scoring should perhaps be based on the SG60 level but be raised to 65-70 given recognition of meeting the SG80 level first component. Combining the 65/70 for Silky Shark and the 80 for Blue Marlin would give 70/75 overall, consistent with the draft score and also requiring a condition.

Overall, therefore, I agree with a score of 75 (or 70) but not with the rationale used to reach it.

Moody Marine Comment: we agree with this and the scoring has been adjusted.

PI 2.2.3

Agree.

PI 2.3.1

In the Scoring Comments the second paragraph starts “This CITES listed species...” For clarity, assuming the species referred to is the whale shark, it would be good to join this paragraph with the first. Alternatively, create a paragraph for whale shark only by joining the last sentence of the first paragraph with the second. I agree with the scoring.

Moody Marine Comment: The sentence is preceded with the name of the species (False killer whale) so no change is considered necessary.

PI 2.3.2

Agree.

PI 2.3.3

Agree.

PI 2.4.1

Agree.

PI 2.4.2

Agree.

PI 2.4.3

Agree.

PI 2.5.1

This may need to be revisited. The Scoring Comments are good but the justification statements fall between SG80 and 100 levels and the scores given for both fisheries do likewise. The problem is that the way the FAM scoring guidance at section 4.2 is worded, where only a single

scoring element exists at SG 80 and SG100, then only a score of 80 or 100 can be given. This is perhaps unintended (and unfortunate) but given the guidance in FAM 4.2.7-9, while it is possible to vary scores using judgment when multiple conditions exist, it does not appear possible to use judgment when a single condition exists.

Either scores of 80 will need to be assigned or fuller justification will be needed, consistent with 100 level SG language, and scores of 100 given.

Moody Marine Comment: This comment is accepted and it has been rescored at 80.

PI 2.5.2

In the Scoring Comments there is nothing that speaks to ecosystem considerations beyond those already covered in PI 2.1.2 and PI 2.2.2. In Section 6 there is no mention of explicit attendance to ecosystem objectives that might be the basis for a strategy. Therefore, I would start in this instance with the SG60 level first condition but recognize SG100 level conditions 3 and 4 hold. In that case, following FAM 4.2.9, a score of 75 seems warranted. However, noting the final sentence of 4.2.9, if the Assessment team does not think a condition is warranted, then a score of 80 could be given. The FAM is not explicit in allowing an overall 80 score when an intermediate score of 60 is included, but the final sentence of 4.2.9 does seem to allow the possibility. In this case, it would seem reasonable.

Moody Marine Comment: We have reviewed the Convention text and, with additions now made to Section 6.6.2, are satisfied that Articles 5 (Principles and Measures), 6 (Precautionary Approach), 10 (Functions of the Commission) and 12 (Functions of the Scientific Committee) provide at least a partial strategy towards an ecosystem-based approach to management. We have updated the scoring comments to reflect this.

PI 2.5.3

Agree but note in the Scoring Comments at PI 2.5.3, line 3 of the Table entry – there is a vestigial “164”.

Moody Marine Comment: Correction made

CONCLUSIONS AND RECOMMENDATIONS

The Client Draft report is well structured and written and is of a high standard. The background material is generally sufficient to provide evidence of scoring but there are some areas where more detail may be required and a few areas where forward references need to be checked.

For P1, scoring of PIs 1.1.1, 1.1.3, 1.2.2, 1.2.3 and 1.2.4 appears robust. Scoring for PIs 1.1.2 and 1.2.1 should be reviewed. For PI 1.1.2 it is necessary to provide evidence that the reference points used to frame advice from the SC are actually used in management decision making, or that advice based on those reference points is used. The reference points only become surrogates or de facto reference points through usage, not through being estimable. Care is needed in particular with respect to adoption of a default limit reference point. It is not clear that this is in fact the case and there may be a need to reconsider the scoring (and raise a condition). For P1.2.1 there is a difficulty in that the requirement that the components of the strategy should work together to achieve objectives is not clearly demonstrated. More evidence is needed as to how monitoring and assessment outputs are used to inform management measures. Without such evidence, it is hard to justify the 80 level scoring. Generally for P1, even if scores are modified and conditions required, a single unified condition could encompass the reference point (PI 1.1.2), control rule (PI 1.2.2) and harvest strategy (PI 1.2.1) requirements.

For PI 2.1.1 there is a need to check and refer to the stock assessment documents to ensure that the interpretation of probabilistic statements to justify scoring is correct with respect to FAM requirements. If it is not, or if the stock assessment documents do not provide the relevant

probabilities, then there may be a need to rescore this PI. There is also a need for consistency in statements as to limit reference point defaults.

For PI 2.1.2 there is insufficient support, either as background in Section 6 or in Scoring Comments, to demonstrate how specific management of the skipjack tuna fisheries will ensure that the fishery under assessment does not pose a risk of serious or irreversible harm to the retained bycatch species. The scoring seems to be appropriate but better support is needed; as currently presented it is hard to justify the scoring. Nevertheless, the critical score of less than 60 for BET is supported and it would be appropriate more explicitly to explain this by reference to the Harley et al work. At PI 2.2.2 the justification may need to be revisited.

At PI 2.2.2, while I agree with the score given, there appears to be a problem with the justification, which invokes P2.2.3 issues.

At PI 2.5.1 there is a technical difficulty with the scoring that will require for both fisheries either amendment of the scores downward (from 90 to 80) or fuller justification and upward amendment (from 90 to 100). At PI 2.5.2 there is a problem with justification of strategy with respect to ecosystem considerations. I suggest a major change to the justification and a consequent change to the score.

Moody Marine Comment: Responses to the issues covered in this summary section are set out above.

15.4 APPENDIX D: CLIENT ACTION PLAN

15.4.1 Background

It is our understanding that :

- Under MSC assessment, if there are areas of concern to the assessors they provide non negotiable terms as conditionalities which must be implemented within specified time frames. They also make non binding recommendations which are non conditional but should be incorporated into PNA Strategy.
- Following are the 4 conditionality's, each with the PNAO draft response.
- Responses will form part of the final published report.
- All the conditions are within our intended programs, and at least two [whale sharks and observers] are already implemented.

15.4.2 Condition 1 : Reference Points (1.1.2)

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the following SG80 requirements have been met:

- Reference points are appropriate for the stock and can be estimated.
- The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.
- The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome.
- For low trophic level species, the target reference point takes into account the ecological role of the stock.

To this end:

1. PNA and/or WCPFC shall establish and adopt explicit and appropriate target and limit reference points for skipjack;
2. PNA vigorously pursue the adoption of reference points in the WCPFC.

Milestones in achieving this end are:

4. Year 1 identification and development of appropriate reference points initiated by PNA
5. Year 2 explicit and appropriate target and limit reference points for skipjack adopted by PNA, and adoption of appropriate target and limit reference points for skipjack promoted by PNA within WCPFC.

PNA Response:

- notwithstanding that WCPFC may introduce reference points independently of PNA action, PNA have the option of meeting Conditions 1 and 2 independently; or through the option to call on WCPFC to develop compatible measures; or PNA may propose these are set through WCPFC

- PNA have commissioned work to clarify the actions necessary by PNA to meet these conditions in the setting of target and limit reference points through current contracts with SPC and CLS. [Appendix 1]
- PNA has demonstrated previously that it is prepared to take a disproportionate burden for conservation of bigeye as a bycatch in the skipjack purse seine fishery [3IA, and actions under CMM 2008-01- FAD and high seas closures],
- PNA also confirm that PNA would be prepared to take the burden of accounting for skipjack catches outside of PNA waters in setting reference points, which are currently reflected in the SPC scientific advice being considered in PNA management decisions (refers to Decision para 31)
- Depending on the results of this work, PNA may proceed independently or through influencing WCPFC. This decision would be taken within the first year of certification, on receipt of results from SPC and CLS

This will set the basis for adopting a harvest control strategy linking the exploitation rate to the LRPs.

15.4.3 Condition 2: Harvest Control Rules & Tools (1.2.2)

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met:

- Well defined harvest control rules shall be in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.
- The selection of the harvest control rules shall take into account the main uncertainties.
- Evidence shall be available that indicates that tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules

Milestones in achieving this end are:

1. Plans for the development and adoption of appropriate HCRs for skipjack, including scientific analysis to assess the scope for SG80 requirements applying to the whole stock to be met by PNA actions and consideration of the main uncertainties, should be in place by the first surveillance audit.
2. If the analysis to be undertaken in Year 1 demonstrates that adoption of appropriate HCRs for the WCPO skipjack stock by PNA will be effective, proposals for adoption of appropriate HCRs by PNA should be prepared and under consideration by PNA by the second annual surveillance audit. PNA should promote the adoption of appropriate HCRs for skipjack by the WCPFC; if the analysis in Year 1 shows that WCPFC action is necessary, then this promotion within WCPFC will be essential in meeting this condition.
3. By the third surveillance audit, PNA should either adopt appropriate HCRs for the WCPO skipjack stock or support specific proposals for adoption of appropriate HCRs by the WCPFC.
4. HCRs within PNA (and/or WCPFC) should be in place by the fourth surveillance audit.

In achieving this outcome, PNA (and/or WCPFC) may consider the following:

- adopt defined harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy and act to reduce the exploitation rate, as limit reference points are approached).
- assessment of the main uncertainties should include the fishing mortality in archipelagic waters and territorial waters in order to ensure that the exploitation rate is appropriately reduced as limit reference points are approached.

In demonstrating that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules, PNA (and/or WCPFC) should consider demonstrating that effort is effectively limited within overall PAE levels established in accordance with the VDS text, Implementing Arrangements and appropriate WCPFC conservation and management measures. In the event that these tools were to substantially change, then their effectiveness should be re-evaluated .

PNA Response:

- The PNA is a very significant player in the Western and Central Pacific and has demonstrated its capacity to drive management interventions in the wider regional context. PNA have already commissioned work towards the development of limit and target reference points for skipjack tuna (**Condition 1**). This will set the basis for adopting a harvest control strategy linking the exploitation rate to the LRPs, taking note of our commitment to account for catches outside PNA waters. The VDS is PNA's main tool for regulating fishing for skipjack and will therefore be central in responses to any approach to a limit reference point. However additional management measures are under continual evaluation and may also be relevant in the future to compliment the governance.
- PNA have established a formal VDS Committee under the Palau Arrangement to consider the various information available and to provide advice on *inter alia* the setting of the annual TAE. The harvest control rules, and information on the status of the fishery against the reference points will become a key consideration of the VDSC when making recommendation to the formal meeting of the Parties in this regard.
- In terms of accounting for external influences in the design of the harvest control rules, PNA notes that while the majority of catch and effort occurs in PNA EEZs, there are significant levels of fishing mortality in other areas, including archipelagic waters, and waters outside of PNA. As custodians of the resource, and in compliance with international law, PNA remain committed to ensuring sustainable management of the stock as a whole, but recognizes that in the areas beyond the control of PNA, it is the Commission and respective non PNA states that need act. PNA will continue to support the WCPFC in this and will implement as necessary our commitment to account for catches outside PNA waters.
- In order to ensure that the management of fisheries in PNA EEZs can adequately detect and respond to changes regardless of their origin, it is anticipated that the overall harvest strategy will rely on both empirical and model based reference points. This will be coupled with regular reporting against those reference

points to guide management deliberations. Clearly there are numerous factors to be considered in this significant undertaking, but PNA remain committed to meeting the requirements and timeframes in the Condition.

- Decisions on governance in PNA EEZ will take account of the exploitation rates achieved in Archipelagic waters and territorial waters, and will make its best endeavors to ensure that equivalent compatible measures are adopted under the framework of WCPFC. PNA Parties will collectively press WCPFC through its annual meetings to set Harvest Control Rules which should be extended to all skipjack related fisheries in the Western and Central Pacific.
- The PNA Parties also commit to commissioning an independent review of the Harvest Control Rules set to ensure that the rules and tools applied, are effective and more specifically are consistent with the VDS text, and that parties comply with the PAE restriction set. This will include an evaluation of the effectiveness of the tools applied to skipjack (as well as to yellowfin and bigeye). This may include an assessment of appropriate support tools such as a restriction on vessel capacity. This commitment represents part of a continuous and ongoing review of management systems within the PNA, in which experts are engaged at regular intervals to explore all aspects of tuna fisheries management. In the event that there are changes to the harvest control tools, PNA will also engage experts to evaluate the effectiveness of any changes made.

15.4.4 Condition 3: Management Strategy (Bycatch) (2.2.2)

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (second and third scoring issues) have been met:

- There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or the species involved.
- There is some evidence that the partial strategy is being implemented successfully.

Milestones in achieving this are:

1. By the first annual surveillance audit, PNA should review available data (e.g. observer, logsheet) to provide the necessary level of confidence that the current management measure (CMM 2010-07) for sharks will work. The review should be initiated by the first annual surveillance audit, with a specific focus on silky sharks.
2. The review of available information should be completed by the second annual audit.
3. If the above should indicate that this fishery has a significant impact on shark populations, then implementation of those elements of the Pacific Islands RPOA for sharks that have “a high likelihood, in aggregate, of delivering improved conservation outcomes for sharks” should be instigated by the third surveillance audit, and completed by the fourth. . These may include (i) the release of all live sharks, (ii) that sharks to be landed with fins naturally attached, allowing for fins to be partially severed and folded back against the carcass for storage; and (iii) the prohibition of dumping carcasses after landing.

PNA Response:

- PNA Parties will support a review of all available data (observer and logsheet), and to determine whether the strategy to properly manage sharks is effective. The review should be completed within two years of certification.

- The Pacific Islands RPOA for sharks was prepared by three regional agencies to act as a guide for PICs to implement sustainable shark management. It is worth noting that PNA Parties did not have direct input into the development of the RPOA and therefore did not conduct any in depth review of the practicality or effectiveness of its recommendations at the time of its development. Nevertheless, PNA Parties commit to the implementation of an aggregate package of appropriate measures, consistent with the Condition in the event that the Review indicates that the fishery has a significant impact.
- Recommendation 3 is closely related to this Condition. PNA fully supports all efforts towards stock assessment. PNA have always supported the work on ecological risk assessment in the WCPFC and were strongly supportive of the shark stock assessment programme that was adopted by WCPFC7. PNA will continue to support all such undertakings and look to contribute where possible.

15.4.5 Condition 4: ETP Status (2.3.1)

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements have been met for whale sharks:

- The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.
- Direct effects are highly unlikely to create unacceptable impacts to ETP species.
- Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.

Milestones in achieving this outcome are:

PNA should adopt both the RPOA for Shark's recommended prohibition on schools associated with whale sharks as well as the subsequent PNA decision to prohibit sets on whale sharks. This should be validated by written and agreed rules to implement this by the first annual surveillance audit.

4. Reviews of the level of whale shark interactions should be begun by the second annual surveillance audit and published by the third annual audit.
5. Any necessary actions in response to the above should be initiated by the fourth surveillance audit.

PNA Response:

- PNA has already advanced the measure to ban sets on whale sharks. This has now been introduced as an amendment to the Third Implementing Arrangement.
- PNA will review the existing measure to ensure that the activities listed are consistent with best practice
- It is also worth noting that FFA members tabled a proposal to WCPFC7 to implement compatible measures in the high seas and non-PNA EEZs. This was based solely on the PNA rules. PNA was disappointed that other WCPFC members did not support the measure. PNA remain committed to implementing these requirements on a regional basis.

15.4.6 Condition 6 : Fishery-Specific Objectives (3.2.1)

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements (third and fourth scoring issues) have been met:

Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.

Milestones in meeting this objective are:

Year 1. PNA should show identification of appropriate management vehicles (within PNA and/or WCPFC) where such objectives would be appropriate, and provide draft text for objectives.

Year 2. PNA should show tabling of proposed objectives at relevant meetings and consideration of their adoption.

Year 3. Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, should be included within the management framework of PNA and/or WCPFC

PNA Response

- PNA will formerly incorporate into the Palau Arrangement, and VDS text, Short and long term objectives, which are specific to the management of the skipjack stocks.
- These objectives will incorporate elements of Condition 1 and 2; through the adoption of fishery specific reference points and a harvest strategy that also take account of catches outside PNA waters, and interactions with other retained species. As a result, management measures that reflect principles 1 and 2 will be explicitly incorporated the fishery's management system.

15.4.7 Condition 5 : Decision making process (3.2.2)

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (third and fourth scoring issues) have been met:

- Decision-making processes use the precautionary approach and are based on best available information.
- Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
 1. By first annual surveillance audit, provide a description of decision making processes and their relation to scientific advice
 2. Subsequent meeting output should then explain decision making processes in relation to scientific information.

PNA Response :

- As described above, the harvest control rules (Condition 1) and reference points (Recommendation 1) will form a fundamental basis of the deliberation of TAEs in the future.
- Decisions taken on adjustment to the VDS scheme shall be based on best available information. This will be derived largely from SPC scientific advice, SPC logsheet data, information compiled by the PNA Office and FFA as well as any additional work commissioned through PNA or other management organisation. Explanations on recommendations made and decisions taken, or lack of action, will be clearly documented by the PNA Office, through minutes of meetings. These minutes will be publically available on the PNA Office website.
- At the same time, the WCPFC Convention itself requires that the Commission and its members also account for a range of socio-economic factors when deciding conservation and management measures. These factors are of high importance to PNA as small island developing states and will continue to be considered in line with the provisions of the Convention and UNCLOS.

15.4.8 Recommendation 1: Harvest Control Strategy (1.2.1)

1. PNA to draw up a management strategy for PNA which integrates existing elements to apply specifically to the skipjack harvest and is linked to limit and target reference points established as per Condition 1; and
2. PNA vigorously pursue the adoption of a management strategy for WCPO skipjack in WCPFC.

PNA Response:

PNA will conduct an annual internal review on the monitoring, management and implementation of the VDS scheme, encompassing the performance of the PNAO and the Parties implementation performances. This process will be strengthened through the application of internal and external reviews. The latter to be held within **3 years** of Certification and may cover a range of factors and issues that are important to PNA in addition to those listed above.

15.4.9 Recommendation 2: Information (1.2.3)

Encouragement of, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.

PNA Response:

PNA will also encourage, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.

15.4.10 Recommendation 3: Management Strategy (2.1.2)

PNA provide documented evidence that the partial strategy *continues* to be implemented successfully for bigeye and yellowfin tuna.

PNA Response:

PNA continually assesses the interaction with retained species to ensure that the levels of bycatch are maintained to a level that does not contribute to the decline stock status, and to report on the implementation of the technical conditions (CMM 2009-02) associated with the FAD closure.

15.4.11 Recommendation 4: Stock assessment (2.2.3)

Stock assessments of both silky shark (IATTC, under way) and blue marlin (ISC, 2012) will provide greater understanding of the status of these stocks as will planned shark assessments for WCPFC. Results of these should be reviewed and if necessary appropriate mitigation measures taken to reduce mortalities of these species. Mitigation action would have to be implemented in 2013, if required. **PNA Response:**

Following the ISC stock assessment of silky shark and blue marlin, the PNA will also seek to implement the recommendations relating to the monitoring and management t for blue marlin in 2012 and will further support WCPFC in the implementation of a management strategy for this species if required.

15.4.12 Recommendation 5: Long Term Objectives (3.1.3)

The PNAO will also review the Nauru agreement and related instruments to ensure that the appropriate principles including the precautionary approach are required to be applied.

PNA Response:

The PNAO will also review the Nauru agreement and related instruments to ensure that the appropriate principles, including the precautionary approach, are required to be applied

15.4.13 Recommendation 6: Compliance (3.2.3)

A biennial review of MCS arrangements in the purse seine fishery should be undertaken, using the MRAG national/regional study as a benchmark.

PNA Response:

PNA is a proactive participant in the review of MCS arrangements, and a supporter of the Strategy for strengthening MCS support within the region. FFA has initiated a support programme which will seek to implement MCS strengthening needs.

15.4.14 Recommendation 7: Performance Review process

The PNA should establish a system of regular internal and external reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery. The Internal review should comprise an annual administrator's report prepared **annually** (as opposed to on an *ad hoc* basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document must be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers and lessons learned. The external review should be undertaken within **3 years** of Certification.

PNA Response:

PNA has already initiated a process of regular monitoring of VDS reporting, uptake and exchanges between the Parties. Two reports have been prepared and presented for 2009 and 2010 and regular reviews will be made for an external review.

15.4.15 Additional note

- Please note that subject to the assumptions used in future SPC stock assessments, Indo/Phil application of CMM, and PNA ability to enforce hard limits and application of reference points, etc. it may be onerous on PNA to maintain MSC certification and see the fuller long term economic benefits to PNA.
- Failure to demonstrate such obligations may also independently have bearing on ongoing WCPFC recognition of PNA VDS and resource governance, E-NGO perceptions, PNA

investments, and ongoing market access under the EU IEPA ; which has similar conditionalities.

15.5 APPENDIX E: STAKEHOLDER COMMENTS

World Wildlife Fund International Sustainable Seafood Foundation Assessor Responses to the submissions



for a living planet[®]

WWF Submission to Moody Marine Ltd

MSC Certification of The PNA Western and Central Pacific skipjack tuna (*Katsuwonus pelamis*) unassociated and log set purse seine fisheries

August 2010

Introduction

WWF welcomes the opportunity to comment on the application by the Parties to the Nauru Agreement (PNA)⁵⁷ for Marine Stewardship Certification (MSC) of skipjack tuna (*Katsuwonus pelamis*) taken in unassociated and log set purse seine fisheries (the PNA Skipjack Tuna Fishery).

As input to the MSC assessment process, WWF has conducted a preliminary assessment of the PNA Skipjack Tuna Fishery against the Default Assessment Tree of the MSC Fisheries Assessment Methodology (FAM, v.2, 31 July 2009). While WWF has not attempted to score the Fishery against individual indicators our assessment suggests that the Fishery may score below the 80 Scoring Guidepost for many indicators and that, potentially, the fishery could fail to meet Scoring Guidepost 60 for some indicators. It is our view, however, that many of our concerns may be addressed through the provision of more information and details, particularly in relation to sub-regional and domestic management programs.

WWF has also provided comments on the role of RFMOs in the management of fisheries under MSC assessments, the unit of certification in the PNA Skipjack Tuna Fishery and other issues relevant to the certification of the fishery that are not explicitly, or adequately in WWF's view, covered by the FAM. We plan to take up some of these issues directly with the MSC.

RFMO management

WWF has long held that the tuna RFMOs are not performing well enough to ensure sustainable management of tuna stocks. They have failed to adopt precautionary conservation measures based on precautionary limit and target reference points for the tuna stocks under their responsibility and have failed to adopt comprehensive and consistent best practices to mitigate bycatch associated with tuna fishing. Some of the tuna RFMOs have failed to conduct the performance reviews that they agreed to conduct at a joint meeting in Kobe, Japan. Those that have conducted a performance review have received scathing assessments. The WCPFC is one of those that have not conducted the agreed review. This is not the fault of the staff of the RFMOs but of the governments of fishing nations that have adhered to the treaties establishing the RFMOs individually, collectively and even collaboratively through sub-regional agreements.

⁵⁷ The PNA countries are: Federated States of Micronesia, Kiribati, the Marshall Islands, Nauru, Palau, Papua New Guinea (PNG), the Solomon Islands and Tuvalu

UNIT of Certification

WWF's understanding of the proposed unit of certification, based on the Client's Confirmation of Certificate Sharing (PNA, 2010a) is that it applies to the fishery for skipjack tuna by purse seine but includes only those sets during a given fishing trip on unassociated schools and logs, by vessels managed under the Vessel Day Scheme of the Parties to the Nauru Agreement (PNA VDS) and licensed domestically, through the Federated States of Micronesia Arrangement or, bilaterally, by the PNA and operating outside of the PNA archipelagic waters. Based on this definition, vessels operating in the waters of PNA members under the US Multilateral Treaty are not included in the unit of certification. It is also our understanding that the fishery relates only to catch taken within the EEZs of the PNA Group, excluding the archipelagic waters of PNG and the Solomon Islands.

The MSC announcement for the assessment of the fishery indicates that, in 2007 and 2008, catches of skipjack tuna in the PNA Skipjack Tuna Fishery were 438,000 t and 442,000 t respectively on unassociated sets, and 270,000 t and 125,300 t on log sets. WWF assumes that these figures relate only to catch taken inside the EEZs of the PNA Group and exclude catch taken in the archipelagic waters of PNG and the Solomon Islands.

WWF understands that the definitions of unassociated school sets and log sets are as follows.

Unassociated school sets are sets on free swimming schools of tuna or schools associated with baitfish.

Log sets are defined as sets on a natural object, where no artificial attachment (buoys, bamboo rafts, lights, beacons and nets) has been added.

WWF also understands that the PNA Skipjack Tuna Fishery will not include sets made on whales and those whales and large sharks are excluded from the definition of 'natural object' in the definition of log set. The analysis contained in this Submission relies on the above definitions of set types included in the Fishery.

WWF considers that there remain potential difficulties associated with confirming the two set types that comprise the PNA Skipjack Tuna Fishery. For example, at what distance from a FAD is a school of fish considered to be 'unassociated'? Scientific studies suggest that tuna schools are thought to be associated with FADs at considerable distances and many FAD closures consider a one nautical mile distance from a FAD to constitute an unassociated school (Harley, *et al.*, 2009a). WWF believes that the definition of an unassociated set for the purposes of the MSC certification should specify the minimum distance from a FAD that defines an unassociated set.

WWF understands that there are practical difficulties involved in distinguishing between drifting FADs and logs and unless there is reliable and validated observer coverage of 100% of sets there remains the potential for misidentification of set type.

Further, the spatial definition of the unit of certification, which excludes catch taken in the high seas and in archipelagic waters, adds a further burden on the Client in relation to ensuring that procedures are in place to ensure that product from skipjack catch taken by fisheries in waters under the Unit of Certification can be differentiated from catch taken elsewhere.

Finally, the fact that FAD sets are likely made on any given fishing trip along with unassociated and log sets inextricably ties these three purse seine set types together, i.e. they are not separate fishing activities but inseparable fishing activities in the purse seine fishery. However, if observer coverage can ensure coverage of each set and if on-board operational procedures can ensure differentiation of catch from log and unassociated sets from catch from FAD sets, then it may be possible to overcome these concerns.

In WWF's view these issues present, at the very least significant, but potentially surmountable, traceability issues for both fishery certification and chain of custody certification. It is our view that, if these issues are not addressed, they could potentially compromise certification of the Fishery. WWF believes that these issues need to be clarified in the Certifying Body's assessment of the fishery so as to facilitate appropriate consideration of the impacts of the fishery and the capacity of the PNA Group to differentiate certified product from other catch.

Preliminary assessment

Principle 1: Target Species

WWF notes the MSC has confirmed that Principle 1 applies to the whole of the fish stock exploited by the fishery:

“The Standards Council agreed that Principle 1 applies to the whole of the fish stock(s) exploited by the fishery seeking certification. So a fishery could only pass if the whole fish stock(s) meet this standard, and it would not pass if the standard was not met irrespective of who (e.g., the fishery seeking certification or other fisheries) was responsible for the stock not meeting the standard (MSC,2010a)”.

Stock status: 1.1.1: The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing

SG60	SG80	SG100
It is <u>likely</u> that the stock is above the point where recruitment would be impaired.	It is <u>highly likely</u> that the stock is above the point where recruitment would be impaired. The stock is at or fluctuating around its target reference point.	There is a <u>high degree of certainty</u> that the stock is above the point where recruitment would be impaired. There is a <u>high degree of certainty</u> that the stock has been fluctuating around its target reference point, or has been above its target reference point, <u>over recent years</u> .

Stock assessment

The last stock assessment for skipjack tuna was conducted by the Secretariat of the Pacific Community (SPC) on behalf of the Western and Central Pacific Fisheries Commission (WCPFC) in 2008 and a new stock assessment will be undertaken in 2010.

The stock assessment model covers the time period 1972-2004 and uses MULTIFAN-CL.

SPC regards the equatorial model for skipjack tuna, which includes the PNA Skipjack Tuna Fishery, as more robust than that for the WCPO as a whole, since it is not sensitive to the assumptions relating to catchability in the pole and line fisheries applied in the northern part of the WCPO and the large tagging data set and associated information on tag reporting rates for the equatorial region is relatively informative regarding stock size in the eastern and western regions of the equatorial model (Langley and Hampton, 2008).

The equatorial region is divided into two components: the western region (Area 5), in which the bulk of the PNA Skipjack Tuna Fishery operates; and the eastern region (Area 6) which includes a relatively small area of the PNA Skipjack Tuna Fishery.

The 2008 stock assessment indicates that the skipjack tuna stock is not in an overfished state nor is overfishing occurring. These results are generally consistent with those for the previous three assessments in 2002, 2003 and 2005.

Fishing Mortality(F)_{current}/ F_{MSY} is estimated at 0.26 and Biomass(B)_{current}/ B_{MSY} is estimated at 2.99. There is a zero probability that $B_{current}/B_{msy}$ is anywhere close to 1.0 and on this basis the stock is nowhere near an overfished state.

The conclusions of the model appear relatively robust, at least within the statistical uncertainty of the current assessment

However, the tagging data that informs the equatorial model was collected in the mid-1990s and there has, therefore, been no direct information on the level of absolute biomass from the equatorial component of the stock for more than a decade. There is a need to integrate the data from the recent tagging programmes in PNG and the Solomon Islands into the stock assessment as a matter of urgency (Langley and Hampton, 2008).

There is a high degree of certainty that the stock is above the point where recruitment would be impaired.

Recruitment showed an upward shift in the mid-1980s and is estimated to have remained at a higher level since that time. Recent recruitment is estimated to be at historically high levels but is poorly determined due to limited observations from the fishery

Recruitment in the eastern part of the equatorial region is more variable than in the west with recent peaks in recruitment following strong El Nino events reflecting the strong relationship between higher stock abundance/availability and environmental conditions in the eastern region.

Biomass trends are driven largely by recruitment

Recruitment variability, influenced by environmental conditions, will continue to be the primary influence on stock size and fishery performance (Langley and Hampton, 2008).

WWF considers that the stock assessment provides a high level of confidence that the skipjack tuna stock remains at a high level of productivity and has a low probability of recruitment overfishing.

Reference points

The WCPFC has not adopted formal reference points however stock assessments conducted by SPC use B_{MSY} and F_{MSY} as limit reference points and provide advice to the Commission in this context. While there is no target reference point in place for the WCPFC skipjack tuna fishery, the FAM (paragraph 6.2.10) states that for well managed stocks that do not have target reference points the stock will still need to be assessed in terms of the overall outcome objectives: i.e. for SG80 the stock status is highly likely to be above the point at which there is an appreciable risk that recruitment is impaired, and will be at or around a level consistent with B_{msy} . The stock assessment indicates that this is the case for the skipjack stock.

However, WWF believes that it is important that the WCPFC formally adopt target reference points. In 2009 a special workshop on reference points was held by the WCPFC Scientific Committee’s Methods Specialist Working Group. It is expected that the Scientific Committee will make recommendations on appropriate provisional limit reference points for the key target species to the WCPFC in 2010. The Commission’s decisions on reference points will also take into account the outcomes of the Workshop on Management Objectives to be held in 2010. WWF notes, however, that reference points have been under consideration in the WCPFC since 2006 and, that while the Scientific Committee may make recommendations to the Commission in 2010 on appropriate reference points, there can be no certainty that the Commission will formally adopt them.

Reference points 1.1.2: Limit and target reference points are appropriate for the stock.

SG60	SG80	SG100
<p>Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.</p>	<p>Reference points are appropriate for the stock and can be estimated.</p> <p>The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.</p> <p>The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome.</p> <p>For low trophic level species, the target reference point takes into account the ecological role of the stock.</p>	<p>Reference points are appropriate for the stock and can be estimated.</p> <p>The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of relevant precautionary issues.</p> <p>The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome, or a higher level, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.</p>

As discussed above, the WCPFC has not adopted formal limit or target reference points. The WCPFC’s Scientific Committee’s advice is, however, provided in the context of default reference points that are based on justifiable and reasonable practice. In WWF’s view the question that must be resolved in relation to this indicator is whether the reference points used in providing stock assessment advice, but not formally adopted by the WCPFC for the purposes of taking management action, can be regarded as constituting limit and target reference points. To answer this question WWF has considered the advice in the FAM and in MSC *Policy Advisory 12: Further Guidance on Scoring Reference Points in Principle 1* (MSC, 2010b).

The FAM defines a reference point as “Biological reference points; Stock Status Reference Points used to define management action in response to stock status”. However, the FAM states, in relation to indicator 1.1.2, that (our emphasis added):

“This supplementary performance indicator measures the appropriateness of the target and limit reference points used to assess stock status.” (paragraph 6.2.16)

This suggests that the use of default reference points by the SPC might be considered adequate for the purposes of assessment against this indicator. However, the FAM goes on to say:

The MSC standard at SG80 shall be interpreted “to determine whether limit reference points, set by management, are above the level at which there is an appreciable risk of impairing reproductive capacity, and that target reference points are set a level ‘consistent with Bmsy’ “ (paragraph 6.2.17); and

“It is assumed that all management systems will have reference points. Even if these are not stated explicitly they should be implicit within the decision rules or management procedures, and the fishery should be assessed on these implicit reference points. For example...a management system that uses only a limit reference point will have some implicit acknowledgement of targets” (paragraph 6.2.21).

More recent advice from the MSC appears to reinforce the view that target and limit reference points in the MSC standard are considered to be those that have been adopted by management. MSC’s recent Policy Advisory (MSC, 2010b) states that for the purposes of 1.1.2 reference points shall be interpreted as “reference points used for managing the fishery – i.e. set by management and implemented as part of the management plan”.

The WCPFC’s report to the second joint meeting of Tuna RFMOs in 2009 stated that “Management decisions to date have been based on maintaining stocks at or above MSY-based reference points”. This is consistent with provisions of the WCPFC Convention, specifically Article 5(b) and Article 6.

Article 5(b) requires the Commission to:

“ ensure that such measures are based on the best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield, as qualified by relevant environmental and economic factors, including the special requirements of developing States in the Convention Area, particularly small island developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global;”

Article 6 of the Convention requires that the Commission apply the guidelines of Annex II of the United Nations Fish Stocks Agreement (Guidelines for the Application of Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks). Point 7 of Annex II reads as follows:

“The fishing mortality rate which generates maximum sustainable yield should be regarded as a minimum standard for limit reference points. For stocks which are not overfished, fishery management strategies shall ensure that fishing mortality does not exceed that which corresponds to maximum sustainable yield, and that the biomass does not fall below a predefined threshold. For overfished stocks, the biomass which would produce maximum sustainable yield can serve as a rebuilding target.”

WWF believes that these provisions of the Convention constitute implicit target and limit reference points that are, in the absence of explicitly determined stock reference points, the default generic indicators to be applied by the Commission.

Given that the MSC has confirmed that Principle 1 applies to the whole of the fish stock exploited by the fishery (MSC 2010a), the onus for addressing Principle 1 indicators must fall, ultimately, on the WCPFC, which is responsible for management of the skipjack tuna stock fished in the PNA Skipjack Tuna Fishery. WWF believes that the adoption of explicitly determined limit and target reference points for skipjack tuna is a priority for the sustainable management of the PNA Skipjack Fishery.

Harvest strategy 1.2.1: There is a robust and precautionary harvest strategy in place

SG60	SG80	SG100
<p>The harvest strategy is <u>expected</u> to achieve stock management objectives reflected in the target and limit reference points.</p> <p>The harvest strategy is <u>likely</u> to work based on prior experience or plausible argument.</p> <p><u>Monitoring</u> is in place that is expected to determine whether the harvest strategy is working.</p>	<p>The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy <u>work together</u> towards achieving management objectives reflected in the target and limit reference points.</p> <p>The harvest strategy may not have been fully tested but monitoring is in place and <u>evidence</u> exists that it is achieving its objectives.</p>	<p>The harvest strategy is responsive to the state of the stock and is <u>designed</u> to achieve stock management objectives reflected in the target and limit reference points.</p> <p>The performance of the harvest strategy has been <u>fully evaluated</u> and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.</p> <p>The harvest strategy is <u>periodically reviewed and improved</u> as necessary.</p>

The harvest strategy for skipjack tuna includes monitoring, stock assessment and management action. There are no explicit harvest control rules. Monitoring of the stock is based on catch and effort data, length-frequency data and tagging data. The stock assessment has been discussed under 1.1.1.

The primary management action involves limitation of fishing effort via the PNA’s Vessel Day Scheme (VDS), which limits total days fished in the Exclusive Economic Zones (EEZs) of the PNA members to no greater than 2004 levels. In addition, from 1 January 2011 high seas pockets surrounded by the EEZs of PNA countries will be closed to purse seine fishing vessels licensed to fish in their waters. The closed high seas areas stretch from Palau and PNG in the west to Kiribati in the east, Marshall islands in the north and Tuvalu in the South and cover all high seas areas from 10°N to 20°S latitude and 170°E to 150°W longitude, equating to an area of 4,555,000 sq km. The WCPFC has also implemented capacity limits (driven by concerns for bigeye tuna (*Thunnus obesus*) and yellowfin tuna (*Thunnus albacares*)) that require members and cooperating non-members of the Commission to ensure that:

“the total capacity of their respective other commercial tuna fisheries for bigeye and yellowfin tuna, including purse seining that occurs north of 20°N or south of 20°S, but excluding artisanal fisheries and those fisheries taking less than 2,000 tonnes of bigeye and yellowfin, shall not exceed the average level for the period 2001-2004 or 2004” (Conservation and Management Measure (CMM) 2008-01, para. 39).

The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. As discussed above, the Convention for the WCPFC includes default target and limit reference points and the management objective for all target stocks is to maintain stocks at or above MSY-based reference points. While the harvest strategy has not been fully tested, the current stock assessment suggests that the existing monitoring and management arrangements are ensuring that the stock performs well against the default reference points and that the current harvest strategy is likely to work.

The absence of harvest control rules that provide for immediate and effective action to reduce exploitation rates in the PNA Skipjack Fishery, when and as required, is a serious concern to WWF.

Harvest control rules and tools 1.2.2: There are well defined and effective harvest control rules in place

<u>SG60</u>	<u>SG80</u>	<u>SG100</u>
<p>Generally <u>understood</u> harvest control rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.</p> <p>There is <u>some evidence</u> that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.</p>	<p>Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.</p> <p>The <u>selection</u> of the harvest control rules takes into account the <u>main</u> uncertainties.</p> <p><u>Available evidence indicates</u> that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.</p>	<p>Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.</p> <p>The <u>design</u> of the harvest control rules take into account a <u>wide</u> range of uncertainties.</p> <p><u>Evidence clearly shows</u> that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.</p>

The MSC defines harvest controls rules as: a set of well-defined pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points. The harvest strategy for the PNA Skipjack Tuna Fishery does not contain control rules.

While there are no formal control rules in place, there is a high degree of certainty that the stock has been well above its default limit reference points in recent years suggesting that the current approach is appropriate and effective in controlling exploitation to sustainable levels. Management mechanisms are in place through the PNA’s VDS to restrict exploitation rates further should the default limit reference points be approached and the WCPFC is moving to develop harvest control rules. WCPFC has shown itself to be capable of implementing management in response to scientific advice on stock status, for example, of bigeye and yellowfin tuna. However the effectiveness of this response is questionable and this underlines the importance of well defined harvest control rules to ensure a timely and adequate response.

As noted in relation to Indicator 1.2.2, the lack of well-defined harvest control rules for the PNA Skipjack Fishery is a serious concern to WWF.

Information / monitoring 1.2.3: Relevant information is collected to support the harvest strategy

SG60	SG80	SG100
<p>Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</p> <p>Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.</p>	<p>Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.</p> <p>Stock abundance and fishery removals are <u>regularly monitored at a level of accuracy and coverage consistent with the harvest control rule</u>, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.</p> <p>There is good information on all other fishery removals from the stock.</p>	<p>A <u>comprehensive range</u> of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available.</p> <p><u>All information</u> required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent <u>uncertainties</u> in the information [data] and the robustness of assessment and management to this uncertainty.</p>

There is a comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information) available. The stock assessment (Langley and Hampton, 2008) identifies any inherent uncertainties. One specific action that needs to be addressed is the incorporation of recent tagging data into the stock assessment. It is understood that this will occur in the 2010 stock assessment and that information on regional migration patterns will also be incorporated at that time. There is generally good information on other fishery removals from the stock, however better data are required for the Philippines and Indonesian fisheries (Langley and Hampton, 2008). The WCPFC is conducting an Indonesian Philippine Data Collection Project in order to improve the data from these fisheries.

The absence of control rules is also an issue that must be considered against this indicator, however WWF has addressed this specific concern under 1.2.3.

WWF is particularly concerned about the status of the data from the skipjack fisheries in the Philippines and Indonesian fisheries and the potential implications of the uncertainty about this catch for the assessment of the overall skipjack tuna stock.

Assessment of stock status 1.2.4: There is an adequate assessment of the stock status

SG60	SG80	SG100
<p>The assessment estimates stock status relative to reference points.</p> <p>The assessment identifies major sources of uncertainty..</p>	<p>The assessment is appropriate for the stock and for the harvest control rule, and is evaluating stock status relative to reference points.</p> <p>The assessment takes uncertainty into account.</p> <p>The assessment of stock status is subject to peer review.</p>	<p>The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.</p> <p>The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.</p> <p>The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.</p> <p>The assessment has been <u>internally and externally</u> peer reviewed.</p>

The MULTIFAN stock assessment model is suitable for the stock and is age (16 age-classes) and spatially structured. The catch, effort, size composition and tagging data used in the model are classified by 24 fisheries and quarterly time periods from 1972-2007. As noted above there is an urgent need to integrate the data from the recent tagging programmes in PNG and the Solomon Islands into the stock assessment (Langley and Hampton, 2008).

The stock assessment takes uncertainty into account and evaluates stock status relevant to default reference points in a probabilistic way. WWF considers, that for the purposes of the stock assessment, it is adequate that stock assessment results are reported by the SPC against default reference points and that the WCPFC Scientific Committee provides management advice based on those reference points.

Currently the stock assessment conducted by SPC is subject to peer review by scientists from WCPFC member countries within the Scientific Committee framework. There is currently no established process for regular external peer review of the SPC stock assessments. A recent independent review of the WCPFC's transitional science structure and function has recommended that the Commission implement a periodic external peer review process on all contracted assessments of the Commission, including reciprocal review with other tuna RFMOs. This approach has been adopted by the WCPFC with the bigeye tuna stock assessment to be the first to be subject to external review.

WWF reiterates that there are no harvest control rules in the fishery against which to assess the effectiveness of the stock assessment. Further, there is an urgent need to integrate the data from the recent tagging programmes in PNG and the Solomon Islands into the stock assessment.

Principle 2: Ecosystem

WWF notes the MSC has confirmed that Principle 2 applies as follows:

“The Standards Council agreed that Principle 2 applies to the fishery (a combination of stock(s)/gear/practice) seeking certification, so long as the fishery as a whole is conducted in a way that does not substantially undermine the objectives of Principle 2 across the whole range of the fish stock(s). This was intended to allow Principle 2 to be applied across the full spatial range of the fish stock(s) involved, and the relevant ecological structure and processes, and not be limited to just the local effects of the fishery seeking certification (MSC, 2010a)”.

Retained Species Status 2.1.1: The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species.

SG60	SG80	SG100
<p>Main retained species are <u>likely</u> to be within biologically based limits or if outside the limits there are <u>measures</u> in place that are <u>expected</u> to ensure that the fishery does not hinder recovery and rebuilding of the depleted species.</p> <p>If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.</p>	<p>Main retained species are <u>highly likely</u> to be within biologically based limits, or if outside the limits there is a <u>partial strategy</u> of <u>demonstrably effective</u> management measures in place such that the fishery does not hinder recovery and rebuilding.</p>	<p>There is a <u>high degree of certainty</u> that retained species are within biologically based limits.</p> <p>Target reference points are defined and retained species are at or fluctuating around their target reference points.</p>

Retained Catch Profile in the PNA Skipjack Tuna Fishery

Catch of non-target retained species varies according to whether sets are associated (in the case of the PNA Skipjack Tuna Fishery, the relevant associated sets are log sets) or unassociated (i.e. free swimming schools). Molony (2007) estimated non-target catch (i.e. apart from skipjack, bigeye and yellowfin tuna) to be around 1.8% by weight of the total purse seine catch in the WCPFC Convention Area. However, this seemingly small percentage needs to be considered in the context of the quantity of the purse seine catch. The provisional purse seine catch of target species in the WCPO in 2008 was nearly 1.8m t implying that retained catch of non-target species (i.e. other than skipjack, bigeye and yellowfin tuna) may be around 36,000 t.

Langley, Williams and Hampton (2008) analyzed fishery observer data from the equatorial purse-seine fishery for the period 2001–2006 to determine the species composition of catches (by weight) from unassociated (free-school) and associated (log, drifting FAD and anchored FAD) sets (see Figure 1).

Apart from skipjack tuna, yellowfin and bigeye tuna are clearly the main species taken in the purse seine fishery. Langley, Williams and Hampton (2008) found that:

All set types were dominated by catches of skipjack tuna and yellowfin, with the two species accounting for 99% of the unassociated sets and 91% of the catch from the associated set types.

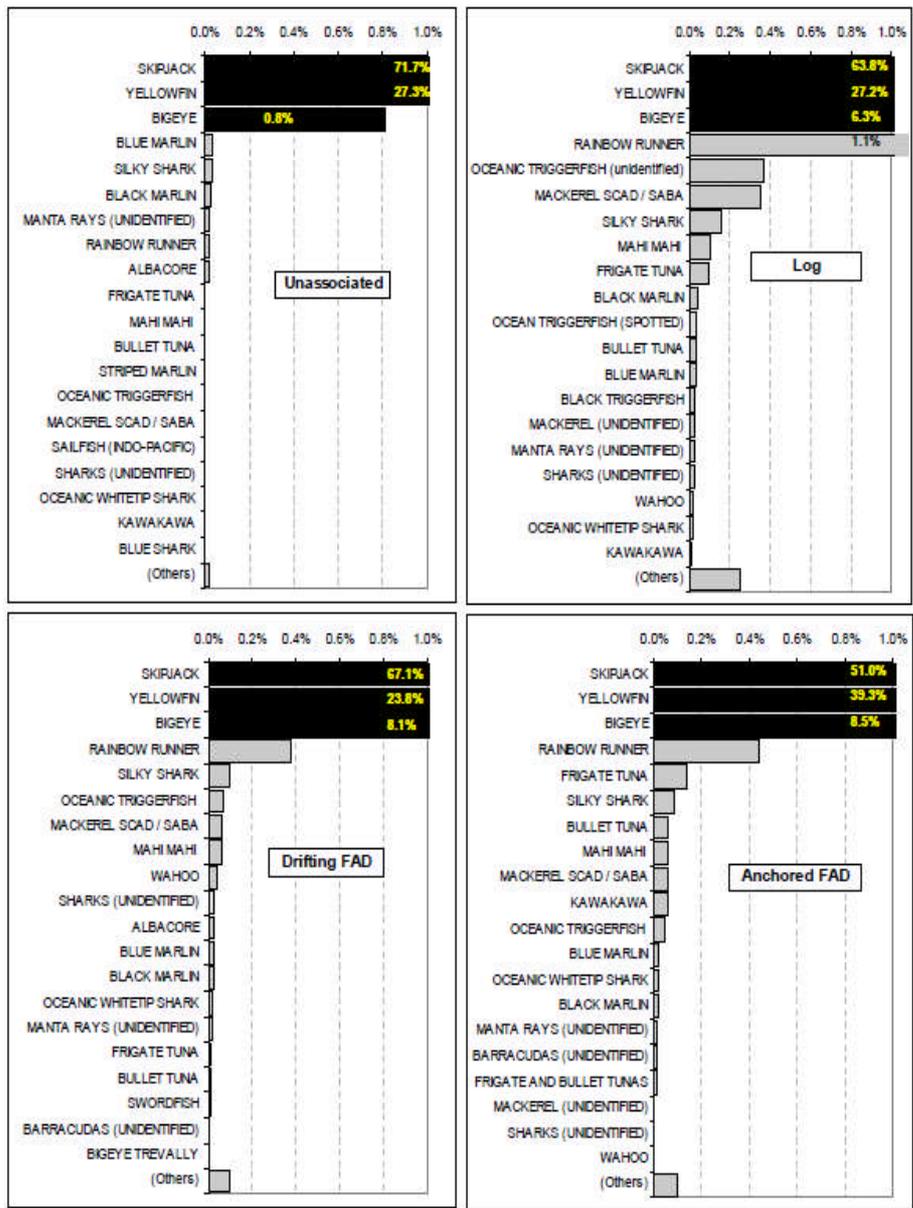
Bigeye tuna represented less than 1% of the catch from unassociated sets and 6–9% of the catch from associated set types which was comprised mainly of juvenile fish.

Juvenile yellowfin represented a significant component of the yellowfin catch from associated sets, while catches from unassociated sets were dominated by adult fish.

Other species represented less than 0.2% of the catch from unassociated sets, and only 1–2% of the catch from associated sets, of which rainbow runner (*Elegatis bipinnulata*) is the most significant component. The remainder of the catch from associated sets is comprised of surface-orientated species that are principally oceanic in habitat (e.g. mackerel scad (*Decapterus macarellus*), frigate tuna (*Auxis thazard*) and mahi mahi (*Coryphaena hippurus*)) or occupy both reef and oceanic habitats (e.g. rainbow runner; oceanic triggerfish (Balistidae), silky shark (*Carcharhinus falciformis*) and oceanic whitetip shark (*C. longimanus*)).

Log sets accounted for a higher proportion of bycatch than the other associated set types (drifting and anchored FAD sets).

Figure 1: Percentage composition of the 20 main species caught by unassociated, log-drifting FAD and anchored FAD purse-seine sets (by weight) in the WCP-CA determined from recent observer data (2001–2006). Number of sets sampled is 7605, 3159, 3236 and 4153 respectively.



Source: Langley, Williams and Hampton (2008).

The species/species groups identified in Figure 1 as being taken as bycatch in log sets are listed in Table 1 along with estimates, derived from Kirby and Hobday (2007), of the proportion of each species retained or discarded from log sets.

The FAM advises that species that make up less than 5% of the catch would not necessarily be considered “main retained species for the purposes of Principle 2 but that such species may need to be assessed against indicators 2.1.1, 2.1.2 and 2.1.3 if considered to be particularly vulnerable (MSC, 2009).

Table 1: Retention and discards of bycatch in log sets in purse seine fisheries of the WCPO

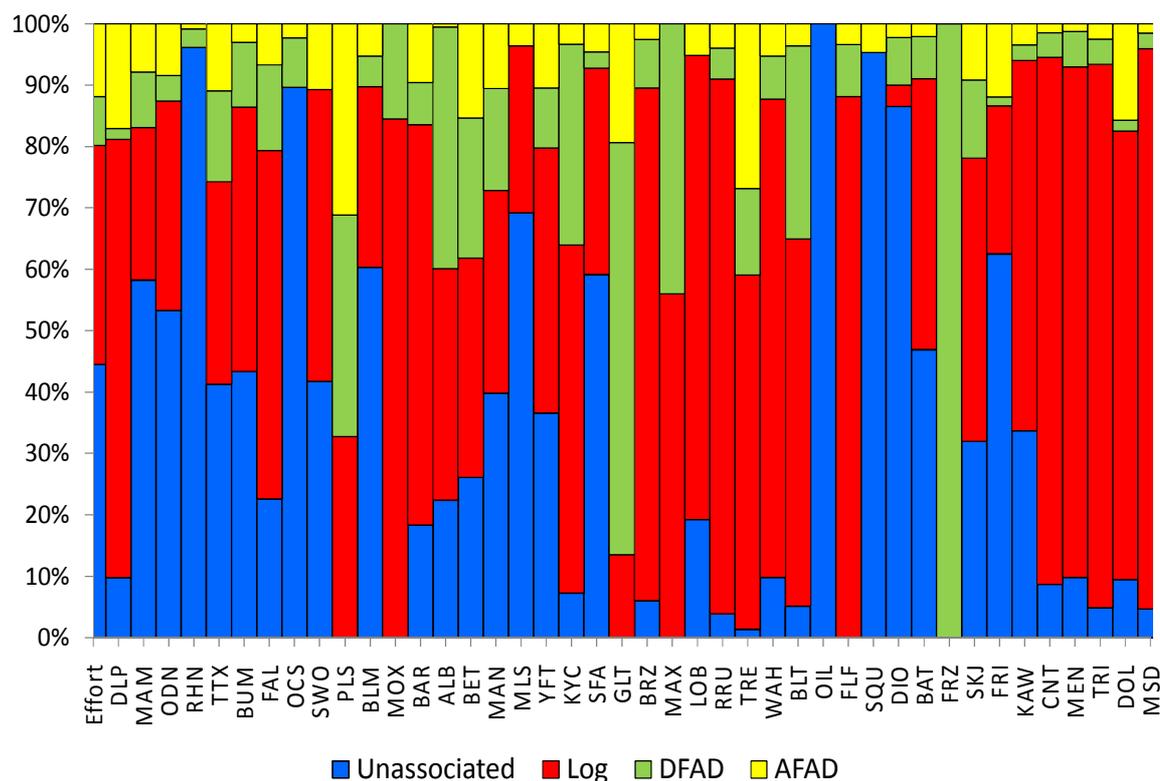
Species/Group	Discarded (%)	Retained (%)
Bigeye tuna	5	95
Rainbow runner	81	19
Ocean triggerfish (unidentified)	No data	No data
Mackerel scad	86	14
Silky shark ¹	30	70
Mahi mahi	54	46
Frigate tuna	55	45
Black marlin (<i>Makaira indica</i>)	No data	No data
Ocean triggerfish (spotted) (<i>Canthidermis maculatus</i>)	67	33
Bullet tuna (<i>Auxis rochei</i>)	49	51
Blue marlin (<i>Makaira nigricans</i>)	63	37
Black triggerfish (<i>Melichthys niger</i>)	85	15
Mackerel (unidentified)	93	7
Manta rays (Unidentified)	95	5
Sharks (Unidentified)	50	51
Wahoo (<i>Acanthocybium solandri</i>)	44	56
Oceanic whitetip shark ¹	37	63
Kawakawa (<i>Euthynnus affinis</i>)	37	63

Sharks are regarded as retained if the fins are retained and the carcass discarded

Source: Langley, Williams and Hampton (2008) and Kirby and Hobday (2007)

Kirby (unpublished) has attributed fishing mortality by purse seine set type and ranked by productivity risk (Figure 2). Of the eight main bycatch species identified as taken in log sets in Figure 1, frigate tuna, spotted and black triggerfish, mahi mahi and mackerel scad are to the right of Figure 2 indicating relatively low risk. Silky shark is assessed as having the highest relative risk with bigeye tuna, yellowfin tuna and rainbow runner in the mid-range of risk.

Figure 2: Attribution of fishing mortality by set type for each species, ranked by high (left) to low (right) productivity risk score



Key species codes: bigeye tuna (BET), yellowfin tuna (YFT), silky shark (FAL), rainbow runner (RRU), oceanic triggerfish (spotted (CNT) and black (MEN)), mackerel scad (MSD), mahi mahi (DOL), frigate tuna (FRI)

Source: Kirby (unpublished)

The data in Figure 1 indicate that bigeye tuna taken in log sets and yellowfin tuna taken in both unassociated and log sets clearly meet the 5% criterion. Catch of these species by these methods should therefore be assessed against this indicator. In addition, while the catch of bigeye tuna on unassociated sets is very low, the catch is predominantly retained and, given the concerns about the status of the bigeye stock, WWF believes that bigeye taken in unassociated sets should also be considered as a main retained species.

The data in Figure 1 suggest that there are no other species retained from unassociated sets that need to be assessed against this indicator since the level of impact of the fishery on all bycatch species is very low.

The percentages of total catch of other non-target species in log sets are well below 5%. In addition Table 1 suggests that of the most common bycatch species (rainbow runner, unidentified oceanic triggerfish, mackerel scad, silky shark and mahi mahi and frigate tuna) only silky shark is retained in significant quantities. Figure 2 confirms that silky shark is likely to be at higher risk than the other retained species. Given the inherent vulnerability of sharks it is therefore proposed that silky shark be considered as a “main retained species”. The remainder of the bycatch species identified above will be considered as bycatch (i.e. discards) under indicators 2.2.1-2.2.3.

Bigeye and yellowfin tuna

Purse seine fisheries catch of bigeye and yellowfin is comprised mainly of juveniles of these species, well below the size of first reproduction and below the size that would maximize yield per recruit

As a result, the impacts of associated purse seine sets on bigeye and yellowfin tuna are out of proportion with catches (Molony, 2007)

Most capture of bigeye tuna by the purse seine fishery is reported from associated sets (logs and FADs) and significant catches of yellowfin tuna are reported from unassociated sets (Molony, 2007)

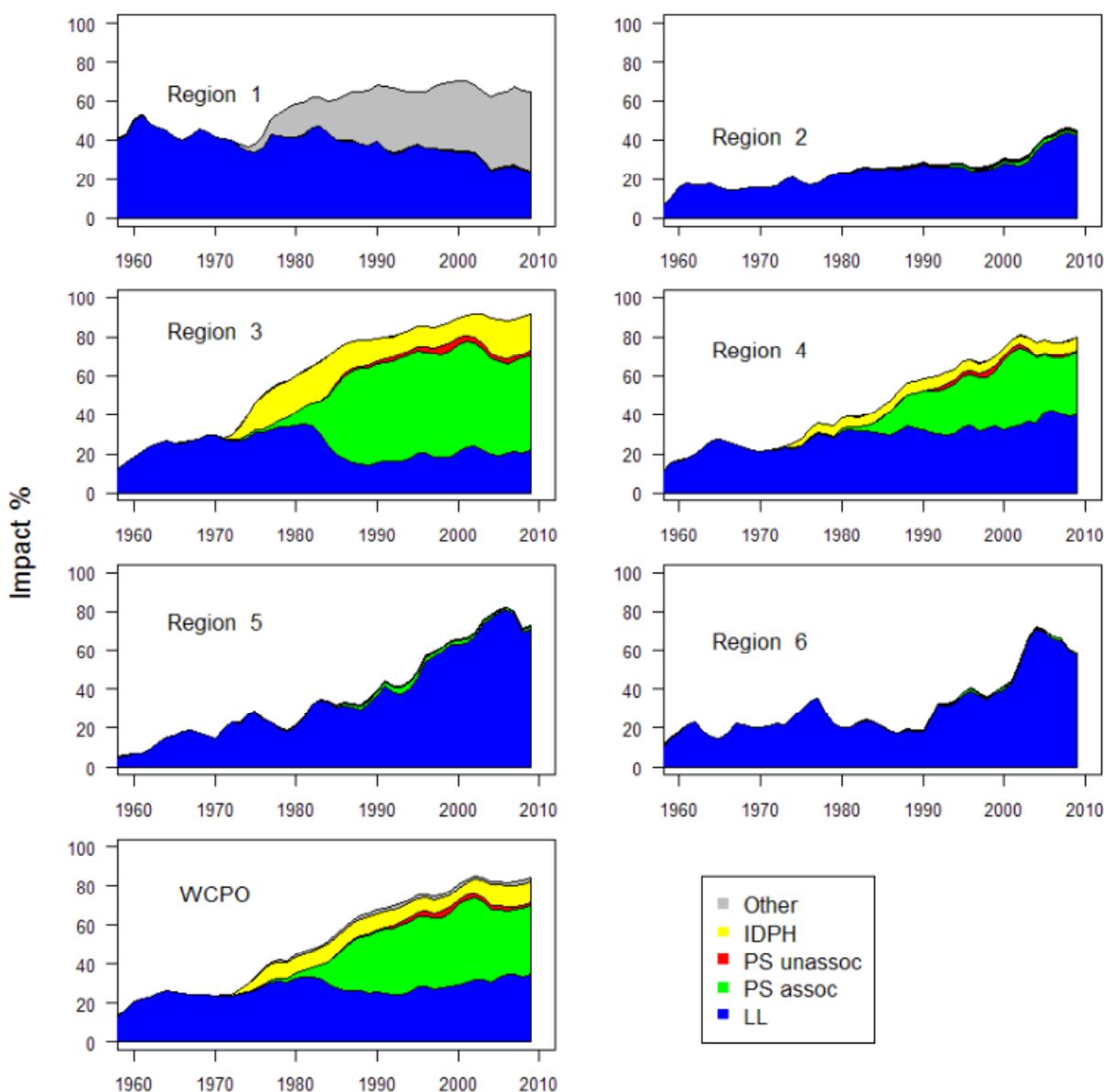
Catch-per-unit effort of bigeye tuna is low in unassociated sets while catch rates for log and drifting FAD schools are an order of magnitude higher (Williams and Terawasi, 2009)

Associated purse seine sets are estimated to have been responsible for reducing the total biomass of bigeye by more than 20% and of yellowfin by more than 10% (Molony 2007)

Harley *et al.* (2010) conclude that the purse seine and other surface fisheries have an equal or greater impact on the bigeye tuna biomass than longline fisheries and that the purse seine and Philippines/Indonesian domestic fisheries also have a substantial impact on region 3 and to a lesser extent in region 4 (the PNA waters are located in regions 3 and 4; see Figure 3).

A slightly lower proportion of yellowfin are reported from associated sets than from unassociated sets; however yellowfin from associated sets display a smaller size distribution than yellowfin captured from unassociated sets (Molony, 2007).

Figure 3. Estimates of reduction in spawning potential due to fishing (fishery impact =) by region and for the WCPO attributed to various fishery groups (base case model). LL = all longline fisheries; PH/ID = Philippines and Indonesian domestic fisheries; PS assoc = purse seine log and FAD sets; PS unassoc = purse seine school sets; Other = pole and line fisheries and coastal Japan purse-seine.



Source: Harley *et al.* (2010)

Note: Regions 3 and 4 include the waters of the PNA.

The WCPFC has recognized that a reduction in the purse seine catch of juvenile bigeye and yellowfin tuna is required to reduce the impact of the fishery on these stocks. This is reflected in CMM 2008-01 which, in summary:

requires Members and Cooperating non-members (CNMs) to ensure that the days fished by purse seine vessels on the high seas does not exceed 2004 levels or the average of 2001-2004;

reflects the PNA VDS which limits total days fished in the EEZs of PNA members to no greater than 2004; and closes the area bounded by 20°N and 20°S to fishing on FADs (natural and man-made) between 1 August and 30 September and requires the carriage of an observer during this time OR requires Members and CNMs to introduce a catch limit to reduce their catch by weight of bigeye tuna in the purse seine fishery in that area by a minimum of 10% relative to 2001-2004 average levels.

In addition to the WCPFC measures, PNA members recognized in 2009 the “serious impact on the bigeye stock from fishing by distant water longliners and purse seiners in the high seas and that high seas continue to provide a safe haven for IUU fishing”. The PNA members proposed further high seas purse seine closures (specifically to the high seas east of 170°E and between 10°N and 10S°) to the WCPFC meeting in December 2009. The WCPFC did not adopt this proposal and the PNA Group subsequently adopted the Koror Declaration in February 2010, which, expressing concern about the status of bigeye and yellowfin tuna and the increasing growth of capacity and effort in the region, closed off those additional high seas areas (PNA, 2010).

In 2009, the Scientific Committee of the WCPFC:

concluded that the *bigeye* stock is “in a slightly overfished state, or will be in the near future with high levels of overfishing occurring”;

noted “the continued high fishing mortality on juvenile bigeye due to associated purse seine sets and the fisheries of Indonesia and the Philippines”;

recommended (as in 2008) that a 30% reduction in fishing mortality from the 2001-2004 level was required in order to return fishing mortality to MSY levels;

advised that the management measures for bigeye tuna established in 2008 (for both the purse seine and longline fleets) will not achieve the targeted reduction in fishing mortality (Hampton and Harley, 2009). Some of the reasons identified for this were:

the increases in purse seine effort allowed under the measure and the increase in purse seine catchability (fishing mortality per unit of effort) that has occurred since 2001-2004, is not sufficiently offset by the FAD and high seas pocket closures to reduce purse seine fishing mortality below 2001-2004 average levels;

the exclusion of archipelagic waters which includes significant amounts of purse seine effort in Papua New Guinea and Solomon Islands from the measures which effectively quarantines an important source of fishing mortality on juvenile bigeye tuna; and

the net effect of the closure of high seas pockets may be an increase in bigeye fishing mortality compared to no closure of the pockets if effort transfers to other high seas areas, primarily to the east.

suggested that it is possible that a 34-50%(average of 43%) reduction in fishing mortality from 2004-2007 levels may be required to keep bigeye biomass above MSY levels (WCPFC Scientific Committee, 2009).

The revised stock assessment for bigeye tuna (Harley *et al.*, 2010), which will be considered by the WCPFC Scientific Committee in August 2010, concluded that:

current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the last decade;

overfishing is occurring in the bigeye tuna stock, but possible at a lower level than previously estimated;

bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and

MSY levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.

WWF is supportive of measures that reduce effort within the region while creating a tradable property right for those PNA countries. However, as demonstrated by the SPC and endorsed by the WCPFC Scientific Committee, the current measures in place under the VDS will not achieve the necessary reduction in bigeye tuna catch. The WCPFC's CMM 2008-01 will apply to only six (Republic of Korea, China, United States of America, Indonesia, Chinese Taipei, and Japan) of the 27 countries with recorded BET longline catch, since the majority caught less than 2,000 tonnes during the specified period of time and those countries will be allowed to catch up to but not exceed 2,000 tonnes of BET for each of the three years commencing in 2009. In theory, taking into account the 10% required reduction for the six countries, this measure could *increase* the total catch of BET by longline fleets to 120,583 tonnes, an increase of 32,097 tonnes on the 2001 – 2004 average or 38,122 tonnes greater than that recorded in 2007. This measure, to be effective, requires a catch limit (on those twenty-one countries that can currently catch up to 2,000 tonnes) that restricts those catches to each countries respective average catch between the years 2001 – 2004. If this element was included in the measure it would reduce the total catch to 85,571 tonnes which equates to 2,915 tonnes less than the average catch between 2001 – 2004 but would still result is a higher catch by 3,110 tonnes compared to 2007. In reality, at best this measure will deliver a reduction of around 3.3% on BET fishing mortality. Furthermore, China's catch limit will remain at 2004 levels for the years 2009 and 2010. However, this depends on whether an agreement can be reached to develop an arrangement for the attribution of Chinese catch taken as part of domestic fisheries in the EEZs of Pacific Island Countries. This clause could further compromise the effectiveness of the CMM (P. Trott in litt., July 2010).

WWF believes that the effort reduction measures in place under the VDS , and reflected in CMM 2008-01 are inadequate and that much greater reductions in vessel days are required in order to place bigeye tuna on a sustainable footing. Further should fishing effort from the closed high seas areas be transferred to archipelagic waters which are excluded from the CMM, additional pressure may be placed on bigeye tuna.

In 2009 the Scientific Committee:

advised that the *yellowfin* stock is not overfished and that overfishing is not occurring;

noted that exploitation rates for yellowfin differ between regions, that exploitation rates are highest in the western equatorial region (in the waters relevant to the PNA Skipjack Tuna Fishery under assessment) which accounts for around 95% of the yellowfin tuna catch and that the spawning biomass in that region is estimated to have declined to about 30% of the unexploited level; recommended that there be no increase in fishing mortality of yellowfin in the western equatorial region; and advised that the current management measure (CMM2008-01) was likely to achieve its objective of constraining levels of fishing mortality on the WCPO yellowfin tuna stock to the level experienced in either 2004 or the annual average of the period 2001-2004 (WCPFC Scientific Committee, 2009).

Silky shark

Catches of silky sharks are much higher on log sets than on unassociated schools (see Figure 1).

No formal stock assessment has been conducted for silky shark. Catch rate data suggest that there are considerable fluctuations in local abundances of silky shark. Median sizes of silky sharks captured by the longline and purse-seine fisheries of the WCPO have been relatively stable since at least the late 1990s. However, declines in median size of silky sharks have been observed in sub-equatorial areas of the western WCPO and Area 14 (10–20°N, east of 170°E). This suggests that some degree of local depletion may be occurring (Molony, 2007).

SPC has estimated from observer data that annual catches of silky shark in the purse seine fleet in the WCPFC Statistical Area ranged from 680t to 1360t between 2000 and 2007 (SPC, 2008). Catches of silky shark by the longline fishery in the same area were estimated to range between 5000 and 10,500t. However, a recent estimate of catches of sharks in the WCPO, including silky shark, based on shark fin trade data, has suggested that the actual catch levels may be up to two-three times higher than observer-based estimates (Clarke, 2009).

Silky shark features significantly in the global shark fin trade. Clarke *et al.* (2006) found that it contributed an estimated 3.5% of the identified fins in the Hong King fin auctions, making it third in importance after blue and hammerhead sharks.

A productivity-susceptibility analysis (PSA) (Nicol *et al.* 2009) of purse seine fisheries in PNG identified that silky shark was one of four species at highest risk from those fisheries.

Using SPC observer data from purse seine operations in Pacific Island Countries and Territories, Lack and Meere (2009) found silky shark was the most commonly identified species in each of the PNA member countries.

The World Conservation Union (IUCN) classifies this species as near threatened globally but it is assessed as vulnerable in the Eastern Central and Southeast Pacific and the Northwest and Western Central Atlantic (Camhi *et al.*, 2007)

In 2008, the WCPFC Scientific Committee noted, that on the basis of ERA results and other analyses, silky shark, along with oceanic whitetip shark, warranted further attention.

The WCPFC has had a CMM for sharks in place since 2006 (now CMM 2010-07). Silky shark is, since December 2009, included as a 'key' species in the previous iteration of this CMM (CMM 2009-04). This means that Members and CNMs are requested, not required, to include silky shark in annual catch and effort statistics reported to the WCPFC and that the Scientific Committee is required to provide a preliminary report to the Commission on the stock status of silky shark in 2010. In addition, the CMM imposes a shark fin:carcass weight ratio of 5% on WCPFC vessels. The WCPFC does not impose any direct catch limits on any species of sharks. However some PNA members, such as Palau, do not allow any retention of sharks taken in their waters. While this measure, if enforced, may remove the incentive for targeting of sharks it does not necessarily reduce mortality if the take of sharks is truly incidental.

Summary

WWF considers that the bigeye tuna stock is not within biologically based limits and the management measures in place are considered unlikely to ensure recovery or rebuilding of the stock. WWF believes that the PNA Skipjack Tuna Fishery setting on logs does not meet the minimum requirements for MSC certification given its impact on the bigeye stock.

On the basis of the information available, WWF considers that the PNA Skipjack Fishery on unassociated sets has a much lower impact on bigeye tuna stocks than does the log set fishery. However, given the status of the bigeye stock, WWF believes that there is a need for clear evidence that the level of take of bigeye tuna on unassociated sets does not hinder recovery and rebuilding of that stock.

Further, WWF notes that there is no assessment as to whether the silky shark stock is likely to be within biologically based limits. Should the preliminary shark assessment being undertaken by the SPC indicate that it is outside those limits, then there are currently no measures in place to ensure that the fishery does not hinder recovery and rebuilding of the species.

Retained species management strategy 2.1.2: There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species.

SG60	SG80	SG100
<p>There are measures in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p> <p>The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a partial strategy in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p> <p>There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.</p> <p>There is some evidence that the partial strategy is being implemented successfully.</p>	<p>There is a strategy in place for managing retained species.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work.</p> <p>There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring.</p> <p>There is some evidence that the strategy is achieving its overall objective.</p>

The management strategies for retained species have been discussed under Indicator 2.1.1 above. WWF's conclusions on this indicator mirror those for Indicator 2.1.1.

Retained species Information / monitoring 2.1.3: Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species.

SG60	SG80	SG100
<p>Qualitative information is available on the amount of main retained species taken by the fishery.</p> <p>Information is adequate to qualitatively assess outcome status with respect to biologically based limits.</p> <p>Information is adequate to support measures to manage main retained species.</p>	<p>Qualitative information and some quantitative information are available on the amount of main retained species taken by the fishery.</p> <p>Information is sufficient to estimate outcome status with respect to biologically based limits.</p> <p>Information is adequate to support a partial strategy to manage main retained species.</p> <p>Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).</p>	<p>Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.</p> <p>Information is sufficient to quantitatively estimate outcome status with a high degree of certainty.</p> <p>Information is adequate to support a comprehensive strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.</p> <p>Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.</p>

There is quantitative information available from logbooks and observer records and from specific research projects to estimate the amount of the main retained species (bigeye tuna, yellowfin tuna and silky shark) taken by the fishery. There are stock assessments for bigeye and yellowfin tuna and preliminary advice on stock status of silky shark will be available in 2010. There are management strategies in place for bigeye and yellowfin tuna. These strategies, which are aimed at reducing effort, should in theory also act as a partial management strategy for other retained species such as silky sharks. However, to date the strategies have not delivered a reduction in fishing effort. The only other strategy that has relevance to silky shark is the CMM for sharks that essentially requires Members and CNMs to encourage their fishers to return live sharks, that are not utilized, to the water and imposes a maximum fin:carcass ratio of 5% to all sharks retained. Information has been collected on catch, life status and the fate of silky sharks through observer programs. However, WWF notes that there is evidence that observer-based estimates of catch of silky shark may substantially understate catch (Clarke, 2009). Further,

there is very little logbook data for shark catch and submission of shark catch data is not mandatory under the current CMM.

The collation and analysis of information on this species by the SPC under the proposed *Research Plan to Determine the Status of the Key Shark Species* (Clarke and Harley, 2010) may address this issue. However, until such time as the SPC completes that analysis, WWF believes that it is not possible to determine whether there is sufficient information to support a management strategy for silky shark.

Bycatch species: Status 2.2.1: The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups.

<p>Main bycatch species are likely to be within biologically based limits, or if outside such limits there are mitigation measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding.</p> <p>If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the bycatch species to be outside biologically based limits or hindering recovery.</p>	<p>Main bycatch species are highly likely to be within biologically based limits or if outside such limits there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.</p>	<p>There is a high degree of certainty that bycatch species are within biologically based limits.</p>
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As discussed under Indicator 2.1.1, the nature and extent of bycatch (discards) will vary according to whether the sets are unassociated or associated. Figure 1 demonstrates that the bycatch associated with unassociated sets is negligible. Figure 1 and Table 1 suggest that the main bycatch (discarded) species for the purposes of this indicator are rainbow runner, unidentified oceanic triggerfish, mackerel scad, mahi mahi and frigate tuna taken in log sets.

As discussed above, of these five main bycatch species frigate tuna, spotted and black triggerfish, mahi mahi and mackerel scad are considered to be at relatively low risk from purse seine fishing and rainbow runner is considered to be at medium risk. Black and blue marlin (*Makaira indica* and *M. mazara*) comprise a small proportion of the catch (around 0.05%) in both unassociated and log sets (Figure 1). Both species are considered relatively high risk (Figure 2) and should therefore be assessed as bycatch species.

No formal stock assessments have been conducted for frigate tuna, rainbow runner, mahi mahi, mackerel scad, any species of oceanic triggerfish or black marlin. Molony (2008) reports that:

a reduction in median size of rainbow runner in pooled purse-seine catches of the WCPO since approximately 2000/01 may give cause for some concern of the status of this species in the WCPO;

overall, while the biological and fishery data suggest that mahi mahi are likely to be robust to exploitation, the lack of region-specific information suggests a precautionary approach to exploitation until more robust information become available; and

very few black marlin are captured in the purse seine fisheries with catches being less than 300 t in all years since 1962. Black marlin is more commonly reported from associated sets. The status of black marlin is uncertain. Catch rate information suggests that the stocks are stable in the WCPO.

Molony (2008) reports that annual catches of blue marlin in the WCPO purse-seine fishery since 1990 have fluctuated between 200 t and 300 t per year with annual catches in the longline fleet exceeding 20,000 t since 2002. More than 92% of purse-seine sets in which blue marlin are reported are associated sets (logs, FADs, animals) (unpublished Observer Data reported in Molony, 2008). The most recent stock assessment for blue marlin was conducted in 2003 (Kleiber *et al.*, 2003), using MULTIFAN-CL, and concluded that the most pessimistic status of Pacific blue marlin is that the stock is close to being fully-exploited.

WWF considers that, while the status of these bycatch stocks is uncertain, the relatively low catches of these species in the purse seine fishery, particularly in comparison to the much higher relative impact of the longline fleet on species such as blue and black marlin, means that it is unlikely that the fishery would cause the bycatch

species to be outside biologically based limits or to hinder recovery. However, on the basis of the information available to it, WWF is does not believe it is possible to determine whether rainbow runner, mahi mahi, black marlin and blue marlin are highly likely to be within biologically based limits.

Bycatch species Management strategy: 2.2.2: There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.

SG60	SG80	SG100
<p>There are <u>measures</u> in place, if necessary, which are expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, for managing bycatch that is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery.</p> <p>There is <u>some objective basis for confidence</u> that the partial strategy will work, based on some information directly about the fishery and/or the species involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being implemented successfully.</p>	<p>There is a <u>strategy</u> in place for managing and minimising bycatch.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports <u>high confidence</u> that the strategy will work.</p> <p>There is some <u>evidence</u> that the strategy is achieving its objective.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring.</p>

There is no indication that any of the species identified are outside biologically based limits. As noted above, the catch of the main bycatch species represents a very small proportion of the catch and this reflects the relatively selective nature of the purse seine fishing gear.

The nature of the gear used in the unit of certification together with controls on the level of effort for target species through the VDS constitute a ‘measure’ that is considered likely to work to ensure that the fishery does not pose a risk of serious or irreversible harm to bycatch populations.

In 2005, the WCPFC adopted a Resolution on Non-target Species, which called on Members and CNMs to encourage their vessels to avoid the capture of all non-target fish species that are not retained (i.e. to avoid capture of species which are discarded) and to release discards promptly to the water unharmed. Resolutions of the WCPFC are not binding on the parties. Apart from this Resolution there are no management measures in place to control the take of the main bycatch species.

Clucas (1997) reports that in the WCPO rainbow runner and trigger fish are generally discarded alive. However, WWF has been unable to access information to confirm the life status and post-release survival of the main species of discards. Therefore the effectiveness of the WCPFC Resolution, even if implemented, cannot be assessed. Further, WWF is not aware of any attempt to conduct an assessment of the extent to which the Resolution has been implemented or of the changes to fishing, retention or discard practices that have occurred in response to the Resolution. It is, therefore, not possible to conclude that there is any evidence that the partial strategy is being implemented successfully.

Overall, WWF is concerned that there are no management measures in place to minimize mortality of the main bycatch species in the PNA skipjack fishery.

Bycatch species Information / monitoring 2.2.3: Information on the nature and amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch.

SG60	SG80	SG100
<p><u>Qualitative information</u> is available on the amount of main bycatch species affected by the fishery.</p> <p>Information is <u>adequate</u> to <u>broadly understand</u> outcome status with respect to biologically based limits.</p> <p>Information is adequate to support <u>measures</u> to manage bycatch.</p>	<p><u>Qualitative information</u> and <u>some quantitative information</u> are available on the amount of main bycatch species affected by the fishery.</p> <p>Information is sufficient to estimate outcome status with respect to biologically based limits.</p> <p>Information is adequate to support a <u>partial strategy</u> to manage main bycatch species.</p> <p>Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).</p>	<p><u>Accurate and verifiable information</u> is available on the amount of all bycatch and the consequences for the status of affected populations.</p> <p>Information is <u>sufficient</u> to quantitatively estimate outcome status with respect to biologically based limits with a <u>high degree of certainty</u>.</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage bycatch, and evaluate with a high degree of certainty whether a strategy is achieving its objective.</p> <p>Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.</p>

Information on discards from the purse seine fleet is collected by observers and in logbooks. However, to date the information available from logbooks and observer coverage is limited. Nevertheless, there is sufficient information available to identify the main bycatch species. This is demonstrated through the ability of the WCPFC to publish estimates of encounter rates with bycatch species (WCPFC, 2010) and to conduct ecological risk assessments of bycatch species (Kirby 2006).

The information available is sufficient to support a partial strategy aimed at minimizing mortality of these species. The partial strategy includes the bycatch resolution mentioned above together with control on the level of target fishing effort through the VDS.

The PNA’s requirement for 100% observer coverage on purse seine vessels fishing in their zones and the implementation of the WCPFC’s requirement for 100% observer coverage on purse seine vessels from the beginning of 2010 will ensure that sufficient data is collected to detect any increase in risk to bycatch species.

ETP species Status 2.3.1: The fishery meets national and international requirements for protection of ETP species. The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species.

SG60	SG80	SG100
<p>Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species.</p> <p>Known direct effects are unlikely to create unacceptable impacts to ETP species.</p>	<p>The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.</p> <p>Direct effects are highly unlikely to create unacceptable impacts to ETP species.</p> <p>Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.</p>	<p>There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species.</p> <p>There is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species.</p>

The purse seine fisheries on logs and unassociated schools interact with ETP species listed on international conventions or variously protected under national legislation of the PNA Members.

Of the PNA members, only Palau, PNG and the Solomon Islands have acceded to the Convention for International Trade in Endangered Species of Wild Fauna and Flora (CITES); none are parties to the Convention for Migratory Species (CMS) but all participate in one or more of the Convention's Agreements or MOUs.

The ERA (Kirby, 2006) indicates that protected species of marine turtles, shark species, whales and dolphins have been recorded by observers as caught in the WCPO purse seine fisheries. ERA data suggest that only 1 record of an interaction with an unidentified sea bird exists in purse seine observer records and the WCPFC (2010) identifies the encounter rate with birds (unidentified) as rare (<1 per 100 sets) in tropical associated sets and identified no encounters in unassociated sets. Impacts on seabirds are therefore not considered relevant for the purposes of this assessment.

Turtles (CITES and CMS)

Olive ridley, leatherback, hawksbill, loggerhead, green and unidentified turtles have been recorded by observers in the purse seine fisheries. WCPFC (2010) identifies the encounter rate with each of these species as rare (i.e. <1 per 100 sets) in both tropical associated and unassociated sets. Williams *et al.* (2009) note that:

marine turtles are often found near logs and other drifting debris and are sometimes found within the purse seine net after a school of tuna has been encircled. Turtle mortalities in the purse seine fishery, when they occur, are due to drowning as a result of entanglement in the net, or in rare cases, to being crushed during the process of loading the net on-board;

observer data for the period 1995 to 2007 indicate that 71 turtles were encountered in 11,604 unassociated purse seine sets (incidence of 0.6%) and 60 turtles were encountered in 7,713 drifting log sets (incidence of 0.5%). This compared to incidences of 0.3% in drifting FAD sets, 0.8% in anchored FAD sets and 1.6% in animal-associated sets.

Sharks (CITES and/or CMS)

Shortfinned mako, longfinned mako, mako sharks unidentified, great white shark and whale shark have been recorded by observers in the purse seine fishery. WCPFC (2010) identifies the encounter rate with:

mako sharks as 'rare' (<1 per 100 sets) in tropical unassociated sets and 'seldom' (i.e.<1 per set) in tropical associated sets;

great white sharks as 'rare' in associated sets and records no interactions in unassociated sets;

whale sharks as 'seldom' in unassociated sets and 'rare' in associated sets;

While some purse seine sets are known to be made on whale sharks, these sets are not part of the PNA Skipjack Tuna Fishery.

Whales (CITES and Memorandum of Understanding for the Conservation of Cetaceans and their Habitats in the Pacific Islands Region)

Unidentified whales, false killer whale, killer whale, pygmy killer whale, other toothed whales and shortfinned pilot whale have been recorded by observers in the purse seine fishery. WCPFC (2010) identifies the encounter rate with all whale species as rare (<1 per 100 sets) in both associated and unassociated sets.

Dolphins (CITES and CMS Memorandum of Understanding for the Conservation of Cetaceans and their Habitats in the Pacific Islands Region)

Bottlenose dolphin, common dolphin, unidentified dolphins, Risso's dolphin, spinner dolphin and spotted dolphin have been recorded by observers in the purse seine fishery. WCPFC (2010) identifies the encounter rate with all dolphin species as 'rare' (<1 per 100 sets) in both associated and unassociated sets except for the common dolphin which is identified as 'seldom' (<1 per set) in associated sets.

Interactions with most ETP species in both associated and unassociated purse seine sets are assessed by the WCPFC as being 'rare' (<1 per 100 sets). Only for common dolphins and mako sharks in associated sets is the encounter rate assessed as seldom (<1 per set).

The available data suggest that there is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species. There is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species.

ETP species Management strategy 2.3.2: The fishery has in place precautionary management strategies designed to:

- meet national and international requirements;
- ensure the fishery does not pose a risk of serious or irreversible harm to ETP species;
- ensure the fishery does not hinder recovery of ETP species; and
- minimise mortality of ETP species.

SG60	SG80	SG100
<p>There are measures in place that minimise mortality, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species..</p> <p>The measures are considered likely to work, based on plausible argument (eg general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a strategy in place for managing the fishery’s impact on ETP species, including measures to minimise mortality, that is designed to be highly likely to achieve national and international requirements for the protection of ETP species.</p> <p>There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.</p> <p>There is evidence that the strategy is being implemented successfully.</p>	<p>There is a comprehensive strategy in place for managing the fishery’s impact on ETP species, including measures to minimise mortality, that is designed to achieve above national and international requirements for the protection of ETP species.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and a quantitative analysis supports high confidence that the strategy will work.</p> <p>There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is evidence that the strategy is achieving its objective.</p>

The WCPFC has in place two CMMs that apply specifically or generically to protected species taken as bycatch. These are:

CMM 2008-03 *Conservation and Management of Sea Turtles*

CMM 2010-07 *Conservation and Management for Sharks*

CMM 2008-03 requires that operators of purse seine vessels:

avoid encirclement of sea turtles and take practical measures to safely release encircled or entangled turtles;

release all sea turtles entangled in FADs or fishing gear;

if a turtle is entangled, stop net roll as soon as the turtle comes out, disentangle the turtle without injury and assist the recovery of the turtle before returning it to the water; and

record all incidents involving sea turtles.

CMM 2008-04 requires that Members and CNMs ‘encourage’ the release of live sharks that are caught incidentally and are not used for food or other purposes. However, it does not preclude the retention of protected species of sharks.

In addition, the WCPFC’s non-binding resolution on Bycatch (2005-03) specifies that fishers shall:

avoid to the extent practicable, the capture of all non-target fish species that are not to be retained; and

promptly release to the water unharmed any non-target fish species that are not to be retained, to the extent practicable.

Williams *et al.*, 2009 note that observers are instructed to inform the captain and crew of their obligations regarding protected and endangered species, but formal requirements regarding these obligations may not be specified in fishing access agreements.

These measures, taken together with the low impact that the fishery has on ETP species, and the ongoing and increasing collection of observer data in the fishery is considered to constitute a strategy that includes measures to minimize mortality. However there is no evidence of the effectiveness of either CMM 2008-03 or 2009-04.

WWF is concerned that there is no evidence that the management strategy, implemented under CMMs 2008-03 and 2009-04 is being implemented successfully. Further, WWF is concerned that there is no information available regarding the extent to which the fishing access agreements negotiated by the PNA members impose obligations relating to the minimization of interactions with protected species and the immediate release, without further harm, of any protected species taken during purse seine fishing operations in the Fishery.

ETP Species Information / monitoring 2.3.3: Relevant information is collected to support the management of fishery impacts on ETP species, including:

- information for the development of the management strategy;
- information to assess the effectiveness of the management strategy; and
- information to determine the outcome status of ETP species.

SG60	SG80	SG100
<p>Information is adequate to broadly understand the impact of the fishery on ETP species.</p> <p>Information is adequate to support measures to manage the impacts on ETP species</p> <p>Information is sufficient to qualitatively estimate the fishery related mortality of ETP species.</p>	<p>Information is sufficient to determine whether the fishery may be a threat to protection and recovery of the ETP species, and if so, to measure trends and support a full strategy to manage impacts.</p> <p>Sufficient data are available to allow fishery related mortality and the impact of fishing to be quantitatively estimated for ETP species.</p>	<p>Information is sufficient to quantitatively estimate outcome status with a high degree of certainty.</p> <p>Information is adequate to support a comprehensive strategy to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives.</p> <p>Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species.</p>

There is sufficient information to determine whether the fishery is a threat to the protection and recovery of ETP species and to measure trends in the impact of the fishery on these species. This is demonstrated through the ability of the WCPFC to publish estimates of encounter rates with bycatch species (WCPFC, 2010) and to conduct ecological risk assessments for such species (Kirby 2006).

The PNA Skipjack Tuna Fishery is now subject to 100% observer coverage and all purse seine vessels fishing on the high seas in the WCPFC Convention area and/or in both the high seas and EEZs of Member States must carry an observer.

However there are issues surrounding the currently available set of data on some ETP species. For example, Williams *et al.* (2009) note that, while observers can usually see whether marine turtles have been discarded prior to brailing and that information on encounter rates is therefore considered representative, it is often not possible to identify the species or its life status from the deck of the vessel and that “historical information on marine turtle species identification and life status is therefore quite poor for the purse seine fishery.” They go on to note that the current level of observer coverage is not sufficient to provide statistically robust estimates of total marine turtle encounters in WCPO purse seine fisheries. In addition, market data suggests that estimates of the take of protected species of sharks, based on existing observer data, may underestimate the catch. However the additional data collected from the introduction of 100% coverage will address this situation.

Habitats Status 2.4.1: The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function.

SG60	SG80	SG100
<p>The fishery is <u>unlikely</u> to reduce habitat structure and function to a point where there would be serious or irreversible harm.</p>	<p>The fishery is <u>highly unlikely</u> to reduce habitat structure and function to a point where there would be serious or irreversible harm.</p>	<p>There is <u>evidence</u> that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.</p>

The nature of the purse seine fishing method is such that it is highly unlikely to cause serious or irreversible harm to benthic habitats as no contact is made with the substrate during capture of surface schooling pelagic fish. WWF notes, however, that sub-ecosystems created around floating objects may provide important pelagic habitat for tunas and other species. Encircling these pelagic habitats and drawing a purse seine through them at least disturbs if not destroys these pelagic habitats. While the impact of such activity is unknown, WWF would like to see this issue considered in the assessment.

Habitats Management strategy 2.4.2: There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types.

SG60	SG80	SG100
<p>There are <u>measures</u> in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.</p> <p>There is some <u>objective basis for confidence</u> that the partial strategy will work, based on information directly about the fishery and/or habitats involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being implemented successfully.</p>	<p>There is a <u>strategy</u> in place for managing the impact of the fishery on habitat types.</p> <p>The strategy is mainly based on information directly about the fishery and/or habitats involved, and testing supports <u>high confidence</u> that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its objective.</p>

As noted above the fishery has little if any impact on bottom habitats. The reliance of the fishery on purse seine gear set on unassociated schools and logs removes the potential for any habitat impacts associated with the introduction of drifting or anchored FADs. This, together with the VDS, may constitute a strategy for managing the impact of the fishery on habitat types, depending on the impact on pelagic habitats. . While this strategy has not been tested specifically, experience in other purse seine fisheries suggests that there is a high level of confidence that impacts on habitat types can be managed through this strategy and that there is evidence that the strategy is being implemented successfully.

Habitats Information / monitoring 2.4.3: Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.

SG60	SG80	SG100
<p>There is a basic understanding of the types and distribution of main habitats in the area of the fishery.</p> <p>Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear</p>	<p>The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery.</p> <p>Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear.</p> <p>Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).</p>	<p>The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types.</p> <p>Changes in habitat distributions over time are measured.</p> <p>The physical impacts of the gear on the habitat types have been quantified fully.</p>

The fishery has limited impact on habitat types. There is widespread agreement that purse seine gear has minimal impacts on benthic habitats and operates only in the surface layer of the ocean habitat. There is a good understanding of the distribution of fishing effort across the equatorial Pacific. The nature of the fishery effectively precludes the need for information on most habitat types.

Ecosystem Status 2.5.1: The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function.

SG60	SG80	SG100
The fishery is <u>unlikely</u> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is <u>highly unlikely</u> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is <u>evidence</u> that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.

The trophic impact of removing large quantities of skipjack tuna has not been confirmed. A number of studies are currently being conducted by SPC that will clarify the trophic relationships in the Western and Central Pacific. These include: *Food web study of the Western and Central Pacific Ocean Tuna Ecosystem* and *Trophic structure and tuna movement in the cold tongue-warm pool pelagic ecosystem of the equatorial Pacific*. Until these studies are complete the ‘evidence’ required to underpin the 100 scoring guidepost is not available. However it is considered that, given that significant quantities of skipjack tuna have been removed from the WCPO over an extended period of time, it is reasonable to conclude that the purse seine fishery for skipjack tuna is highly unlikely to cause serious or irreversible harm to ecosystem function.

A previous study (Sibert *et al.*, 2006) found that the skipjack tuna biomass increased between 1950 and 2004 and that this is a potentially important ecosystem response predicted by simple ecosystem models and possibly attributable to a reduction in the biomass of other large predators. However this relationship remains uncertain. The analysis of major top-order predator stocks in the Pacific Ocean (bigeye tuna, yellowfin tuna, skipjack tuna, albacore tuna and blue shark) concluded that there is no impact on the trophic level of the population and that the apparent reduction in the trophic level of the catch is caused by the development of purse seine fisheries targeting smaller tunas, that is by “fishing through the food web”.

There is some evidence that this fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.

Ecosystem Management strategy 2.5.2: There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function.

SG60	SG80	SG100
<p>There are <u>measures</u> in place, if necessary, that take into account potential impacts of the fishery on key elements of the ecosystem.</p> <p>The measures are considered likely to work, based on <u>plausible argument</u> (eg, general experience, theory or comparison with similar fisheries/ ecosystems).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.</p> <p>The partial strategy is considered likely to work, based on <u>plausible argument</u> (eg, general experience, theory or comparison with similar fisheries/ ecosystems).</p> <p>There is <u>some evidence</u> that the measures comprising the partial strategy are being implemented successfully.</p>	<p>There is a <u>strategy</u> that consists of a <u>plan</u>, containing measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem.</p> <p>This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm.</p> <p>The measures are considered likely to work based on <u>prior experience</u>, plausible argument or <u>information</u> directly from the fishery/ecosystems involved.</p> <p>There is <u>evidence</u> that the measures are being implemented successfully.</p>

Management of exploitation of the skipjack tuna resource and, by default rather than explicitly, the impacts of the fishery on ecosystem structure and function relies on the VDS as implemented by the members of the PNA. As indicated under 2.5.1 there is some evidence to suggest that the current strategy may be sufficient to maintain ecosystem structure and function, although the potential impact of disturbance or destruction of pelagic sub-ecosystems needs to be considered. The relationships between the removal of juvenile bigeye and yellowfin tuna and ecosystem structure and function are not well understood. The impact of the fishery on bigeye tuna and yellowfin tuna through its impact on juveniles of these species is currently managed through FAD closures imposed by the WCPFC.

Ecosystem Information / monitoring 2.5.3: There is adequate knowledge of the impacts of the fishery on the ecosystem. Information is adequate to identify the key elements of the ecosystem (e.g. trophic structure and function, community composition, productivity pattern and biodiversity).

SG60	SG80	SG100
<p>Information is adequate to <u>identify</u> the key elements of the ecosystem (e.g. trophic structure and function, community composition, productivity pattern and biodiversity).</p> <p>Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but <u>have not been investigated in detail</u>.</p>	<p>Information is adequate to <u>broadly understand the</u> key elements of the ecosystem.</p> <p>Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but <u>may not have been investigated in detail</u>.</p> <p>The main functions of the Components (i.e. target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are <u>known</u>.</p> <p>Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred.</p> <p>Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).</p>	<p>Information is adequate to <u>broadly understand the key elements</u> of the ecosystem.</p> <p>Main <u>interactions</u> between the fishery and these ecosystem elements can be inferred from existing information, and <u>have been investigated</u>.</p> <p>The impacts of the fishery on target, Bycatch, Retained and ETP species and Habitats are identified and the main functions of these Components in the ecosystem are <u>understood</u>.</p> <p>Sufficient information is available on the impacts of the fishery on the Components <u>and elements</u> to allow the main consequences for the ecosystem to be inferred.</p> <p>Information is sufficient to support the development of strategies to manage ecosystem impacts.</p>

There is enough information collected to understand the impact of the fishery on many but not all of the key elements of the ecosystem and the function of these elements in the ecosystem are only broadly understood.

Principle 3: Governance and Policy

WWF notes the MSC has confirmed that Principle 3 applies as follows:

“The Standards Council agreed that Principle 3 applies to the fishery (a combination of stock(s)/gear/practice) seeking certification, except where elements of Principle 3 are required to achieve Principles 1 and 2. This was intended to allow Principle 3 to be applied flexibly to achieve Principles 1 and 2 (MSC, 2010a).”

Introductory comments

The totality of the management system of the PNA Skipjack Tuna Fishery includes:

the national arrangements/laws of PNA members;

the national arrangements/laws of the flag States of foreign purse seine vessels operating in the zones of PNA members;

Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest and its implementing agreement;

the Forum Fisheries Agency (FFA); and

the WCPFC.

Most, if not all, of the measures adopted by the FFA have now been translated into broader initiatives under the WCPFC. For example – vessel register, observers, VMS. For this reason, WWF considers that the FFA governance and policy does not need to be assessed separately under Principle 3. Further, since operations of foreign flagged vessels in the waters of the PNA Group are subject to the terms of their license agreements with PNA members it is considered that the national governance and policy arrangements of the flag States that operate in PNA water does not require separate assessment.

WWF believes that the national governance and policy arrangements of PNA members should be included in the assessment against Principle 3, since these arrangements will determine how capable these States are of delivering sustainable fisheries in accordance with MSC Principles 1 and 2. Ultimately, effective implementation of management measures, whether instigated by the PNA or the WCPFC, falls on national governments. WWF has not undertaken such an assessment across the eight PNA members and has restricted its assessment against Principle 3 in this submission to the governance and policy arrangements associated with the Nauru agreement and associated arrangements and declarations, and with the WCPFC. However, WWF believes the Certifying Body must consider the impact of national level governance and policies in conducting its assessment against Principle 3 and of the nature and effectiveness of the PNA members' participation in the WCPFC in particular.

Legal/Customary Framework 3.1.1: The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:

- Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2;
- Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and
- Incorporates an appropriate dispute resolution framework.

SG60	SG80	SG100
<p>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</p> <p>The management system incorporates or is subject by law to a <u>mechanism</u> for the resolution of legal disputes arising within the system.</p> <p>Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.</p> <p>The management system has a mechanism to <u>generally respect</u> the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.</p>	<p>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</p> <p>The management system incorporates or is subject by law to a <u>transparent mechanism</u> for the resolution of legal disputes which is <u>considered to be effective</u> in dealing with most issues and that is appropriate to the context of the fishery.</p> <p>The management system or fishery is attempting to comply in a timely fashion with binding judicial decisions arising from any legal challenges.</p> <p>The management system has a mechanism to <u>observe</u> the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.</p>	<p>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</p> <p>The management system incorporates or is subject by law to a <u>transparent mechanism</u> for the resolution of legal disputes that is appropriate to the context of the fishery and has been <u>tested and proven to be effective</u>.</p> <p>The management system or fishery acts proactively to avoid legal disputes or rapidly implements binding judicial decisions arising from legal challenges.</p> <p>The management system has a mechanism to <u>formally commit</u> to the legal rights created explicitly or established by custom on people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.</p>

The Nauru Agreement

The Nauru Agreement has been in place since 1982 and seeks to coordinate and harmonize the management of fisheries with regard to common stocks within the fisheries zones. The Nauru Agreement provides among other things for the:

- development of minimum terms and conditions governing access of foreign fishing vessels to their zones;
- agreement on uniform terms and conditions for licensing of foreign fishing vessels;
- cooperation and coordination of monitoring and surveillance;
- the development of arrangements to facilitate the implementation of the terms and attain the objectives of the Agreement; and
- annual meetings of the Parties.

Up until 2010 the PNA Group relied upon the secretarial assistance of the FFA for implementing and coordinating the provisions of the Nauru Agreement. However, in October 2009 the Parties agreed, “In order to secure greater economic benefits and control of their tuna resources...[to] strengthen the institutional arrangements for their cooperation through the establishment of additional mechanisms” (WCPFC, 2009). These mechanisms include:

- the establishment of a PNA Office in Majuro, Marshall Islands from January 2010 with the functions of developing:
- strategic fisheries conservation and management initiatives; and

initiatives to maximize the sustained direct and indirect economic benefits to the Parties
the adoption of the Koror Declaration (see discussion under Principle 2.1.1)
the decision to seek MSC certification.

While the PNA has proven itself capable, through the implementation and operation of the VDS, of agreeing upon management measures, the Nauru Agreement does not provide a mechanism for resolution of disputes between the Parties.

Of the Parties to the Nauru Agreement all have either ratified or acceded to both the United Nations Convention on the Law of the Sea (UNCLOS) and the United Nations Fish Stock Agreement (UNFSA). However, a submission by the WCPFC to the 2006 review conference of the UNFSA noted that: Some members of the WCPFC are not only concerned about the financial commitment required to effectively implement their obligations under the UNFSA and the WCPFC, but also the costs of internal reassignment of administrative functions (operational, legislative and administrative changes and the time to achieve this) required to give practical effect to their obligations. It is worth noting that although this is an issue of particular concern to developing State members of the WCPFC, some developed State members face similar challenges.”

WWF notes that these same challenges are likely to restrict the extent to which the some of the PNA members can ensure that they implement effectively the agreements of either the PNA or the WCPFC.

The WCPFC

Each of the PNA members is a Party to the WCPFC Convention. The Convention reflects current international laws and standards relevant to management of migratory species and the ecosystem, including specific reference to the precautionary approach. The Commission seeks input from recognized international law experts to ensure that its decision making is informed in relation to compliance with international law and protocols. The Convention includes dispute resolution mechanisms based on those in Part VII of the UNFSA, however, these have not been formally tested to date. The Convention explicitly recognizes the rights of artisanal and subsistence fishers and the dependence of coastal States and States fishing on the high seas on the stocks concerned. The Convention identifies as a function of the WCPFC the development of criteria for the allocation of catch or effort. To date, the Commission has not allocated fishing rights but has sought and received external advice on allocation mechanisms and options.

On the basis of the information available to it, WWF is not able to form an informed view of the extent to which the management system, in its totality, is consistent with international laws and standards. There does, however, remain concern as to whether the PNA members have the capacity to meet their obligations to the international instruments to which they are a party. Further, the lack of a transparent dispute resolution mechanism within the Nauru Agreement is, in WWF’s view, a significant deficiency in the current management arrangements.

Consultation, roles and responsibilities 3.1.2: The management system has effective consultation processes that are open to interested and affected parties.

SG60	SG80	SG100
<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood.</p> <p>The management system includes consultation processes that obtain relevant information from the main affected parties, including local knowledge, to inform the management system.</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction.</p> <p>The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained.</p> <p>The consultation process provides opportunity for all interested and affected parties to be involved.</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction.</p> <p>The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information and explains how it is used or not used.</p> <p>The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.</p>

PNA system

The organizations and individuals involved in the management system are clearly identified. The functions of the PNA are specified in the Nauru Agreement and the recent establishment of a separate office and the Bikenibeu and Koror declarations have elaborated on roles and responsibilities. The Nauru Agreement specifically provides for other members of the FFA to attend the meetings of the Parties as observers. There is no provision for other interested parties to attend meetings or to provide input.

WCPFC System

The WCPFC has a comprehensive governance structure in which participation by Members and CNMs is encouraged. The mechanisms for participation include meetings of the Commission, Scientific Committee, Technical and Compliance Committee and Finance and Administration Committee. Each group has well defined terms of reference and the roles and responsibilities of members and non-members are well defined in the Convention, in the Rules of Procedure and in relevant CMMs. The views of Members and CNMs are considered in the adoption of operational procedures and CMMs. The WCPFC facilitates the participation of relevant non-members and encourages eventual membership.

Observer participation is encouraged and facilitated in line with the Rules of Procedure and observers are permitted to make oral submissions to the Commission and its subsidiary bodies. Written documents prepared by observers can also be tabled at meetings as information documents in line with the Rules of Procedure.

WWF considers that the absence of a provision for other interested parties to attend PNA meetings or to provide input to be a serious fault under this indicator.

Long term objectives 3.1.3; The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.

SG60	SG80	SG100
Long-term objectives to guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are implicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within and required by management policy

PNA system

The objectives of the Nauru Agreement are to coordinate and harmonize the management of fisheries with regard to common stocks within their fisheries zones for the benefit of the peoples of the Parties. More recently the Bikenibeu declaration expressed the objective of:

Securing greater economic benefits and control of the parties tuna resources through cooperation in the management and development of their shared fisheries resources

The February 2010 Koror Declaration elaborated further on this objective expressing the objectives of:

To effectively conserve and restore highly migratory stocks while maximizing economic returns

To promote the greater commercial utilization of the tuna resources for the benefit of the Parties

To enhance commercial and economic opportunities for the Parties through optimum utilization of the tuna fishery

However the PNA system does not explicitly acknowledge the precautionary approach. Further, it is unclear to what extent the precautionary approach is reflected in the national fisheries management legislation and policies of the PNA members. However, all members of the PNA have ratified or acceded to (same legal effect as ratification) the United Nations Fish Stocks Agreement and this obligates them to apply the precautionary approach.

WCPFC System

The WCPFC convention specifies its objective as:

“to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and Agreement [UNCLOS and UNFSA respectively]”. This objective is elaborated upon in the Convention by the specification of principles and measures for conservation and management.

Article 5 of the Convention specifically requires that the WCPFC apply the precautionary approach and Article 6 elaborates upon how this shall be done.

WWF considers that the absence of an explicit commitment to the application of the precautionary approach in decisions taken under the Nauru Agreement is a significant deficiency in the current management arrangements.

Incentives for sustainable fishing 3.1.4: The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing.

SG60	SG80	SG100
The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that perverse incentives do not arise.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and explicitly considers incentives in a regular review of management policy or procedures to ensure that they do not contribute to unsustainable fishing practices.

PNA System

The VDS provides foreign purse vessels with an allocation of days to be fished in EEZs of PNA members. This approach provides a cap on one element of fishing effort, days, and is essentially an allocation of effort based on effort history. Further, the VDS incorporates a mechanism to respond to the variation in effort by different sized vessels within a standard fishing day through application of variable fishing day ratio linked to vessel length (Shanks, 2010). As such it provides some incentives for sustainable fishing and attempts to counter the substitution of other input for days fished. However, the scheme does not fully preclude the substitution of other inputs to compensate for the constraint on days fished and does not constitute a direct control on the amount of fish taken. As a result it may allow for development of excess fishing capacity and may not address overfishing.

Pacific Island nations are the recipients of substantial quantities of aid in support of their fishing and fish processing operations. Such aid can be direct support for development of domestic fishing industries, in support of fishing infrastructure or in support of governance arrangements for fisheries. In addition national governments of Pacific Island nations are known to subsidize inputs such as fuel in their domestic fishing fleets.

WCPFC system

The WCPFC Convention provides for the allocation of total allowable catch or effort although such allocations have not yet been made. However, the PNA VDS is an integral part of the WCPFC's CMM on bigeye and yellowfin tuna.

The WCPFC provides subsidies to Pacific Island nations to facilitate their participation in Commission activities and their implementation of CMMs. However it might be argued that these subsidies are in fact consistent with the pursuit of sustainability.

A number of WCPFC CMMs exclude the Small Island Developing States (SIDS) from their provisions. While WWF appreciates the need for the SIDS to have equitable and fair opportunities to develop their fisheries for skipjack, within the constraints of sustainability, WWF believes that excluding the fisheries of the SIDS, or portions of fisheries of these nations from some CMMs, effectively constitutes a perverse incentive.

WWF believes that there are some aspects of the management system that provide economic incentives to sustainable fishing. However, the nature and extent of the subsidies in place across the PNA Group is not known. In the absence of a comprehensive analysis of assistance provided to PNA fisheries in the domestic and regional context it is not possible to form an informed view as to the extent to which such assistance may provides perverse incentives or compromise sustainable fisheries.

Fishery Specific Objectives 3.2.1: The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.

<u>SG60</u>	<u>SG80</u>	<u>SG100</u>
Objectives, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery's management system.	Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.	Well defined and measurable short and long term objectives, which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.

The long term objectives of both the PNA Group and the WCPFC are clearly articulated as described above. Short-term objectives for specific stocks and ecosystem impacts are identified in relevant CMMs and through default reference points for target stocks. The fishery's objectives can be identified and are consistent with the MSC's Principles 1 and 2. However, many of the CMMs are not specified in terms of measurable targets or outcomes.

Decision-making processes 3.2.2: The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives.

SG60	SG80	SG100
<p>There are <u>informal</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>serious issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take <u>some</u> account of the wider implications of decisions.</p>	<p>There are <u>established</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>serious and other important issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.</p> <p>Decision-making processes use the precautionary approach and are based on best available information.</p> <p><u>Explanations</u> are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.</p>	<p>There are <u>established</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>all issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.</p> <p>Decision-making processes use the precautionary approach and are based on best available information.</p> <p><u>Formal reporting</u> to all interested stakeholders describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.</p>

PNA system

The PNA Group’s decision-making processes are not clearly defined but have been shown to be effective in responding to findings of research and monitoring. There is no specification in the Nauru agreement of the nature of the decision-making process. For example, it is not clear whether decisions are taken by consensus. The Group has proved itself to be cohesive and proactive in taking decisions to achieve its objectives. As noted above, there is no specification of the precautionary approach in the Nauru Agreement and the process by which the PNA interpret the best available scientific advice in setting the total number of vessel days under the VDS is unclear. Processes for reporting of decisions are not well established at this time and there is a lack of transparency associated with decision making by the PNA.

WCPFC system

Consensus is the general rule for decision-making by Commission Members during their annual meetings. If consensus cannot be reached, voting, grounds for appealing decisions, conciliation and review are all part of the decision-making process, as described in Article 20 of the Convention.

The application of the precautionary approach and the use of the best available scientific advice is required by the WCPFC Convention. While the application of these requirements by the Commission has not been tested in respect of skipjack tuna, given the status of the stock, the Commission has not always met these requirements in respect of other stocks. For example, scientific advice on bigeye tuna has not been reflected fully in management measures.

There are well-established procedures for reporting of material considered by and outcomes of the Commission and its subsidiary bodies.

WWF is concerned that the PNA decision-making framework is not clearly articulated and that, currently, there is a lack of transparency in the reporting processes of the PNA. Our concerns about the lack of commitment to the precautionary approach have been outlined under Indicator 3.1.3.

Compliance and enforcement 3.2.3: Monitoring, control and surveillance mechanisms ensure the fishery’s management measures are enforced and complied with.

SG60	SG80	SG100
<p>Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.</p> <p>Sanctions to deal with non-compliance exist and there is some evidence that they are applied.</p> <p>Fishers are generally thought to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.</p>	<p>A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.</p> <p>Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence.</p> <p>Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.</p> <p>There is no evidence of systematic non-compliance.</p>	<p>A comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.</p> <p>Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence.</p> <p>There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.</p> <p>There is no evidence of systematic non-compliance.</p>

PNA system.

As members of the FFA the PNA members use the following MCS tools:

the FFA Vessel Monitoring System, a satellite-based system that monitors the position, speed and direction of licensed fishing vessels;

the Observer Program, which places independent data collectors on board fishing vessels;

legislative arrangements for data sharing between countries, enforcement legislation, WCPFC rules and their implementation at a national level;

the Regional Fisheries Surveillance Centre which collects, displays and analyses aircraft and vessel movements to identify and monitor suspicious vessels and advise national staff to make decisions on where to allocate surveillance aircraft and patrol boats.

The PNA has responded to the issue of illegal, unreported and unregulated (IUU) fishing in the high seas pockets of its EEZs through its decision to close those waters to vessels that are not licensed to fish in the EEZs of its Parties. The Group requires 100% observer coverage on their purse seine vessels and has agreed to allow fishing observers from one PNA member country to act as observers in other PNA member’s waters. However, in the past, many Pacific Island countries have struggled to train and retain observers and there remains doubt as to whether this can be achieved. From 1 January 2010 the WCPFC requires 100% observer coverage on high seas purse seine vessels. This will assist in ensuring that vessels do not undertake unauthorized fishing in the waters of PNA members.

The FFA has developed a regional monitoring, control and surveillance strategy which includes regional cooperation to control fishing in the region. The strategy was endorsed by Forum Fisheries Committee Ministers in July 2010.

However, Hanich *et al.* (2010) note that poor implementation of regional MCS measures at the national level of Pacific Island countries has undermined the ability of these countries to effectively monitor and control their fisheries and cite a 2004 study that identified poor operation of observer programmes and lack of monitoring and enforcement of VMS programmes as particularly problematic in some Pacific Island countries.

WCPFC

The WCPFC has a comprehensive package of integrated MCS measures in place including:

a Record of Fishing Vessels and Authorization to Fish;

a centralized VMS activated on April 1, 2009;
 IUU Vessel Listing Procedures;
 high seas boarding and inspection procedures;
 prohibition on transshipment at sea by purse seine vessels (with specified exemptions);
 regional observer programme in 2008 (20% purse seine coverage in 2009, 100% in 2010); and
 FAD Management Plans.

The WCPFC’s Technical and Compliance Committee is also continuing consideration of port State measures, chartering arrangements, catch/statistical documentation, the control of nationals, and compliance monitoring and reporting.

The WCPFC relies largely on the IUU vessel listing process as an incentive for compliance. There are no other sanctions in place for non-compliance by members with CMMs. In 2009, the Commission agreed to terms of reference to establish a Compliance with Conservation and Management Measures Working Group.

Overall, WWF believes that while there is an effective regional MCS strategy in place under the WCPFC, there is considerable doubt as to the capability of PNA members to ensure that the measures they adopt are monitored and enforced. WWF believes that there is a need for each PNA member to demonstrate its capacity to enforce the management measures of the PNA and the WCPFC and to demonstrate how the regional MCS strategy will improve the capacity of the PNA members to ensure compliance with their management measures.

Research plan 3.2.4: The fishery has a research plan that addresses the information needs of management.

SG60	SG80	SG100
<p>Research is undertaken, as required, to achieve the objectives consistent with MSC’s Principles 1 and 2.</p> <p>Research results are available to interested parties.</p>	<p>A research plan provides the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC’s Principles 1 and 2.</p> <p>Research results are disseminated to all interested parties in a timely fashion.</p>	<p>A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC’s Principles 1 and 2.</p> <p>Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.</p>

The WCPFC has a Strategic Research Plan 2007-2011 in place which identifies four overall research and data collection priorities:

- collection and validation of data from the fishery
- monitoring and assessment of stocks
- monitoring and assessment of the ecosystem
- evaluation of management options.

The research plan relates largely to scientific and ecosystem research, i.e. to Principles 1 and 2. While governance issues are not addressed directly by the research plan, the WCPFC has commissioned a number of research projects that inform aspects of governance, for example the institutional arrangements for provision of scientific advice and options for allocation of participatory rights. Research reports are made available on the WCPFC’s web site in a timely fashion.

Monitoring and management performance evaluation 3.2.5: There is a system for monitoring and evaluating the performance of the fishery-specific management system against its objectives.

SG60	SG80	SG100
The fishery has in place mechanisms to evaluate some parts of the management system and is subject to occasional internal review.	The fishery has in place mechanisms to evaluate key parts of the management system and is subject to regular internal and occasional external review.	The fishery has in place mechanisms to evaluate all parts of the management system and is subject to regular internal and external review.

There are no specific mechanisms for evaluating the performance of the PNA management system. The WCPFC has not yet undertaken a performance review and in 2009 decided to defer consideration of this issue since there were no funds provided for the review in the Commission’s budget.

Stock assessments conducted by the SPC are subject to internal peer review by other members of the Scientific Committee. A recent Independent *Review of the Commission’s Transitional Science Structure and Functions* suggested periodic external review of the stock assessments. This has been adopted by the WCPFC and an external review of the 2010 stock assessment for bigeye tuna will be conducted.

An annual report is provided to the Commission by the Secretariat on compliance of members with the reporting provisions of the Commission. Progress with implementation of CMMs is monitored through the reporting provisions within the CMMs themselves or the Annual Reports by members to the Commission.

As noted above the MCS measures used by the PNA members have recently been subject to external review through the development of a regional MCS strategy for FFA members.

Key components of the management system are subject to regular internal and occasional external review. However, the WCPFC has yet to implement an ongoing, comprehensive system of performance review.

ADDITIONAL ISSUES

Climate change

WWF note that there is a strong relationship between stock abundance in the eastern part of the equatorial region and environmental conditions (Langley and Hampton, 2008). A portion of the PNA Skipjack Tuna Fishery falls within this area. There is therefore potential for climate change to have a significant bearing on stocks of skipjack tuna in the longer term.

In addition, it has been postulated that the catch of non-target species may be affected by climatic patterns change. In particular, it has been suggested that it is plausible that the number and location of floating logs will vary with El Nino-Southern Oscillation conditions with floating logs expected to be more prevalent in La Nina years when higher rainfall is experienced in the region. An abundance of floating logs might lead to a greater proportion of associated sets and higher non-target species catch than during drier El Nino years (Nicol *et al.*, 2009).

WWF believes that the uncertainty around the potential for climate change to affect the nature and extent of the impact of the PNA Skipjack Fishery on target and non-target species needs to be taken into account in the assessment. Specifically, WWF considers that these uncertainties should be reflected in stock assessment, in management advice developed by the Scientific Committee and in the level of precaution applied in developing management responses for target and non-target species.

Traceability

WWF is concerned about the capacity of the PNA Members to ensure that skipjack tuna taken from sets on unassociated schools and logs can be differentiated and isolated from skipjack tuna taken on anchored and drifting FADs. WWF acknowledges that the PNA Members will require 100% observer coverage on the relevant vessels. Essentially this means one observer per vessel. Analysis by Harley *et al.* (2009b) suggests that 94% of FAD sets (including those on logs) are conducted at night while 97% of unassociated sets are conducted during daylight hours. It is questionable therefore whether this level of coverage can ensure observation of 100% of sets. In the absence of an additional observer or tamper-proof electronic validation, the opportunity therefore exists for non-compliance by operators.

In addition, all observer programs are open to abuse and the integrity of the program can be compromised by corruption of observers. While WWF acknowledges that this is likely to be the exception rather than the rule, it cannot be ruled out. Further, previous studies have identified corruption as an ongoing concern at both political and operational levels in the Pacific (AusAID, 2007).

Given that the standing of the certification rests strongly on the capacity for product from different set types to be quarantined, WWF believes that the onus is on the PNA Group to prove that it can ensure this differentiation. This will require articulation of the measures that will be put in place to achieve this including measures to ensure 100% observation of each set and measures to ensure the integrity of the observers.

WWF believes that the PNA Group should investigate the use of tamper-proof electronic measures of catch validation as an adjunct to observer presence on vessels. Such measures may, for example, include the use of integrated logged sensor data and digital video. Such measures are currently being trialled in the Australia's Eastern Tuna and Billfish Fishery.

Gaps in WCPFC Coverage

Non-members

WWF considers that Indonesia's failure to join the WCPFC is a serious risk to sustainable fishing in the region. Indonesia continues to be a Cooperating Non-Member of the Commission but has yet to become a Member. In 2007 it is estimated that Indonesia took around 230,000 t of skipjack tuna in 2007 (Lawson, 2008).

Archipelagic waters and domestic fleets

A number of Members and CNMs continue to maintain a position that the WCPFC does not have the mandate to limit/manage fishing activities in the archipelagic waters.

Hampton and Harley (2009) have identified the exclusion of archipelagic waters, which encompass most of the fishing activity of the Indonesian and Philippines domestic fleets and significant amounts of purse-seine effort in Papua New Guinea and Solomon Islands, as one of the causes of the failure of the current CMM on bigeye and yellowfin tuna to achieve the required 30% reduction in bigeye fishing mortality.

This is a serious flaw in the management capability of the WCPFC given the extent of archipelagic waters in countries such as the Philippines and Indonesia. The risks associated with failure/inability to manage all components of the skipjack stock must be taken into account in consideration of Principle 1.

Participation in the WCPFC and fisheries instruments

WWF does not believe that the current MSC Assessment methodology provides for adequate assessment of the role that the client plays in relevant regional fisheries management organizations and the extent to which they have committed to overarching legal instruments that impose obligations with respect to sustainable fishing. All members of the PNA Group are members of the WCPFC. However, as noted above, some Members continue to exclude substantial parts of their fisheries from the authority of the WCPFC and WWF contends that this approach is not consistent with their obligations as parties to the UNFSA. Such action cannot be regarded as being consistent with the MSC Principles. WWF also believes that the level of participation and compliance with CMMs of the members of the PNA Group should be considered explicitly by the MSC assessment.

At the same time, WWF recognizes the strong role that the PNA members have taken in driving the introduction of stronger management for fisheries resources in the WCPO and the leadership that they have shown on this issue in the WCPFC.

WWF believes that these issues are relevant to the capacity of the PNA Group to manage the unit of certification in a manner that is consistent with the principles of the MSC. WWF urges the assessor to take these issues into account.

Unit of certification

WWF's analysis has raised issues relating to the impacts on non-target species of log sets. Potentially, this could mean that the unit of certification should be reduced to only unassociated sets. If this was to be the case, WWF considers that the economic viability of a fishery based only on unassociated sets would need to be considered. WWF appreciates that this is an issue for the client. However, if the economic viability of certification is

reduced by constraining the certified product to product from unassociated sets, WWF sees the potential for non-compliance to be much higher. This will place added pressure on the PNA Group to ensure the integrity of the certified product's origins by rigorous monitoring, control and surveillance measures.

Condition Setting

WWF notes that the most recent MSC Guidance on Setting Certification Conditions (MSC, 2010c) requires that, in when setting conditions, the certification body shall consult with:

“all relevant entities...if those conditions are likely to require investment of time or money by those entities, or changes to management arrangements or regulations, or re-arrangement of research priorities by these entities, in order to satisfy the certification body that the conditions are achievable by the certification client and realistic in the time frame specified”.

MSC defines ‘relevant entities’ as “all fisheries management or research agencies, authorities or regulating bodies that might have authority, power or control over management arrangements, research budgets and/or priorities”.

WWF believes this raises a potential difficulty with respect to certification of a fishery that is subject to management by a regional fisheries management organization (RFMO). In the case of the PNA Skipjack Tuna Fishery, WWF considers that the WCPFC, including the SPC as the Commission’s contracted scientific services provider, is, in addition to the PNA Group, a relevant management and research entity. Since the WCPFC, like other RFMOs, are governed by their membership, any such consultation would need to be with the members through a Commission meeting. Given the range of interests in the Commission, WWF believes that, depending on the nature of conditions sought to be imposed, that it may be very difficult to get a commitment to changes to management arrangements, regulation or research priorities in order to satisfy the MSC requirements of a particular component of the Commission’s mandate.

Concluding Comments

WWF has identified a range of underlying issues concerning the potential certification of the PNA Skipjack Tuna Fishery. In summary WWF is concerned that:

the Fishery is clearly defined in respect of the type of purse seine sets that are covered by the unit of certification;

the capacity of the PNA Group to quarantine skipjack taken under the unit if certification in the first instance from skipjack taken in other purse seine sets and ultimately, further in the marketing chain, from skipjack tuna by other methods, is adequate;

uncertainties related to climate change are given sufficient weight in the assessors’ consideration of the level of precaution with which the fishery is managed; and

issues relating to the assessment of fisheries that are subject, in part, to management and research conducted by an RFMO are considered.

WWF has identified one issue which in its view may preclude certification of the fishery in part or in its totality. This relates to the impact of log sets on bigeye tuna as a main retained species under Principle 2. WWF believes that the log set component of the Fishery currently poses an unacceptable level of risk to a stock which is classified as overfished and for which the current management arrangements have been shown to be inadequate. WWF believes that the fishery will potentially contribute to the continued overfishing of the stock and/or will impede the recovery of the stock. As a result, WWF believes that log sets should fail the assessment or be excluded from the unit of certification.

WWF’s analysis has also identified a number of issues which are of particular concern in the context of potential MSC certification of the PNA Skipjack Fishery. These issues relate to the following indicators:

Principle 1:

Reference points 1.1.2: Limit and target reference points are appropriate for the stock.

Harvest strategy 1.2.1: There is a robust and precautionary harvest strategy in place

Harvest control rules and tools 1.2.2: There are well defined and effective harvest control rules in place

Information / monitoring 1.2.3: Relevant information is collected to support the harvest strategy

Stock Status 1.2.4: Assessment of Stock Status: There is an adequate assessment of the stock status

Principle 2:

Retained Species Status 2.1.1: The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species

Retained species management strategy 2.1.2: There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species

Retained species Information / monitoring 2.1.3: Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species.

Bycatch species: Status 2.2.1: The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups.

Bycatch species Management strategy: 2.2.2: There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.

ETP species Management strategy 2.3.2: The fishery has in place precautionary management strategies designed to:

- meet national and international requirements;
- ensure the fishery does not pose a risk of serious or irreversible harm to ETP species;
- ensure the fishery does not hinder recovery of ETP species; and
- minimise mortality of ETP species.

Principle 3:

Legal/Customary Framework 3.1.1: The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:

Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2;

Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and

Incorporates an appropriate dispute resolution framework.

Long term objectives 3.1.3: The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.

Incentives for sustainable fishing 3.1.4: The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing.

Decision-making processes 3.2.2: The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives.

Compliance and enforcement 3.2.3: Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.

ACRONYMS

CCMs	Members, cooperating non-members and participating territories (of the WCPFC)
CITES	Convention for International Trade in Endangered Species of Wild Fauna and Flora
CMM	Conservation and management measure (of the WCPFC)
CMS	Convention on Migratory Species
EEZ	Exclusive Economic Zone
ERA	Ecological risk assessment
FAD	Fish aggregating device
FAM	Fisheries Assessment Methodology (MSC)
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
IUCN	The World Conservation Union
IUU	Illegal, unreported and unregulated (fishing)
MCS	Monitoring, control and surveillance
MSC	Marine Stewardship Council
MSY	Maximum sustainable yield
PNA	Parties to the Nauru Agreement
PNG	Papua New Guinea
PSA	Productivity-susceptibility analysis
RFMO	Regional fisheries management organization
SG	Scoring Guidepost
SPC	Secretariat of the Pacific Community
UNCLOS	United Nations Convention on the Law of the Sea of 10 December 1982
UNFSA	The Agreement for the Implementation of the of the Provision of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks
VDS	Vessel day scheme
VMS	Vessel monitoring system
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and Central Pacific Ocean

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August 10, 2010

Mr. Richard Banks

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Dear Mr. Banks:

We are the International Seafood Sustainability Foundation (ISSF), which is a global partnership among leaders in science, the tuna industry and the World Wildlife Fund. Our mission is to undertake science-based initiatives for the long-term conservation and sustainable use of tuna stocks, reducing bycatch and promoting ecosystem health. To that end, the ISSF is a registered stakeholder in the Marine Stewardship Council's (MSC's) assessment of the Parties to the Nauru Agreement (PNA) Western and Central Pacific skipjack tuna purse seine fishery on logs and unassociated schools (i.e. the "PNA Fishery").

We are opposed to MSC certification of the PNA Fishery at this time.

Our opposition arises from multiple concerns which we elucidate in detail below. Broadly, our conclusions are that the PNA Fishery (a governmental entity rather than an organization of vessel operators or owners) has neither defined nor demonstrated the national, PNA or international management controls needed to assure operation of the fishery at MSC standards. Harvest control rules and biological reference points have not been established for the skipjack stock as required under Principle 1, and actions have not been undertaken by the PNA Fishery to achieve them. Stocks of retained and bycatch species in the PNA fishery have been sufficiently impacted by fisheries as to warrant stock rebuilding plans which have yet to be implemented, and, thus, the standards of Principle 2 have not been met. Additionally, management controls are insufficient to implement the regulatory burden required of Principle 3.

General Comments

As defined by the applicants, the proposed unit of certification of the PNA Fishery applies to the fishery for skipjack tuna by purse seine sets on unassociated schools and logs, by vessels managed under the Vessel Day Scheme of the Parties to the Nauru Agreement and licensed domestically, through the Federated States of Micronesia Arrangement or, bilaterally, by the PNA (PNA 2010). In particular, the certification unit has been defined by:

Species: The Principle 1 species identified for assessment is skipjack tuna. Yellowfin tuna, bigeye tuna are defined as retained species, and are therefore considered under Principle 2 of the MSCs Fisheries Assessment Methodology (FAM; MSC 2010).

The geographical boundaries for Certification: The EEZs of the PNA countries. Archipelagic waters and the high seas are excluded from the assessment.

A log set: Defined as a natural object, where no artificial attachment has been added. Artificial attachments include buoys, bamboo rafts, lights, beacons and nets.

These definitions prescribe an artificial fishery created solely to meet minimum MSC standards without consideration of the ecological footprint of the fishery operation as a whole. For example, should certification be approved, essentially it would be assigned to a licensing agency rather than to a vessel or vessel operator. The vessel operator would not have incentives to achieve MSC goals other than to maintain access through their license. Indeed, in order for a vessel-trip to be profitable, both FAD and unassociated-log sets would be required. Thus, sometimes the vessel would be operating sustainably (under MSC standards) and sometimes it would not. The definitions also convert target species of the operating vessels (yellowfin and bigeye), which should be evaluated under Principle 1, into “retained species” evaluated under Principle 2. While this may fulfill the letter of the FAM, the result is a subterfuge of the spirit of MSCs sustainability goals. The evaluation should encompass the impacts of the operating fishery on the stocks and ecosystem and not just those elements of the fishery that have been pre-selected to only include those aspects of the operating fishery that have minimal impact.

In the case of the PNA Fishery, effectively it is the PNA governments that wish to be certified. They then propose passing access to those fish/fishing grounds to participating vessel/operators. While this model of fisheries certification is possible, incentives have shifted. Instead of vessels working under self-developed operating guidelines, a PNA arrangement must have vessel operating procedures imposed through a national and PNA regulatory process, i.e. licensing agreements, monitoring, control and surveillance. And because sustainability incentives do not lie with the vessel, the PNA and its members must have demonstrated its record in imposing those standards on participating vessels through its regulations, monitoring, enforcement and compliance. The PNA Fishery has not done that. Although measures to require 100% observer coverage have been adopted very recently, the programs themselves have yet to be implemented including logistics, training, labor turnover, observer responsibilities under MSC and compliance data management. Therefore, it is unlikely that separation of MSC products from non-MSC products can be achieved, and that at-sea monitoring of effort and bycatch will be fully implemented. This MSC assessment is being directed at an artificially created fishery with management regulations that have yet to be defined. Certification requires a record from existing fishery management, not a promise of what might be done in the future.

There are a number of practical difficulties imposed by the definition of log sets (a log set: defined as a natural object, where no artificial attachment has been added. Artificial attachments include buoys, bamboo rafts, lights, beacons and nets). Virtually any floating object can attract schools of tuna (refuse, balls of line, floating dead animals, floating limbs of trees, lumber, etc). Operating definitions must be specified which include: what objects are natural, how soon after removal of a beacon does a log return to its “natural” state, how close are the floating objects before they are considered a single log, at what proximity to a log does an unassociated school become a log school? Operating definitions shall provide the basis for consideration of certification. Also, the added demands of MSC certification would require that the observer program utilize electronic reporting measures. Thus, training for both licensees and observers in the operating definitions and an effective observer program with 100% coverage must be required. These measures must be in place for certification to guarantee traceability and chain of custody of products that must be differentiated in the catch. It does not appear that they are in place.

Integral to management of the PNA Fishery is the Vessel Day Scheme (VDS). This is a fishery input control in which the number of days a vessel operates in the fishery is allocated, licensed and monitored and is currently the primary management tool of the PNA. Input controls are common in fisheries management. In the case of the PNA the VDS in its evolving versions appears to have been successful in recovering rents, but MSC certification is a sustainability standard and requires another level of examination. In doing so, there are a number of questions that remain unanswered. In particular, the definition(s) of a “vessel day” do not appear to be consistent, the specification of overall vessel day limits are not transparent and are only loosely tied to general Western and Central Pacific Fisheries Commission (WCPFC) resolutions to cap effort on bigeye and yellowfin to 2004 levels and not to the skipjack fishery. Vessel days which are to be specifically allocated to the PNA Fishery (those associated with skipjack from unassociated/log sets) are undefined. The decision processes for specifying total allocations and country allocations are not well known and lead to mistrust of allocation motives. Additionally, there is the perception that the allocation of total days are not fully prescribed and that national and PNA policies relative to total allocations are not limiting and not guided by policy, analogous to a federal bank printing money. These issues relative to the VDS have not been demonstrated relative to MSC standards, thus ISSF cannot support certification under Principle 3.

Because of critical nature of the VDS to MSC evaluation, the ISSF is also concerned about the participation of Mr. Les Clark in the Assessment Team. We have recently learned that, as a consultant for FFA and various PNA countries, Mr. Clark has had a leading role in the development and implementation of, and advocacy for, key elements being evaluated in the assessment, such as the Vessel Day Scheme. His direct participation as a member of the Assessment Team is already creating, at a minimum, the perception that the exercise will lack independence and impartiality, two vital elements in the MSC certification process. ISSF has no doubt that Mr. Clark is extremely knowledgeable about the fisheries under review, but his knowledge would be more appropriately used if he were to provide inputs to the assessment team, rather than by being an evaluator of elements for which he has been an advocate.

Successful MSC certification of a tuna fishery requires management objectives, limits and targets, biological reference points and harvest control rules be implemented at national and international levels. Regional Fisheries Management Organizations (RFMOs) are the treaty mechanisms to achieve this internationally. In the case of the PNA Fishery, the relevant RFMO is the WCPFC. The PNA members are all member states of WCPFC. MSC certification requires implementation of limits and targets, biological reference points and harvest control rules for the stock of fish under certification under Principle 1. Thus, actions are required at WCPFC, PNA and national levels to define these targets/limits/rules. This has not occurred at any of these levels. Indeed, no RFMO around the world has formally adopted targets, limits and rules. Limits have been used tacitly in the scientific advice (biomass relative to biomass at maximum sustainable yield, B/B_{msy}; fishing mortality rate relative to fishing mortality rate at maximum sustainable yield, F/F_{msy}), but even these precautionary limits have not been formally adopted in the management process. Therefore, scoring of these elements (1.1.2, 1.2.1-1.2.4) will necessarily be deficient for all tuna stocks and would require a condition to ameliorate the lack of targets/limits/rules and to implement them within the five year certification period. The only way to achieve this is through the relevant RFMO. While RFMO members have varying degrees of influence in their RFMO, it is very unlikely that individual fishery actions alone will be sufficient to reach this standard within the 5 year period. Thus, in five years a certified tuna fishery will face the additional dilemma under recertification, of having been certified 5 years without achieving MSC standards. The same situation faces the Western and Central Pacific skipjack stock and the PNA Fishery. It is the ISSFs position that this condition is tantamount to failure under the scoring guidelines of the current FAM for PI's 1.1.2, 1.2.1-1.2.4. Additionally, this calls for MSC reevaluation of the FAM itself (elements, weightings) in regards to RFMOs and tuna stocks. This should include RFMO and national roles in management of both Principle 1 and Principle 2 issues.

Evaluation of Performance Indicators

Following are ISSFs comments related to specific performance indicators (PIs) in reference to the Default Assessment Tree of the FAM and our appraisal of the PNA Fishery relative to the scoring guidelines. Comments are presented for each PI within Principles 1 and 3. However, generic comments are presented in aggregate for PIs of Principle 2, since many of the comments are related. References which contributed to our conclusions are attached.

Principle 1

1.1.1. Principle 1 Stock Status: Score ~90.

Assessment based on an application of MULTIFAN-CL (the equatorial model) where 24 fisheries are modeled (including Japanese Pole & Line), catch and CPUE and size frequency and tagging data used. An improvement between the assessment of 2005 and 2008 was the better integration of the tagging model. No indications of changes in recruitment; size frequency of catches only have limited catches less than 45 cm (size of maturity). The assessment includes six areas.

Limit reference points have not been established by the Commission (WCPFC); however, the WCPFC scientific committee is using BMSY and FMSY as limit reference points for their assessments until such time as formal reference points are adopted by the commission. There is a high degree of certainty that the stock has been fluctuating around its limit reference point, or has been above its limit reference point, over recent years.

$B_{current} > 3 \times BMSY$, $F_{current} < .3 \times FMSY$ and it has been this way for the entire time series; catch has never exceeded MSY. Therefore, the stock status is good and there is no overfishing occurring relative to commonly used limit reference points. There is a high degree of certainty that the stock is above the point where recruitment would be impaired.

1.1.2. Principle 1 Reference Points: Score ~60.

Generic limit reference points have been used by the WPCFC Scientific Committee and the stock is well within these limits (see 1.1.1). However, formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points, but the Commission itself has yet to formally adopt rules. Target and limit reference points can be estimated from the current assessment. There is no technical reason that it cannot be done. The time needed is to establish the appropriate degree of risk to be implemented. This will take Commission input, as well. This was noted by the WCPFC (*In progressing work on reference points the Commission should establish a parallel/joint process for establishing key management objectives for each target species including the possibility of holding an inter-sessional workshop on management objectives in 2009*). Additionally, it is likely that whatever the targets and references are that are chosen for skipjack, the current status will be within these limits.

While the status of the stock under common reference points is good, the fact that formal reference points and rules have not been adopted creates management risk for the future of the fishery. Therefore, the ISSF finds this PI to be insufficient and a Condition must be imposed to ameliorate this situation. The Condition must require action on the part of the PNA within the WCPFC to establish those rules.

1.1.3. Principle 1 Stock Rebuilding:

Not relevant. The skipjack stock is not overfished.

1.2.1. Principle 1 Harvest Strategy: Score ~70.

The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has specified generic capacity limits (driven by concerns for bigeye and yellowfin tuna (“the total capacity of their respective other commercial tuna fisheries for bigeye and yellowfin tuna, including purse seining that occurs north of 20°N or south of 20°S, but excluding artisanal fisheries and those fisheries taking less than 2,000 tonnes of bigeye and yellowfin, shall not exceed the average level for the period 2001-2004 or 2004”; Conservation and Management Measure (CMM) 2008-01, para. 39). The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, these limits have not been formally specified or formally linked to actions at the national level.

Additionally, the management effort controls exerted by the PNA are through the Vessel Day Scheme in which fishing days in their waters are to be maintained below that of 2004, and a large closed area of about 4 million square miles of the high seas.

The above actions are not formal harvest strategies. However, collectively they appear to be achieving common stock status limit reference points ($B > B_{msy}$; $F < F_{msy}$). Apparently, discussions have been initiated within WCPFC to establish further harvest rules for all species (not just skipjack). But these have yet to be implemented (see 1.1.2)

1.2.2. Principle 1 Harvest Control Rules: Score ~60.

Currently there are no formal control rules in place either domestically within the PNA or within the WCPFC. While overall caps on effort and vessel day limitations have served to maintain catches at adequate levels, the whole point of formal harvest control rules is to develop objectives and contingencies for timely actions should conditions in the fishery change. The lack of these contingencies results in risk to the fishery. This PI is deemed inadequate by the ISSF and should be addressed in a Condition in which domestic and WCPFC rules are adopted (see 1.1.2).

1.2.3. Principle 1 Harvest Strategy: Information and Monitoring: Score ~80

A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available. All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.

Monitoring of the stock is based on catch and effort data, length–frequency data and tagging data. The stock assessment has been discussed under 1.1.1 and 1.2.4. However, the efficacy of the information relative to management objectives are not known until such time as harvest control rules are established.

1.2.4. Principle 1 Harvest Strategy, Assessment of stock Status: Score ~60.

Stock assessments were conducted most recently using the MULTIFAN-CL model. As with most assessments, MULTIFAN-CL models the population dynamics of the fish and the characteristics of the fisheries based upon a set of unknown parameters that are estimated from observed data. The model makes “predictions” of the data and these are statistically compared to the observations by searching for the set of parameters where the likelihood of the observations and predictions is maximized. The estimated parameters are used to determine stock productivity and status. The basic approach of MULTIFAN is to model multiple “fishing fleets” which exhibit relatively homogeneous behavior in regards to their selectivity by size, areas fished and the efficiency of their gear. In the WCPO skipjack application the fisheries were categorized into 24 fleets encompassing the six areas, gears (pole-and-line, purse-seine and others) and the nations to which the fleets belong.

The observed data included catch and effort data, length frequency data and tagging data. The catch and effort data were categorized by fisheries, by area and by quarter of the year. Catch per effort was standardized using General Linear Models for the fisheries for which there were longer time series of data in which factors such as year, quarter, region, bait effects, effects of radar/sonar and satellite data and the targeting of other species. Length frequencies were available by 2 cm size class by quarter, year and fishery. However, sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of ~ 250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model.

While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments have not been fully integrated. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points.

Principle 2

2.1.1. Principle 2 Outcome Status, Retained Species

2.1.2. Principle 2 Management Strategy, Retained Species

2.1.3. Principle 2 Information/Monitoring, Retained Species

Aggregate Score ~60

The retained species in the Certification Unit have been defined as yellowfin and bigeye. Of these bigeye is “in a slightly overfished state, or will be in the near future with high levels of overfishing occurring” (WCPFC 2009 Scientific Committee) and it has been advised that current management measures for bigeye will not reach the needed fishing mortality rate reduction goals for this.

The 2010 bigeye assessment (see documents available before the start of the 2010 WCPFC Scientific Committee Meeting) notes that: recruitment in all analyses is estimated to have been high during 1995–2005. This result was similar to that of previous assessments, and appears to be partly driven by conflicts between some of the CPUE, catch, and size data inputs. The attribution of depletion to various fisheries

or groups of fisheries indicates that the purse seine and other surface fisheries have an equal or greater impact than longline fisheries on the current BET biomass. These results led to the conclusions that 1) that current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the last decade; 2) overfishing is occurring in the bigeye tuna stock, but possibly at a lower level than previously estimated; 3) bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and 4) *MSY* levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.

These results require that formal recovery plans and harvest rules be established. They have not. Additionally, were it not for the artificial definition of the fishery, the operating fishery would have been evaluated under Principle 1 which it would have failed.

2.2.1. Principle 2 Outcome Status, Bycatch Species

2.2.2. Principle 2 Management Strategy, Bycatch Species

2.2.3. Principle 2 Information/monitoring, Bycatch Species

Aggregate Score ~60

Analysis of what is a retained species must be presented. For example, log sets catch a suite of species including shark species which can be retained, have vulnerable life histories and are not presently assessed. Also, current scientific advice stresses that marlin exploitation should not expand. Therefore, there are a number of uncertainties about non-targeted species in the PNA Fishery, regardless of whether they are considered retained or bycatch. Management measures related to non-targeted species (bycatch and retained) have been limited both domestically and within the WCPFC. Requirements for 100% observer programs are relatively new and it is unclear whether these have been fully implemented. Note that an observer *program* includes not only placing an observer and collecting the data, but the timely processing/transfer of that data such that it can be used for monitoring and control decisions. The ability of the PNA Fishery to respond to these concerns has not been demonstrated.

Bycatch concerns arise with log sets, as discarded bycatch with unassociated sets is small. No formal stock assessments have been done on the discarded bycatch species. However, the magnitude of the catches is low and the productivities of the species involved are relatively high (mahi mahi, rainbow runner, frigate tuna, oceanic triggerfish, mackerel scad). The exception to this is the sharks and marlins which should most likely be included within the retained species category. Mortality of discarded bycatch (those released alive) does not appear to be known. Non-binding resolutions of the WCPFC encourage fishers to avoid non-target species catches, but it has not been demonstrated that these measures have been effective. And it is unclear if similar measures have been implemented domestically within the PNA Fishery. A comprehensive bycatch management plan has not been implemented at both domestic and international levels.

2.3.1. Principle 2 Outcome Status, ETP Species

2.3.2. Principle 2 Management Strategy, ETP Species

2.3.3. Principle 2 Information/monitoring, ETP Species

Aggregate Score ~70

The WCPFC has adopted management measures for sea turtles and sharks to limit the take of these species. In particular the sea turtle measures require release of sea turtles, procedures to enact the release and the recording of interactions. The shark measure simply encourages live release of those sharks not used for food or other purposes without specific requirements to release protected species of sharks. Obviously a primary monitoring tool for ETP bycatch will be a 100% observer coverage program. However, there are limitations to observers in terms of species identification during release. Additionally, as noted above the turnaround of observer data for management purposes has not been demonstrated. Also, market data suggest that observer catch estimates may be underreported. These and other issues must be addressed by evaluations of the existing management measures must be done and insufficiencies ameliorated. Then comparable measures must be part of the PNA Fishery's licensing agreements.

- 2.4.1. *Principle 2 Outcome Status, Habitats*
- 2.4.2. *Principle 2 Management Strategy, Habitats*
- 2.4.3. *Principle 2 Information/monitoring, Habitats*

Aggregate Score ~80

The “habitat” in relationship to unassociated sets is essentially the surface layer of the water column and thus, there is little effect of the set on that habitat. Conversely, the natural habitat related to log sets presumably includes those floating objects that are not man-made. This implies that for purposes of habitat definition, one would make the distinction between, for example, a floating tree limb versus floating lumber. While the impact of the fishery on the “natural habitat” of logs is expected to be small, the ISSF is not aware of any analyses of this issue. Nevertheless, there is widespread agreement that purse seine gear has minimal impacts on benthic habitats, operates only in the surface layer of the ocean habitat.

- 2.5.1 *Principle 2 Outcome Status, Ecosystems*
- 2.5.2. *Principle 2 Management Strategy, Ecosystems*
- 2.5.3. *Principle 2 Information/monitoring, Ecosystems*

Aggregate Score ~80

The removal of large magnitudes of skipjack over many decades without demonstrable impact on other ecosystem components appears to demonstrate that ecosystem function has not been impaired. However, the fishery has altered the ecosystem. For example, skipjack abundance has increased over recent decades presumably due to reduction of predators due to fishing. The impact of fisheries reduction in the abundance of juvenile bigeye and yellowfin tuna (by FADs for example) and ecosystem structure and function are not well understood.

Management of habitat and ecosystem impacts are managed indirectly by VDS and FAD closures. VDS and observer coverage will provide sufficient information to monitor habitat impacts, if any.

While recently there has been considerable scientific effort on ecosystem effects within the WCPFC, there does not appear to be integrated domestic and international strategies to manage the ecosystem components of this fishery.

Principle 3

The governance framework of the PNA Fishery is: 1) the laws and regulations of the nations of PNA; 2) the Nauru Agreement and its background agreements; 3) the Forum Fisheries Agency (FFA); 4) the laws and regulations of the nations of the flag vessels participating in the fishery; and 5) the WCPFC. Assessment of the PNA Fishery relative to Principle 3 must consider the management in total, although ISSFs comments are limited to items 1), 2) and 5). However, the assessment must recognize that the final implementation of regulations and measures fall to the individual nations.

3.1.1. Principle 3 Governance and Policy, Legal and/or Customary Framework: Score ~70

The Nauru Agreement (1982) provides for terms and conditions governing access of foreign fishing vessels to their zones; agreement on uniform terms and conditions for licensing of foreign fishing vessels; cooperation and coordination of monitoring and surveillance; the development of arrangements to facilitate the implementation of the terms and attain the objectives of the Agreement; and annual meetings of the Parties. Unfortunately, it lacks any specific reference to the precautionary approach. Recent (2009) actions of the PNA have provided for the development of a PNA office, strategic fisheries management initiatives, and planning initiatives to maximize long term economic benefits from the fishery (including MSC certification application). The PNA has demonstrated its ability to implement management measures. However, procedures for dispute resolution within the PNAs have not been established.

All of the PNA are members of the WCPFC. The convention under which the WCPFC is formed reflects current international laws and standards relevant to management of migratory species and the ecosystem common to other RFMOs, including specific reference to the precautionary approach, the input of legal experts, dispute resolution mechanisms based on Part VII of the United Nations Fish Stock Agreement, the rights of artisanal and subsistence fishers, the dependence of coastal States and States fishing on the high seas on the stocks concerned and the role of the WCPFC in development of criteria for the allocation of catch or effort. However, to date, the Commission has not allocated fishing rights nor have they invoked dispute resolution mechanisms.

However, there are concerns by some parties for the cost of implementing WCPFC obligations including financial commitments administrative and stewardship obligations and the administrative and legal challenges needed to make the changes. Little is known about the individual national legal framework of PNA parties.

These concerns suggest limitations in fully implementing a MSC certified fishery.

3.1.2. Principle 3 Governance and Policy, Consultation and Responsibilities: Score ~ <80.

The organization of the PNA is clearly identified and their functions defined in the original Agreement. Recent (2009) measures have further defined the organization, roles and responsibilities. While the Agreement allows for other members of the FFA to be observers at PNA meetings, there is no provision for other interested parties to attend meetings or to provide input. Thus, the PNA process lacks transparency and must be addressed. Little is known about the individual national governance processes

The organization of WCPFC has comprehensive participation by Members and Cooperating Non-Members with formal definitions of the roles of each. Participation occurs at meetings of the Commission, Scientific Committee, Technical and Compliance Committee and Finance and Administration Committee. Input of Members and Cooperating Non-Members are considered when developing management measures and procedures. WCPFC rules allow and facilitate observer participation, including interventions at the Commission meeting and at meetings of committees and subcommittees. Written documents prepared by observers can be distributed at meetings as information documents, as provided by the rules.

In the opinion of ISSF the primary deficiency of this PI (relative to a score of 80) is the lack of PNA, sub-regional and national transparency mechanisms

3.1.3. Principle 3 Governance and Policy, Long term Objectives: **Score ~ <80**

PNA fishery objectives of the developed in the 1982 Agreement and in subsequent amendments are to coordinate and harmonize the management of fisheries with regard to common stocks within their fisheries zones for the benefit of the peoples of the Parties, securing greater economic benefits and control of the parties tuna resources through cooperation in the management and development of their shared fisheries resources; to effectively conserve and restore highly migratory stocks while maximizing economic returns; to promote the greater commercial utilization of the tuna resources for the benefit of the Parties; and to enhance commercial and economic opportunities for the Parties through optimum utilization of the tuna fishery. The objectives do not include explicit acknowledgement of the precautionary approach, nor is it clear that these overall objectives are linked to national regulations and to policies implementing precautionary policies. Also, the most recent modification to the PNA objectives occurred in February 2010, so that the implementation into national policy and operations has not yet been demonstrated.

The WCPFC convention formally defines its objective as: “to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and Agreement [UNCLOS and UNFSA respectively]”. Additionally, the Convention specifically requires that the WCPFC apply the precautionary approach (Article 5) and mechanisms to do it (Article 6).

The PNA Fishery must formally establish precautionary policies both within the PNA and within the individual Parties. These must acknowledge the link of objectives between the WCPFC, the PNA and the individual Parties.

3.1.4. Principle 3 Governance and Policy, Incentives for Sustainable Fishing: **Score ~70.**

The PNA has incentives to maintain sustainability, particularly if the PNA Fishery were to be MSC certified. However, it is the responsibility of the PNA to create operational incentives for the vessels and gears through its licensing agreements. The VDS may be considered an attempt to do this, particularly through its calculation of vessel-size-related fishing days. However, this is limited. Additionally, to ISSF's knowledge an examination of the VDS and other options relative to vessel operator incentives has not been done and needs to be done. Also, aid to the nations of the PNA and the Pacific Islands in support of fisheries infrastructure has been significant on both the small scale (e.g. fuel costs) or on a larger scale (support by national governments to the industry), or indirect subsidies through exemptions of some sectors from management measures within the WCPFC. The PNA must respond to the need for appropriate incentives that are created operationally through the licensing agreements. Analyses are needed to justify actions. The burden must be on the PNA since the vessel/operators are not the entities pursuing certification.

3.2.1. Principle 3 Fishery-specific Management System, Fishery-specific Objectives: **Score ~60.**

The long term objectives of both the PNA Group and the WCPFC have been specified (see 3.1.3). However, short-term operational objectives are lacking. It may be argued that PNA and WCPFC management measures are statement of tactical objectives, but in the opinion of ISSF operational objectives must be developed and linked to harvest control rules (1.2.1 and 1.2.2) at both the PNA and

WCPFC levels. Specification of fishery-specific objectives must be led by the development and implementation of harvest control rules.

3.2.2. Principle 3 Fishery-specific Management System, Decision-making processes:

Score ~ <80.

The PNAs decision-making processes are not clearly defined, nor are they transparent. The record and continuity of PNA decisions has demonstrated the ability and will to make timely decisions, but it is unclear how they are achieved (consensus, voting, or other methods).

The WCPFC generally makes decisions through consensus, but procedures are available and documented for voting, appealing decisions, conciliation and review should consensus not be reached. The application of the precautionary approach and the use of the best available scientific advice are required by the WCPFC Convention. While these requirements may seem to be unnecessary given the current status of the stocks of skipjack tuna, prior decisions have not always been precautionary. With dynamic fisheries transparent procedures must be in place to assure that the management system can respond in a timely and appropriate manner. These procedures must be developed and made available for scrutiny.

3.2.3. Principle 3 Fishery-specific Management System, Compliance and Enforcement:

Score ~ 60

Closures, licensing and vessel day limits are actions taken by the PNA to manage fishing effort and eliminate IUUs (illegal, unreported and unregulated fishing). Additionally, requiring a 100% observer programs is a mechanism for monitoring and control. However, it has not been demonstrated that these measures have been fully enforced, particularly at the national level. Logistical problems of maintaining a cadre of trained observers, the timely turn-around of observer data for use in compliance have been suggested to be lacking. The PNA Fishery must demonstrate their ability to monitor and enforce.

WCPFC has recently adopted measures to assist regional enforcement such a vessel list; centralized VMS; IUU Vessel listing procedures; high seas boarding and inspection procedures; prohibition or transshipment at sea by purse seine vessels (with specified exemptions); a regional observer program and FAD Management Plans. The WCPFC's Technical and Compliance Committee is also continuing consideration of port State measures, chartering arrangements, catch/statistical documentation, the control of nationals, and compliance monitoring and reporting, but these have not yet been implemented.

Overall, each PNA member must be required to demonstrate their ability to meet the MSC enforcement obligations to implement the management measures of the PNA and the WCPFC.

3.2.4. Principle 3 Fishery-specific Management System, Research Plan: Score ~ 80.

The WCPFC has a Strategic Research Plan 2007-2011 in place which identifies the four research and data collection priorities needed for any fishery management system: collection and validation of data from the fishery; monitoring and assessment of stocks; monitoring and assessment of the ecosystem; and evaluation of management options. The Plan is largely directed at the biological status of the stocks and ecosystem. Although a number of research projects on management and governance have been funded, further research is needed on the management system itself, its deficiencies and actions to ameliorate those deficiencies and integrated into the Research Plan. It is unclear to ISSF whether the PNA Fishery is fully integrated into this Plan and whether there is a WCPFC and PNA commitment to the Plan (funding). WCPFC research reports are publically available on their website in a timely fashion.

3.2.5. Principle 3 Fishery-specific Management System, Monitoring and Management Performance Evaluation: Score ~ 60

Neither the PNA management system nor the WCPFC management performance been reviewed. The WCPFC considered such a review, but deferred it due to costs.

Stock assessments are peer reviewed by other members of the Scientific Committee and are subject to public scientific scrutiny. Formal external reviews are just now (2010) being implemented in WCPFC. However, assessments are not full evaluations of the management system.

Components of the WCPFC management system are evaluated through annual compliance reports and through evaluation of the effectiveness of specific management measures. While management performance evaluations have been recommended for all RFMOs, the WCPFC has not done one; nor has it implemented a system of performance review.

Conclusions

For the above reasons ISSF opposes certification of the PNA Fishery as defined. An MSC certifiable fishery must have demonstrated a track record of MSC-compliant management. That has not been done. Instead, a mix of actions has been suggested that “might” work in the future. MSC evaluation must be used to certify existing fisheries that operate sustainably and not to “create” a new fishery that has yet to operate under MSC standards. The weight of the evidence clearly leads to the conclusion that MSC standards for Principles 1-3 have not been met, each with an aggregate score of 80 or better.

Thank you for considering our position on this issue.

Sincerely,



Susan Jackson

President - ISSF

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1. WWF Australia, dated 06 August 2010

WWF submitted a substantial (64 page) submission. The assessors have taken account of the views expressed. It should also be noted that the assessment team met Peter Trott from WWF-Australia on 10 August 2010 to go through the WWF submission and meeting notes have been prepared and signed off by WWF-Australia.

CONCLUDING COMMENTS

WWF has identified a range of underlying issues concerning the potential certification of the PNA Skipjack Tuna Fishery. In summary WWF is concerned that:

Stakeholder comments	Assessment team response
Issues of definition of the unit of certification	
<ul style="list-style-type: none"> • The assessment includes only those sets during a fishing trip on unassociated and logs, and not Drifting or Anchored FADS • The assessment covers only those vessels covered by the VDS scheme • Vessels operating in the waters under the PNA waters under the US Multilateral Treaty are not included in the unit of certification • The fishery relates only to the catch in the EEZs of the PNA members, excluding Archipelagic waters • Unassociated sets are sets on free swimming schools or schools of baitfish • Log sets are defined as sets on natural object, where there is no artificial attachment • Log sets are defined as sets on a natural object, where no artificial attachment (buoys, bamboo rafts, lights, beacons and nets) have been added • The definition of unassociated set should specify the minimum distance from a FAD • Procedures are in place to ensure that product from skipjack catch taken in waters under the Unit of Certification can be differentiated from catch taken elsewhere • Observer operation procedures can ensure differentiation of the catch from log and unassociated sets from the catch of artificial FAD sets 	<p>The MSC definition of a Unit of Certification (TAB D 003 ‘<i>Unit of Certification</i>’) in the MSC Fisheries Assessment Methodology allows for recognition of a group of vessels in the fishery targeting a stock (in this case skipjack), using a specific practice, setting on free schools or natural log sets.</p> <p>Moody Marine will recommend options to ensure that product from skipjack catch taken in waters under the Unit of Certification can be differentiated. However, the specific CoC exercise is not a component part of this assessment, and these issues are presently being addressed by the PNAO.</p> <p>Definitions relating to the unit of Certification are described in Section 2 of the report and conform to the definitions set by SPC. It is also noted that Log sets failed the assessment, and this unit of certification will be dropped.</p>

RFMO Management	
<p>RFMOs have failed to adopt precautionary conservation measures based on precautionary limits and limit reference points</p> <p>RFMOs have failed to adopt comprehensive bycatch mitigation strategies</p> <p>Some of the tuna RFMOs have failed to conduct performance reviews.</p>	<p>Evidence suggested in the report clearly shows that PNA (3 IA), and WCFPC (2008-01) have adopted a precautionary approach to fisheries management. The assessors recommend specific conditions to ensure that these arrangements are supported by the application of strong management processes for VDS. These include a recommendation for PNA to adopt Harvest Control Rules applying the precautionary approach.</p> <p>PNA and WCPFC has limited the bycatch of BET through imposing a three month FAD fishery restriction (CMM 2008-01), supported by other measures including tuna bycatch retention.</p> <p>The assessors also set a Condition 2, data review and shark mitigation measures, if appropriate,. Condition 2 also requires that measures adopted under CMM 2010-07 are implemented to allow assessment of the fishery on silky sharks.</p> <p>WCPFC is committed to and agreed on an independent performance review (Section 7.1).</p>
Principal 1: Target Species	
<p><i>Stock assessment:</i> The stock is neither overfished nor in an overfished stated.</p> <p><i>Reference points:</i> SPC has not made recommendations to the Commission in 2010 on appropriate reference points; the onus for addressing Principle 1 indicators must fall ultimately on the WCPFC</p> <p><i>Harvest strategy:</i> the application of capacity limits has the potential to provide beneficial management controls for skipjack tuna</p> <p><i>Harvest control rules and tools:</i> the absence of harvest control rules that provide for immediate an effective action to reduce exploitation rates</p> <p><i>Information:</i> The status of data in the Philippines and Indonesia</p> <p><i>Assessment:</i> A recent independent review of WCPFC's transitional science structure and function.</p>	<p><i>Stock assessment:</i> Updated tagging data has been incorporated into the latest assessment (2010) but not including the PTTP data, with these tagging data to be incorporated into the 2011 assessment. Data from Indonesia and the Philippines (Section 5.1).</p> <p>SPC</p> <p><i>Reference points:</i> The current assessment provides estimates of a range of indicators that can be used appropriately as LRPs. Using 20%B0 as a limit reference point (FAM 6.2.19 (d)), the stock is above this level.</p> <p>PNA, which has delegated management authority for the VDS, is recommended to adopt limit and target reference points for skipjack tuna (Appendix A, 1.1.2). PNA should promote the adoption of LRPs and TRPs for the WCPFC skipjack stock by WCPFC.</p> <p><i>Harvest strategy:</i> A harvest strategy is in place at WCPFC, PNA regional and national level (Section 5.4.1). The archipelagic states have a range of management actions, which are deemed to be effective to varying degrees (Section 5.4.2).</p> <p><i>Harvest control rules and tools:</i> Figure 1 (Annual Effort Days inside PNA EEZs) demonstrates constant effort levels consistent with CMM 2008-01 for the PNA fleet. However, there are some corresponding concerns: USMLT effort has been growing while effort from the other groups (especially DWFN) has been falling; Effort inside PNA waters is likely to increase in 2010 as a result of a transfer of effort from the high seas; FSMA effort will exceed the limit set; and vessels fishing in Archipelagic waters are exempt from the VDS (Section 4.3). Condition 1, Appendix A 1.2.2 requires that PNA must adopt harvest control rules consistent with a harvest strategy, and for these rules, and take account of the main uncertainties associated with fishing mortality in archipelagic waters. The Condition also requires PNA to commission independent reports demonstrating that effort is effectively limited within overall PAE levels established in accordance with the VDS</p>

	<p>text, PNA Implementing Arrangements and appropriate WCPFC conservation and management measures (within 2 years of certification) and that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules, (within 4 years of certification).</p> <p><i>Information:</i> there are a number of ongoing initiatives to strengthen data collection in Indonesia, Philippines and Vietnam, supported by GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM), This data has been added to the 2010 assessment (Section 7.1.3)</p> <p><i>Assessment:</i> An independent Review of SPC science structure and functions was conducted in 2009 (Section 7.1).</p>
<p>Principal 2: Ecosystem Impacts</p>	
<p><i>Retained stock assessment:</i> The Standards Council agreed that Principle 2 applies to the fishery (a combination of stock(s)/gear/practice) seeking certification, so long as the fishery as a whole is conducted in a way that does not substantially undermine the objectives of Principle 2 across the whole range of the fish stock(s). This was intended to allow Principle 2 to be applied across the full spatial range of the fish stock(s). BET is in a slightly overfished state, or will be in the near future.</p> <p><i>Management Strategy:</i> The current measures in place under the VDS will not achieve the necessary reduction in bigeye tuna catch, and the setting on log sets does not meet the minimum requirements for MSC certification.</p> <p>Greater reductions in vessel days are required in order to bigeye tuna on a sustainable footing.</p> <p>WWF believes that there is a clear evidence that the level of take of YFT on unassociated sets does not hinder recovery and rebuilding of the stock.</p> <p><i>Bycatch stock status and management:</i> There is no assessment as to whether the silky shark stock is likely to be within safe biological limits. Strategies have not delivered a reduction in fishing effort. There is evidence that observer based estimates of catch substantially understate catch.</p>	<p><i>Retained stock assessment:</i> The fishery is assessed across the range of the stock, but also to include the impact of the fishery on that stock.</p> <p>The purse seine catch of YFT and BET represents >50% and 20-25 % respectively (Section 6.2.1). BET represents < 1% and ~ 5% of free school and logset bycatch respectively.</p> <p>There is a high degree of certainty that YFT is within biologically based limits. BET is not overfished (Section 6.2.1, within biologically based limits (FAM 7.11/7.11.12). $B_{current} / B_{msy} = 1.39$; $B_{current} / B_0 = 0.42$. (Harley et al., 2010). Biomass is therefore likely, with a high degree of certainty, to be currently above $B_{lim} = 20\%B_0$ (Section 6.2.1)</p> <p><i>Management Strategy:</i> For the <i>unassociated schools</i>, due to the limited impact of this fishery on the BET stock, there are no measures necessary. Figure 7 provides clear evidence that that the level of take of BET on unassociated sets does not hinder recovery and rebuilding of the stock.</p> <p>In the case of <i>log sets</i>, the measures in place (CMM 2008-01) are not considered able to maintain the BET stock at levels that are highly likely to be within biologically-based limits and they may not effectively limit the impact of log sets on the recovery and rebuilding of the BET stock, especially if there is transfer of effort from drifting FAD to log sets (Section 6.2.3). The log set BET fishery therefore scores below SG and does not meet the requirements for MSC certification.</p> <p>We agree the main discarded bycatch species to be silky shark and blue marlin, but for both set types. The management of discarded by catch is examined in Section 7.3.2. Based on length frequency information, it would appear that the population is relatively stable, though there may be areas of local depletion. It is therefore likely that the stock is within safe biological limits.</p> <p>Condition 2 (Table 18) has been set to review of all available data (observer, logsheet) provide the necessary level of confidence that the partial by catch strategies (CMM 2010-07) is working.</p> <p>Catch rates of blue marlin are very low (c. 0.03% of total catch volume for both set types), with total annual catches likely to be</p>

<p>Bycatch species represent a very small proportion of the catch. There is no indication that any of the species (rainbow runner, mahi mahi, black and blue marlin) are outside biologically based limits.</p> <p><i>ETP species and management:</i> The available data suggest that there is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species.</p> <p><i>Habitats:</i> The nature of the purse seine fishing method is such that it is highly unlikely to cause serious or irreversible harm to benthic habitats. Such ecosystems created around floating objects may provide important habitats for tuna and other species.</p> <p><i>Ecosystems:</i> The trophic impact of removing large quantities of tuna has not been confirmed.</p>	<p>less than 100t for unassociated sets and 10t for log sets. Discard levels in the unassociated catches is high (c. 60%) and post-discard survival is unknown, but likely to be low. Although the stock is likely to be fully exploited, it is likely to be within biological limits and this fishery contributes a very small part of overall fishing mortality. An ISC stock assessment for blue marlin is scheduled 2012 (ISC, 2009). (Table 8, discarded bycatch and Section 6.3).</p> <p><i>Habitats:</i> In the case of log sets, a number of factors suggest that depopulation of natural log populations are neither serious nor irreversible impacts, including: (i) the short residency times under FADs; (ii) most fishers pull logs out of the purse seine and encouraging the smaller juvenile reef species to ‘recolonise’ the logs immediately upon release, where the presence of small fish is likely to accelerate the process; (iii) the time needed to aggregate around FADs is quite short and (iv) logs eventually become waterlogged and sink (Section 6.5.1 – <i>Use of natural logs as a fish aggregating device.</i></p> <p><i>Ecosystems:</i> Whilst the trophic level of the catch has decreased slightly, there was no detectable decrease in the trophic level of the population (Section 6.6).</p>
<p>Principle 3: Governance</p>	
<p><i>Legal Rights:</i> All have either ratified or acceded to both the United Nations Convention to UNCLOS and UNFSA</p> <p>It is unclear to what extent the precautionary approach is reflected in the national fisheries management legislation and policies of the PNA Members</p> <p><i>Decision making:</i> The Nauru Agreement does not provide a mechanism for resolution of disputes between the Parties</p> <p>WCPFC Convention dispute resolution has not been formally tested.</p> <p>The absence of an explicit commitment to the application of the precautionary approach in decisions taken under the Nauru agreement is a significant deficiency</p>	<p><i>Legal Rights:</i> The WCPFC Convention, FFA Convention, the Nauru Agreement and associated arrangements and applicable national fisheries laws and plans are consistent with the principles and provisions of UNCLOS, UNFSA & CBD (Section 7.1).</p> <p>The precautionary approach is incorporated into national laws and tuna management plans (with the exception of Kiribati). All WCPFC Members (including PNA members) are legally bound to apply the precautionary approach as parties to the WCPFC Convention (with its Art. 5 & 7).</p> <p><i>Decision making:</i> The Palau Arrangement sets out a dispute mechanism in Art 8 for issues related to the purse seine fishery and the VDS based on a Pacific way of negotiation, compromise and consensus. The UNFSA dispute mechanism applies to the Palau Arrangement and the VDS. Functioning national legal systems provide recourse for settlement of disputes.</p> <p>Proactive PNA Decision making has resulted in measures and strategies underpinning effective management of the WCPO purse seine fisheries (Section 7.1).</p> <p>At the WCPFC level, There are established decision-making processes in the Convention and these are operationalised in the processes of the SC, the TCC and the Commission itself. Those</p>

Processes for reporting on decisions are not well established at this time and there is a lack of transparency associated with the decision making process

Consultation: There is no provision for other interested parties to attend PNA meetings or to provide input

Incentives: VDS incorporates a mechanism to respond to the variation in effort by different sized vessels, taking account creating some incentives for sustainable fishing by countering the substitution of other input for days

Failure to constitute a direct control on the amount of fish taken may allow for overcapacity and not address overfishing.

National governments of Pacific island nations are known to subsidize inputs such as fuel in their domestic fishing fleets

Fishery specific objectives: CMMs are not specified in terms of measurable targets and outcomes

Compliance: Many Pacific island countries have struggled to train and retain observers and there remains doubt as to whether this can be achieved

The ability of the PNA countries to effectively monitor and control their fisheries is questionable

There is a need for PNA members to demonstrate how the regional MCS strategy will improve the capacity of the PNA members to ensure compliance

Peer Review: There are no specific mechanisms for evaluating the performance of the PNA management system

WCPFC has not yet undertaken a performance review

decision-making processes have resulted relatively quickly in a comprehensive set of CMMs and strategies to achieve the specific objectives in the purse seine fishery. WCPFC decision-making processes are open, use the precautionary approach and best available information and are well documented (Section 7.1).

Explanations are provided at the WCPFC level but not always at the PNA level for actions, or lack of action associated with relevant findings and recommendations. **Condition 4 (2)** requires explanation of decisions by PNA, particularly relating to the operation, monitoring and reporting of the VDS needs to be improved.

The VDS text requires the Parties to “take the necessary management action to ensure (such) effort creep is not detrimental to the fishery”, and the VDS includes mechanisms to adjust effort to reflect effort creep and avoid overfishing. *Consultation:* There is a process which allows for ratification of observer status at PNA meetings as well as TAE/PAE setting meetings. Attendance at PNA Meetings has to date included Greenpeace, New Zealand, Niue, and the Secretariat of the Pacific Community.

Incentives: The rights-based management framework of the VDS creates incentives for sustainable fisheries at the PNA and national government level and provides for the creation of a system of positive incentives at the enterprise level that is only partially in place at this point. There are subsidies that undermine fairness rather than sustainability. There is evidence that these subsidies are considered, sometimes explicitly, within the management system to ensure that they do not undermine sustainability. There is no evidence of widespread subsidies to the tuna purse seine fishery. No fuel subsidies are applied. But the weaknesses in VDS reviews and the clarity in the way that VDS decisions are linked to scientific advice falls short of ensuring that these subsidies do not contribute to unsustainable fishing practices in future (Section 7.3).

Fishery specific objectives: Objectives relating to P1 and P2 Outcomes are set out in various WCPFC CMMs, especially 2008-01 (BET and YFT), and CMMs relating to shark and sea turtle turtles as well as national plans, the Palau Arrangement and the VDS. These include short and long term objectives, but the objectives are not all well defined and measurable, especially for the CMMs related to P2 outcomes.

Compliance: Observer managers comment that the requirement to extend observer coverage has resulted in some difficulties (Box 7, Section 7.2). However, attrition is countered by strong interest within the countries coupled with inter Party observer exchanges. The evidence suggests that 100% observer coverage is being achieved.

MRAG 2009 identified risks associated with the ability to counter compliance, but there is no evidence of systematic non compliance

	<p>within the purse seine fishery and inadequate resourcing by some parties is countered through strong support provided by FFA Surveillance Centre and through joint operating initiatives. The Region has in place a robust VMS system, though a weakness exists in terms of information exchange between the Parties, and between the Parties and WCPFC. Other CCMs are reported to apply strong port inspection systems as and when the vessels land into port (Section 7.2).</p> <p><i>Performance Review:</i> Condition 5 requires PNA to implement appropriate external review processes. It is accepted that WCPFC will implement the required RFMO external review in line with the agreed Kobe course of Action.</p>
Other issues	
<p><i>Set definitions</i></p> <p><i>Climate change:</i> There is potential for climate change to have a significant bearing on stocks of skipjack</p> <p>The abundance of floating logs might lead to a greater proportion of associated sets and higher proportion of non target species</p> <p><i>Traceability:</i> It is questionable whether this level of coverage can ensure observation of 100% sets</p> <p>All observer programmes are open to abuse and the integrity of the programme can be compromised</p> <p>Corruption is an ongoing concern at both political and operational levels in the Pacific</p> <p>PNA should investigate the use of tamper proof electronic measures of catch validation as an adjunct to observer presence on vessels</p> <p><i>Non Members:</i> Indonesia's failure to join WCPFC is a serious risk to sustainable</p>	<p>The type is set following agreement between ship's master and the observer. Any object defined within 1 nautical mile of the vessel's position classifies the set accordingly – log set, dead whale etc. However, it also transpires that on occasions objects are not found until after the set has been made. In such cases, the set is redefined. It therefore follows that a set defined as a free school may be reclassified as a log set, if a log is found in the set.</p> <p><i>Climate change</i> is taken into account under Section 7.6 (Ecosystem impacts) in terms of project impacts, management implications and information availability.</p> <p>The issue of abundance of log sets, as opposed to other FADs, is taken into account in the assessment. The assessors view is that due to the impact of sets on log sets and other floating objects on BET, fishing on floating objects is unsustainable and undermines the ability of CMM 2008-01 to achieve one of its objectives. However, the impact of fishing on free schools, where BET bycatches are very low, suggests that free school fishing should be encouraged at every opportunity. MSC seeks to reward good practice, encourage continuous improvement and lead by example, and so would wish to certify fisheries that showed good practice (Letter from MSC to ISSF).</p> <p><i>Traceability:</i> Chain of Custody procedures allow for mixed trips such that the product from different sets has to be proven to be stored separately, with appropriate records. Selected CoC recorders, as opposed to observers, can endorse this system. The assessors believe that utilising existing observers can validate activities and actions, but record keeping issues must also assigned to an on board professional The alternative would be for specialist free school trips to be undertaken. Observer records can be used to validate activities (as is the case in other Certified fisheries, e.g Toothfish). The integrity of the system would have to be evaluated, and potentially stronger than conventional factory validation procedures.</p>

<p>fishing in the region.</p> <p>Archipelagic waters and domestic fleets:</p> <p>WCPFC do not have a mandate to limit/manage fishing activities in archipelagic waters. The risks associated with failure /inability to manage all components of the skipjack stock must be taken into account.</p> <p>Participation and compliance with CMMs of the members of the PNA Group should be considered explicitly</p> <p>Condition setting: Relevant entities. It is very difficult to get a commitment to change to management arrangements, regulation or research priorities in order to satisfy the MSC requirements</p>	<p>The issue of observer corruption is addressed through debriefing procedures. These have been tested and proven to be effective. Political and administrative corruption was identified (AusAid 2007). This drew attention to a specific problem in the Solomon Is. This issue has been addressed through the creation of a system of public auditing (MFR (I6), and facilitated by an ongoing New Zealand Institutional Strengthening Programme. Other national administrations are also subject to the same level of Audit scrutiny.</p> <p><i>Non Members and Archipelagic countries:</i> The impact on tuna species from non PNA countries is likely to feature for YFT and BET, and not so much for SKJ ,because of high levels of natural mortality. Management measures of CMM 2008-01 do not apply in archipelagic waters, but measures are being introduced with varying degrees of effectiveness (Section 5.4.2). Condition 1 specifies uncertainties such as fishing mortality in archipelagic waters must be taken into account by PNA when setting limit reference points.</p> <p>Participation and compliance with the CMM by the PNA group have been explicitly tested in Section 7.1.</p> <p>Conditions are set such that the PNA Group, as the responsible management organisation, is to implement the conditions. The activities of PNA Group have been tested and have shown to be strong advocates of good governance.</p>
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2. International Seafood Sustainability Foundation (ISSF), dated 10 August 2010

Stakeholder comments	Assessment team response
<p><i>Fishing days are defined as any day or part of a day in the waters of a PA</i></p>	<p>The MSC default assessment tree allows for differentiation between target (P1) and retained species (P2). In meetings the fishery industry conformed that SKJ was the target species. BET was confirmed as a non target species. The statistics illustrate that both for free schools and for log sets, catches of BET are not the target species catch.</p> <p>The assessment indicates following a review of the FAM SGs that standards – Harvest control rules and tools (P1.2.1) and Legislation are being implemented to the greater extent. Where weaknesses have been identified, specific Conditions have been set to rectify any shortcomings. However, PI 2.1.2 (Management strategy), is deemed to be an insufficient strategy to control the log set fishery which is identified as likely to hinder the recovery of BET.</p> <p>Management regulations are clearly defined by 2008-01, and the 3rd Implementing Arrangement or are implemented through a set of parallel national and archipelagic measures.</p> <p>Certification draws from the Scoring Guideposts (SGs). These have been used by the assessors against the defined scoring criteria. Failure to reach SG 80 has resulted in the setting of Conditions with specific timelines for completion, with performance in meeting these conditions evaluated by an annual audit,</p> <p>Definitions of set types have been made by SPC. These have recently been refined. They can be found in SPC (2010). Electronic reporting – to check CoC requirements, but think that electronic reporting procedures are not a requirement.</p> <p>Fishing days are defined in the VDS schemes text (b) as any day in the waters of a Party outside archipelagic waters unless prior notice is given of a vessel not fishing, e.g. for transit (Section 7.1, <i>The Vessel Day Scheme</i>).</p> <p>Fishing in PNA EEZs to date, is shown to have operated within the reference limits set under 2008-01A process is in place to monitor and facilitate exchange of PAEs under the auspices of the PNAO. The PNAO advises that the Parties have taken the decision to make changes to the Scheme to increase the “hardness” of the limits in 2011.</p> <p>Moody Marine Ltd has correctly followed the process of nominating and revising assessors including the posting of assessor profiles and CVs on the Web. Moody Marine took onboard the comments of MSC, WWF and ISSF, especially in the context of strengthening the team to “include experts in the</p>

	<p>actual workings of the appropriate RFMOs and the member governments” (ISSF submission to Moody Marine, 6 May, 2010). Mr Clark’s details, along with those of two additional experts were posted and no further comments were received within the prescribed period of 30 days.</p>
<p><i>Evaluation of Performance Indicators</i></p> <p>Following are ISSFs comments related to specific performance indicators (PIs)) in reference to the Default Assessment Tree of the FAM and our appraisal of the PNA Fishery relative to the scoring guidelines. Comments are presented for each PI within Principles 1 and 3. However, generic comments are presented in aggregate for PIs of Principle 2, since many of the comments are related. References which contributed to our conclusions are attached.</p> <p>Principle 1</p> <p><i>Principle 1.1.1 Stock Status: Score ~90.</i></p> <p>Assessment based on an application of MULTIFAN-CL (the equatorial model) where 24 fisheries are modelled (including Japanese Pole & Line), catch and CPUE and size frequency and tagging data used. An improvement between the assessment of 2005 and 2008 was the better integration of the tagging model. No indications of changes in recruitment; size frequency of catches only have limited catches less than 45 cm (size of maturity). The assessment includes six areas.</p> <p>Limit reference points have not been established by the Commission (WCPFC); however, the WCPFC scientific committee is using BMSY and FMSY as limit reference points for their assessments until such time as formal reference points are adopted by the commission. There is a high degree of certainty that the stock has been fluctuating around its limit reference point, or has been above its limit reference point, over recent years.</p> <p>$B_{current} > 3 \times BMSY$, $F_{current} < .3 \times FMSY$ and it has been this way for the entire time series; catch has never exceeded MSY. Therefore, the stock status is good and there is no overfishing occurring relative to commonly used limit reference points. There is a high degree of certainty that the stock is above the point</p>	<p>The most recent skipjack assessment indicates that there is a zero probability that B / B_{MSY} is anywhere close to 1.0, and has been for the past 10 years, although the most recent value is around 1.6. The stock remains well above either limit RPs at which point recruitment might be impaired based on FAM guidance ($B_{current} / B_0 = 0.75$ cf 0.2; $B_{2009} / B_{MSY} = 1.6$ cf. 0.5)</p>

<p>where recruitment would be impaired.</p>	
<p><i>Principle 1.1.2 Reference Points: Score ~60.</i></p> <p>Generic limit reference points have been used by the WPCFC Scientific Committee and the stock is well within these limits (see 1.1.1). However, formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points, but the Commission itself has yet to formally adopt rules. Target and limit reference points can be estimated from the current assessment. There is no technical reason that it cannot be done. The time needed is to establish the appropriate degree of risk to be implemented. This will take Commission input, as well. This was noted by the WCPFC (<i>In progressing work on reference points the Commission should establish a parallel/joint process for establishing key management objectives for each target species including the possibility of holding an inter-sessional workshop on management objectives in 2009</i>). Additionally, it is likely that whatever the targets and references are that are chosen for skipjack, the current status will be within these limits.</p> <p>While the status of the stock under common reference points is good, the fact that formal reference points and rules have not been adopted creates management risk for the future of the fishery. Therefore, the ISSF finds this PI to be insufficient and a Condition must be imposed to ameliorate this situation. The Condition must require action on the part of the PNA within the WCPFC to establish those rules.</p>	<p>The current assessment provides estimates of a range of indicators that can be used appropriately as LRPs and TRPs.</p> <p>Generic MSY-related reference points are used by the WPCFC Scientific Committee to assess stock status, consistent with the WCPFC Convention, UNFSA and current practice in other tuna RFMOs but explicitly determined limit and target Reference Points for skipjack tuna have not yet been adopted by PNA or the WCPFC.</p> <p>In practice, the stock is managed with Bmsy or above as a default TRP.</p> <p>The general observed strategy of the WCPFC and PNA managing regional tuna stocks is to reduce the exploitation rate when F exceeds F_{MSY}, which should ensure for skipjack that the exploitation rate is reduced as the level associated with an appreciable risk of recruitment being impaired is approached – in this sense there is an implied LRP above the level at which there is an appreciable risk of impairing reproductive capacity</p>
<p><i>1.2.1. Principle 1 Harvest Strategy: Score ~70.</i></p> <p>The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has specified generic capacity limits (driven by concerns for bigeye and yellowfin tuna (“the total capacity of their respective other commercial tuna fisheries for bigeye and yellowfin tuna, including purse seining that occurs north of 20°N or south of 20°S, but excluding artisanal fisheries and those fisheries taking less than 2,000 tonnes of</p>	<p>There is a harvest strategy in place based on the application at the WCPFC level of a mix of catch, effort and capacity limits applying to the major fleets harvesting skipjack; at the PNA level, zonal effort limits on the purse seine fisheries and a range of other management actions e.g. closures of areas within the high seas and national waters, catch retention rules, etc; and a range of additional management actions at national level. These management actions are supported by a robust stock assessment and extensive monitoring frameworks</p>

<p>bigeye and yellowfin, shall not exceed the average level for the period 2001-2004 or 2004”; Conservation and Management Measure (CMM) 2008-01, para. 39). The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, these limits have not been formally specified or formally linked to actions at the national level.</p> <p>Additionally, the management effort controls exerted by the PNA are through the Vessel Day Scheme in which fishing days in their waters are to be maintained below that of 2004, and a large closed area of about 4 million square miles of the high seas.</p> <p>The above actions are not formal harvest strategies. However, collectively they appear to be achieving common stock status limit reference points ($B > B_{msy}$; $F < F_{msy}$). Apparently, discussions have been initiated within WCPFC to establish further harvest rules for all species (not just skipjack). But these have yet to be implemented (see 1.1.2)</p>	
<p><i>1.2.2. Principle 1 Harvest Control Rules:</i> Score ~60.</p> <p>Currently there are no formal control rules in place either domestically within the PNA or within the WCPFC. While overall caps on effort and vessel day limitations have served to maintain catches at adequate levels, the whole point of formal harvest control rules is to develop objectives and contingencies for timely actions should conditions in the fishery change. The lack of these contingencies results in risk to the fishery. This PI is deemed inadequate by the ISSF and should be addressed in a Condition in which domestic and WCPFC rules are adopted (see 1.1.2).</p>	<p>HCRs: <i>a set of well-defined pre-agreed rules <u>or actions</u> used for determining a management action in response to changes in indicators of stock status with respect to reference points</i> (Glossary: MSC, 2009)</p> <p>The assessment includes <u>Condition 1</u>: PNA must adopt harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy and act to reduce the exploitation rate as limit reference points are approached (within 2 years of certification and PNA must promote the adoption of appropriate harvest control rules by the WCPFC at annual meetings</p>
<p><i>1.2.3. Principle 1 Harvest Strategy:</i> <i>Information and Monitoring:</i> Score ~80</p> <p>A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest</p>	<p>stock identification, catch reporting and size-frequency sampling by each fleet and catch-per-unit-effort data from these fleets</p> <p>Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with likely and best practice HCRs, and indicators of catch and effort are available and monitored with sufficient frequency to support catch or effort-related HCRs. In addition there is a very high level of observer coverage (100% since 2010), port sampling and</p>

<p>strategy, is available. All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.</p> <p>Monitoring of the stock is based on catch and effort data, length-frequency data and tagging data. The stock assessment has been discussed under 1.1.1 and 1.2.4. However, the efficacy of the information relative to management objectives are not known until such time as harvest control rules are established.</p>	<p>transshipment monitoring.</p> <p>There is good information on all other fishery removals from the stock, except for Indonesia. However there are a number of ongoing initiatives to strengthen data collection in Indonesia, Philippines and Vietnam, supported by GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM), This data has been added to the 2010 assessment.</p>
<p><i>1.2.4. Principle 1 Harvest Strategy, Assessment of stock Status: Score ~60.</i></p> <p>Stock assessments were conducted most recently using the MULTIFAN-CL model. As with most assessments, MULTIFAN-CL models the population dynamics of the fish and the characteristics of the fisheries based upon a set of unknown parameters that are estimated from observed data. The model makes “predictions” of the data and these are statistically compared to the observations by searching for the set of parameters where the likelihood of the observations and predictions is maximized. The estimated parameters are used to determine stock productivity and status. The basic approach of MULTIFAN is to model multiple “fishing fleets” which exhibit relatively homogeneous behaviour in regards to their selectivity by size, areas fished and the efficiency of their gear. In the WCPO skipjack application the fisheries were categorized into 24 fleets encompassing the six areas, gears (pole-and-line, purse-seine and others) and the nations to which the fleets belong.</p> <p>The observed data included catch and effort data, length frequency data and tagging data. The catch and effort data were categorized by fisheries, by area and by quarter of the year. Catch per effort was standardized using General Linear Models for the fisheries for which there were longer time series of data in which factors such as year, quarter, region, bait effects, effects of</p>	<p>There is a robust and internationally acknowledged stock assessment programme in place (Allen, 2010). The assessment:</p> <ol style="list-style-type: none"> 1. takes into account the major features relevant to the biology of the species and the nature of the fishery. 2. takes into account uncertainty and is evaluating stock status relative to MSY-based reference points in a probabilistic way. 3. has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored 4. The assessment is subject to internal peer review through the WCPFC SC. The WCPFC is also beginning to apply an external peer review process but this has not been applied to this assessment.

radar/sonar and satellite data and the targeting of other species. Length frequencies were available by 2 cm size class by quarter, year and fishery. However, sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of ~ 250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model.

While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments have not been fully integrated. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points.

Principle 2

2.1.1. Principle 2 Outcome Status, Retained Species

2.1.2. Principle 2 Management Strategy, Retained Species

2.1.3. Principle 2 Information/Monitoring, Retained Species

Aggregate Score ~60

The retained species in the Certification Unit have been defined as yellowfin and bigeye. Of these bigeye is “in a slightly overfished state, or will be in the near future with high levels of overfishing occurring” (WCPFC 2009 Scientific Committee) and it has been advised that current management measures for bigeye will not reach the needed fishing mortality rate reduction goals for this.

The 2010 bigeye assessment (see documents available before the start of the 2010 WCPFC Scientific Committee Meeting) notes that: recruitment in all analyses is estimated to have been high during 1995–2005. This result was similar to that of previous assessments, and appears to be partly driven by conflicts between some

It is noted that bigeye tuna represents ,<1% of the unassociated and ~5 % of log catches, but is still considered due to its vulnerability, economic significance to the longline fishery, and the significant impact of the log fishery on the bigeye stock spawning potential.

YFT: Not overfished, within biological based limits (FAM 7.1.11/7.1.12). CMM 2008-01 represents a partial strategy. $B_{current} / B_{MSY} = 1.37-1.88$; $B_{current} / B_0 = 0.57- 0.60$ (Langley *et al.*, 2009); $B_{MSY}/B_0 = 0.37-0.38$; Likelihood profile indicates highly certain that $B/B_{MSY} > 1.0$. Biomass is therefore estimated to be currently above $B_{LIM} = 0.2B_0$, with a high degree of certainty.

BET: $B_{current} / B_{MSY} = 1.39$; $B_{current} / B_0 = 0.42$. (Harley *et al.*, 2010). Biomass is therefore likely, with a high degree of certainty, to be currently above $B_{lim} = 0.20 B_0$.

Fishery impact figures show that the unassociated sets make a very small (<1%) contribution to reduction in the spawning potential of the bigeye stock. The figures also show that there has been no significant increase in the contribution of unassociated sets to a reduction in spawning potential since CMM 2008-01 came into force (Harley *et al.*, 2010). Fishery impact figures also show that the log sets make a larger contribution to reduction in the spawning potential of the bigeye stock, currently estimated to have been responsible for 8-10% reduction.

<p>of the CPUE, catch, and size data inputs. The attribution of depletion to various fisheries or groups of fisheries indicates that the purse seine and other surface fisheries have an equal or greater impact than longline fisheries on the current BET biomass. These results led to the conclusions that 1) that current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the last decade; 2) overfishing is occurring in the bigeye tuna stock, but possibly at a lower level than previously estimated; 3) bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and 4) <i>MSY</i> levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.</p> <p>These results require that formal recovery plans and harvest rules be established. They have not. Additionally, were it not for the artificial definition of the fishery, the operating fishery would have been evaluated under Principle 1 which it would have failed.</p>	<p>For the <i>unassociated schools</i>, due to the limited impact of this fishery on the BET stock, there are no measures necessary. In the case of <i>log sets</i>, the measures in place (CMM 2008-01) are not considered able to maintain the bigeye stock at levels that are highly likely to be within biologically-based limits and they may not effectively limit the impact of log sets on the recovery and rebuilding of the bigeye stock, especially if there is transfer of effort from drifting FAD to log sets.</p>
<p>2.2.1. Principle 2 Outcome Status, Bycatch Species</p> <p>2.2.2. Principle 2 Management Strategy, Bycatch Species</p> <p>2.2.3. Principle 2 Information/monitoring, Bycatch Species</p> <p>Aggregate Score ~60</p> <p>Analysis of what is a retained species must be presented. For example, log sets catch a suite of species including shark species which can be retained, have vulnerable life histories and are not presently assessed. Also, current scientific advice stresses that marlin exploitation should not expand. Therefore, there are a number of uncertainties about non-targeted species in the PNA Fishery, regardless of whether they are considered retained or bycatch. Management measures related to non-targeted species (bycatch and retained) have been limited both domestically and within the WCPFC. Requirements for 100% observer programs are relatively new and it is unclear whether these have been fully implemented. Note that an observer <i>program</i> includes not only placing an</p>	<p>The observer programme has also been examined in detail (Section 6.3), inc. an analyses of data compilation & analysis capacity.</p> <p>We agree the main discarded bycatch species to be silky shark and blue marlin, but for both set types.</p> <p>The management of discarded by catch is examined in Section 7.3.2. Conditions have been set to review all available data (observer, logsheet) to provide the necessary level of confidence that the partial bycatch strategies work.</p>

observer and collecting the data, but the timely processing/transfer of that data such that it can be used for monitoring and control decisions. The ability of the PNA Fishery to respond to these concerns has not been demonstrated.

Bycatch concerns arise with log sets, as discarded bycatch with unassociated sets is small. No formal stock assessments have been done on the discarded bycatch species. However, the magnitude of the catches is low and the productivities of the species involved are relatively high (mahi mahi, rainbow runner, frigate tuna, oceanic triggerfish, mackerel scad). The exception to this is the sharks and marlins which should most likely be included within the retained species category. Mortality of discarded bycatch (those released alive) does not appear to be known. Non-binding resolutions of the WCPFC encourage fishers to avoid non-target species catches, but it has not been demonstrated that these measures have been effective. And it is unclear if similar measures have been implemented domestically within the PNA Fishery. A comprehensive bycatch management plan has not been implemented at both domestic and international levels.

2.3.1. Principle 2 Outcome Status, ETP Species

2.3.2. Principle 2 Management Strategy, ETP Species

2.3.3. Principle 2 Information/monitoring, ETP Species

Aggregate Score ~70

The WCPFC has adopted management measures for sea turtles and sharks to limit the take of these species. In particular the sea turtle measures require release of sea turtles, procedures to enact the release and the recording of interactions. The shark measure simply encourages live release of those sharks not used for food or other purposes without specific requirements to release protected species of sharks. Obviously a primary monitoring tool for ETP bycatch will be a 100% observer coverage program. However, there are limitations to observers in terms of species identification during release. Additionally, as

No ETP species (as defined in the FAM) are endangered by log sets.

There are very low interactions with false killer whales from unassociated sets. Given the observed live condition of released false killer whales of 90%, there is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species.

<p>noted above the turnaround of observer data for management purposes has not been demonstrated. Also, market data suggest that observer catch estimates may be underreported. These and other issues must be addressed by evaluations of the existing management measures must be done and insufficiencies ameliorated. Then comparable measures must be part of the PNA Fishery's licensing agreements.</p>	
<p><i>2.4.1. Principle 2 Outcome Status, Habitats</i> <i>2.4.2. Principle 2 Management Strategy, Habitats</i> <i>2.4.3. Principle 2 Information/monitoring, Habitats</i></p> <p>Aggregate Score ~80</p> <p>The "habitat" in relationship to unassociated sets is essentially the surface layer of the water column and thus, there is little effect of the set on that habitat. Conversely, the natural habitat related to log sets presumably includes those floating objects that are not man-made. This implies that for purposes of habitat definition, one would make the distinction between, for example, a floating tree limb versus floating lumber. While the impact of the fishery on the "natural habitat" of logs is expected to small, the ISSF is not aware of any analyses of this issue. Nevertheless, there is widespread agreement that purse seine gear has minimal impacts on benthic habitats, operates only in the surface layer of the ocean habitat.</p>	<p>The report has reviewed the available literature on the impact of purse seine depletion of floating logs which are considered to be low and short-lived (e.g. recolonisation is rapid).</p>
<p><i>2.5.1 Principle 2 Outcome Status, Ecosystems</i> <i>2.5.2. Principle 2 Management Strategy, Ecosystems</i> <i>2.5.3. Principle 2 Information/monitoring, Ecosystems</i></p> <p>Aggregate Score ~80</p> <p>The removal of large magnitudes of skipjack over many decades without demonstrable impact on other ecosystem components appears to demonstrate that ecosystem function has not been impaired. However, the fishery has altered the ecosystem. For example, skipjack abundance has increased over recent decades presumably due to reduction of predators due to fishing. The impact of fisheries reduction in</p>	<p>Sibert et al (2006) analysed available data from Pacific tuna fisheries for 1950–2004 to provide comprehensive estimates of fishery impacts on population biomass and size structure. The results indicated substantial, though not irreversible, impacts of fisheries on these top-level predators and minor impacts on the ecosystem in the Pacific Ocean.</p> <p>Mechanisms to reduce interactions with both target and non-target species include the preparation of risk assessments at regional level (e.g. Kirby, 2006; Kirby and Hobday, 2007) as well as within the PICT EAFM reports that allow the identification of management measures if deemed necessary by the Ecosystems and Bycatch Specialist Working Group (EB SWG). This is also supported by the recently increased observer coverage of 100% in the purse seine fisheries.</p>

<p>the abundance of juvenile bigeye and yellowfin tuna (by FADs for example) and ecosystem structure and function are not well understood.</p> <p>Management of habitat and ecosystem impacts are managed indirectly by VDS and FAD closures. VDS and observer coverage will provide sufficient information to monitor habitat impacts, if any.</p> <p>While recently there has been considerable scientific effort on ecosystem effects within the WCPFC, there does not appear to be integrated domestic and international strategies to manage the ecosystem components of this fishery.</p>	
<p>Principle 3</p> <p>The governance framework of the PNA Fishery is: 1) the laws and regulations of the nations of PNA; 2) the Nauru Agreement and its background agreements; 3) the Forum Fisheries Agency (FFA); 4) the laws and regulations of the nations of the flag vessels participating in the fishery; and 5) the WCPFC. Assessment of the PNA Fishery relative to Principle 3 must consider the management in total, although ISSFs comments are limited to items 1), 2) and 5). However, the assessment must recognize that the final implementation of regulations and measures fall to the individual nations.</p> <p><i>3.1.1. Principle 3 Governance and Policy, Legal and/or Customary Framework: Score ~70</i></p> <p>The Nauru Agreement (1982) provides for terms and conditions governing access of foreign fishing vessels to their zones; agreement on uniform terms and conditions for licensing of foreign fishing vessels; cooperation and coordination of monitoring and surveillance; the development of arrangements to facilitate the implementation of the terms and attain the objectives of the Agreement; and annual meetings of the Parties. Unfortunately, it lacks any specific reference to the precautionary approach. Recent (2009) actions of the PNA have provided for the development of a PNA office, strategic fisheries management initiatives, and planning initiatives to maximize long term</p>	<p>The WCPFC Convention, FFA Convention, the Nauru Agreement and associated arrangements and applicable national fisheries laws and plans are consistent with the principles and provisions of UNCLOS, UNFSA & CBD), to which all PNA Members are Parties, as well as a range of other relevant international and regional fisheries instruments, and to relevant local, national and regional laws and standards. The precautionary approach is incorporated into national laws and tuna management plans. All WCPFC Members (including PNA members) are legally bound to apply the precautionary approach as parties to the WCPFC Convention (with its Art. 5 & 7).</p> <p>The WCPFC dispute mechanism is set out in Article 31 of the Convention. The Palau Arrangement sets out a dispute mechanism in Art 8 for issues related to the purse seine fishery and the VDS based on a Pacific way of negotiation, compromise and consensus. The UNFSA dispute mechanism applies to the Palau Arrangement and the VDS</p> <p>Functioning national legal systems provide recourse for settlement of disputes.</p>

economic benefits from the fishery (including MSC certification application). The PNA has demonstrated its ability to implement management measures. However, procedures for dispute resolution within the PNAs have not been established.

All of the PNA are members of the WCPFC. The convention under which the WCPFC is formed reflects current international laws and standards relevant to management of migratory species and the ecosystem common to other RFMOs, including specific reference to the precautionary approach, the input of legal experts, dispute resolution mechanisms based on Part VII of the United Nations Fish Stock Agreement, the rights of artisanal and subsistence fishers, the dependence of coastal States and States fishing on the high seas on the stocks concerned and the role of the WCPFC in development of criteria for the allocation of catch or effort. However, to date, the Commission has not allocated fishing rights nor have they invoked dispute resolution mechanisms.

However, there are concerns by some parties for the cost of implementing WCPFC obligations including financial commitments administrative and stewardship obligations and the administrative and legal challenges needed to make the changes. Little is known about the individual national legal framework of PNA parties.

These concerns suggest limitations in fully implementing a MSC certified fishery.

3.1.2. Principle 3 Governance and Policy, Consultation and Responsibilities: Score ~ <80.

The organization of the PNA is clearly identified and their functions defined in the original Agreement. Recent (2009) measures have further defined the organization, roles and responsibilities. While the Agreement allows for other members of the FFA to be observers at PNA meetings, there is no provision for other interested parties to attend meetings or to provide input. Thus, the PNA process lacks transparency and must be addressed. Little is known about the individual national governance processes

The organization of WCPFC has comprehensive participation by Members

Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction at the WCPFC, PNA and national levels as well as support organisations FFA and SPC.

There are extensive, regular formal and informal consultation processes at the WCPFC, PNA, FFA and other regional & international fora and national levels, including consultation with bilateral partners and domestic stakeholders. These processes seek and accept information, and demonstrate consideration of the information but while the WCPFC process explains how information is used or not used, other components of the management system do not.

The Consultation process provides opportunity for involvement

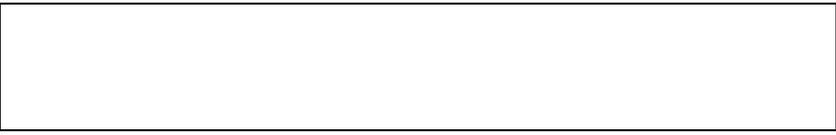
<p>and Cooperating Non-Members with formal definitions of the roles of each. Participation occurs at meetings of the Commission, Scientific Committee, Technical and Compliance Committee and Finance and Administration Committee. Input of Members and Cooperating Non-Members are considered when developing management measures and procedures. WCPFC rules allow and facilitate observer participation, including interventions at the Commission meeting and at meetings of committees and subcommittees. Written documents prepared by observers can be distributed at meetings as information documents, as provided by the rules.</p> <p>In the opinion of ISSF the primary deficiency of this PI (relative to a score of 80) is the lack of PNA, sub-regional and national transparency mechanisms</p>	<p>and no information was found indicating difficulties for parties wishing to be involved. Provision is made for formal observer status at both PNA and TAE/PAE setting meetings. However, there needs to be improved explanation of how decisions are made</p>
<p>3.1.3. Principle 3 Governance and Policy, Long term Objectives: Score ~ <80</p> <p>PNA fishery objectives of the developed in the 1982 Agreement and in subsequent amendments are to coordinate and harmonize the management of fisheries with regard to common stocks within their fisheries zones for the benefit of the peoples of the Parties, securing greater economic benefits and control of the parties tuna resources through cooperation in the management and development of their shared fisheries resources; to effectively conserve and restore highly migratory stocks while maximizing economic returns; to promote the greater commercial utilization of the tuna resources for the benefit of the Parties; and to enhance commercial and economic opportunities for the Parties through optimum utilization of the tuna fishery. The objectives do not include explicit acknowledgement of the precautionary approach, nor is it clear that these overall objectives are linked to national regulations and to policies implementing precautionary policies. Also, the most recent modification to the PNA objectives occurred in February 2010, so that the implementation into national policy and operations has not yet been demonstrated.</p> <p>The WCPFC convention formally</p>	<p>There are clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, and these are explicit within applicable WCPFC CMMs, and management policy as set out in the Palau Arrangement, the VDS and national laws and plans. The WCPFC Convention and national laws and plans (except for Kiribati) require the application of objectives reflecting these principles. However, the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention. The application of the precautionary approach and the priority for environmental sustainability is not undermined in the national acts by other goals, such as economic development requirements.</p>

<p>defines its objective as: “to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and Agreement [UNCLOS and UNFSA respectively]”. Additionally, the Convention specifically requires that the WCPFC apply the precautionary approach (Article 5) and mechanisms to do it (Article 6).</p> <p>The PNA Fishery must formally establish precautionary policies both within the PNA and within the individual Parties. These must acknowledge the link of objectives between the WCPFC, the PNA and the individual Parties.</p>	
<p>3.1.4. Principle 3 Governance and Policy, Incentives for Sustainable Fishing: Score ~70.</p> <p>The PNA has incentives to maintain sustainability, particularly if the PNA Fishery were to be MSC certified. However, it is the responsibility of the PNA to create operational incentives for the vessels and gears through its licensing agreements. The VDS may be considered an attempt to do this, particularly through its calculation of vessel-size-related fishing days. However, this is limited. Additionally, to ISSFs knowledge an examination of the VDS and other options relative to vessel operator incentives has not been done and needs to be done. Also, aid to the nations of the PNA and the Pacific Islands in support of fisheries infrastructure has been significant on both the small scale (e.g. fuel costs) or on a larger scale (support by national governments to the industry), or indirect subsidies through exemptions of some sectors from management measures within the WCPFC. The PNA must respond to the need for appropriate incentives that are created operationally through the licensing agreements. Analyses are needed to justify actions. The burden must be on the PNA since the vessel/operators are not the entities pursuing certification.</p>	<p>The rights-based management framework of the VDS creates incentives for sustainable fisheries at the PNA and national government level and provides for the creation of a system of positive incentives at the enterprise level that is only partially in place at this point. There are subsidies that undermine fairness rather than sustainability.</p> <p>But the weaknesses in VDS reviews and the clarity in the way that VDS decisions are linked to scientific advice falls short of <u>ensuring</u> that these subsidies do not contribute to unsustainable fishing practices in future.</p>
<p>3.2.1. Principle 3 Fishery-specific Management System, Fishery-specific Objectives:</p>	<p>Objectives relating to P1 and P2 Outcomes are set out in various WCPFC CMMs, especially 2008-01 (bigeye and yellowfin), and CMMs relating to shark and sea turtle turtles as well as national plans, the Palau Arrangement and the VDS.</p>

<p>Score ~60.</p> <p>The long term objectives of both the PNA Group and the WCPFC have been specified (see 3.1.3). However, short-term operational objectives are lacking. It may be argued that PNA and WCPFC management measures are statement of tactical objectives, but in the opinion of ISSF operational objectives must be developed and linked to harvest control rules (1.2.1 and 1.2.2) at both the PNA and WCPFC levels. Specification of fishery-specific objectives must be led by the development and implementation of harvest control rules.</p>	<p>These include short and long term objectives, but the objectives are not all well defined and measurable, especially for the CMMs related to P2 outcomes</p>
<p>3.2.2. Principle 3 Fishery-specific Management System, Decision-making processes:</p> <p>Score ~ <80.</p> <p>The PNAs decision-making processes are not clearly defined, nor are they transparent. The record and continuity of PNA decisions has demonstrated the ability and will to make timely decisions, but it is unclear how they are achieved (consensus, voting, or other methods).</p> <p>The WCPFC generally makes decisions through consensus, but procedures are available and documented for voting, appealing decisions, conciliation and review should consensus not be reached. The application of the precautionary approach and the use of the best available scientific advice are required by the WCPFC Convention. While these requirements may seem to be unnecessary given the current status of the stocks of skipjack tuna, prior decisions have not always been precautionary. With dynamic fisheries transparent procedures must be in place to assure that the management system can respond in a timely and appropriate manner. These procedures must be developed and made available for scrutiny.</p>	<p>At the WCPFC level, There are <u>established</u> decision-making processes in the Convention and these are operationalised in the processes of the SC, the TCC and the Commission itself. Those decision-making processes have resulted relatively quickly in a comprehensive set of CMMs and strategies to achieve the specific objectives in the purse seine fishery. WCPFC decision-making processes are open, use the precautionary approach and best available information and are well documented.</p> <p>Proactive PNA decision-making over a long period has resulted in measures and strategies contributing to, and in important respects, underpinning effective management of the WCPO purse seine fisheries.</p> <p>These decision-making processes use the precautionary approach, and are based on best available scientific information, but do not clearly respond to all issues, nor provide formal reporting etc, so meeting only some of the SG 100 requirements.</p> <p>The assessment requires a Condition (4) to be met:</p> <p>(1) The link between the VDS TAEs and WCPFC requirements and the scientific advice needs to be clearly established by the PNA.</p> <p>(2) Explanation of decisions by PNA, particularly relating to the operation, monitoring and reporting of the VDS needs to be improved.</p>
<p>3.2.3. Principle 3 Fishery-specific Management System, Compliance and Enforcement:</p> <p>Score ~ 60</p> <p>Closures, licensing and vessel day limits are actions taken by the PNA to manage fishing effort and eliminate IUUs (illegal, unreported and unregulated fishing). Additionally, requiring 100% observer programs is a mechanism for monitoring and control. However, it has not been demonstrated that these measures have been fully enforced, particularly at the national level. Logistical problems of maintaining a cadre of trained observers, the</p>	<p>The evidence suggests that PNA parties have applied significant resources to enable them to implement the control measures as required. PNA Parties have rapidly adopted a 100% observer programme. The observer programme has in place a series of checking procedures to identify both observer compliance, but also to identify non compliance or other issues, such as reporting deficiencies that are not in contravention of any laws or measures. It is correct to say that the transmission of catch data to SPC is slow, but at the same time, observers and observer debriefers are identifying and acting upon issues. PNA</p>

<p>timely turn-around of observer data for use in compliance have been suggested to be lacking. The PNA Fishery must demonstrate their ability to monitor and enforce.</p> <p>WCPFC has recently adopted measures to assist regional enforcement such a vessel list; centralized VMS; IUU Vessel listing procedures; high seas boarding and inspection procedures; prohibition or transshipment at sea by purse seine vessels (with specified exemptions); a regional observer program and FAD Management Plans. The WCPFC's Technical and Compliance Committee is also continuing consideration of port State measures, chartering arrangements, catch/statistical documentation, the control of nationals, and compliance monitoring and reporting, but these have not yet been implemented.</p> <p>Overall, each PNA member must be required to demonstrate their ability to meet the MSC enforcement obligations to implement the management measures of the PNA and the WCPFC.</p>	<p>compliance structures, aided through coordinated actions under the Direction of FFA hosts an additional variety of other activities including inspection on transshipping, as well as comprehensive VMS system. Joint Deployment Actions also support PNA Parties.</p>
<p>3.2.4. Principle 3 Fishery-specific Management System, Research Plan: Score ~ 80.</p> <p>The WCPFC has a Strategic Research Plan 2007-2011 in place which identifies the four research and data collection priorities needed for any fishery management system: collection and validation of data from the fishery; monitoring and assessment of stocks; monitoring and assessment of the ecosystem; and evaluation of management options. The Plan is largely directed at the biological status of the stocks and ecosystem. Although a number of research projects on management and governance have been funded, further research is needed on the management system itself, its deficiencies and actions to ameliorate those deficiencies and integrated into the Research Plan. It is unclear to ISSF whether the PNA Fishery is fully integrated into this Plan and whether there is a WCPFC and PNA commitment to the Plan (funding). WCPFC research reports are publically available on their website in a timely fashion.</p>	<p>The WCPFC Strategic Plan addresses four overall research and data collection priorities - collection and validation of data from the fishery, monitoring and assessment of stocks, monitoring and assessment of the ecosystem, and evaluation of management options. The WCPFC Strategic Research Plan is supplemented by the SPC, FFA and national Strategic Plans to provide a comprehensive research plan for the fisheries under assessment across P1, P2 and P3. The Plan was adopted by consensus of WCPFC Members, including PNA Members. The WCPFC and SPC Plans and results are widely and publicly available, but the FFA and national research results are not all fully accessible.</p>
<p>3.2.5. Principle 3 Fishery-specific Management System, Monitoring and Management Performance Evaluation: Score ~ 60</p> <p>Neither the PNA management system nor the WCPFC management performance been reviewed. The WCPFC considered such a review, but deferred it due to costs.</p> <p>Stock assessments are peer reviewed by other members of the Scientific Committee and are subject to public scientific scrutiny. Formal external reviews are just now (2010) being implemented in WCPFC. However, assessments are not full evaluations of the management system.</p> <p>Components of the WCPFC management system are evaluated through annual compliance reports and through evaluation of the effectiveness of specific management measures. While</p>	<p>WCPFC has a commitment to implement an external review procedure according to the Kobe course of Action.</p> <p>Condition 5: The PNA must establish a system of external and regular internal reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery.</p>

management performance evaluations have been recommended for all RFMOs, the WCPFC has not done one; nor has it implemented a system of performance review.



15.6 APPENDIX F: INTERVIEW RECORDS

- I1 International Seafood Sustainability Foundation (1)
- I2 National Fisheries Authority, PNG (1)
- I3 Marshall Islands Marine Resources Authority (1)
- I4 Forum Fisheries Agency (1)
- I5 Fishing Industry Association and private sector stakeholders, PNG and Solomon Is
- I6 Fisheries and Marine Resources, Solomon Is
- I7 Ministry of Fisheries and Marine Resource Development, Kiribati
- I8 Bureau of Marine Resources, Palau
- I9 Nauru Fisheries and Marine Resources Authority
- I10 Secretariat of the Pacific Community (1)
- I11 Western, Central Pacific Fisheries Commission (1)
- I12 National Oceanic Resource Management Authority, FS Micronesia
- I13 Western Central Pacific Fisheries Commission (2)
- I14 PNA Office
- I15 Koos Fishing Company and Pan Pacific Foods, Marshall Is
- I16 Marshall Islands Marine Resources Authority (2)
- I17 FMR Observer
- I18 Japan Seas Purse Seine Fishing Association
- I19 Forum Fisheries Agency (2)
- I20 PNA Members (1)
- I21 International Seafood Sustainability Foundation (2)
- I22 Secretariat of the Pacific Community (2)
- I23 World Wildlife Fund
- I24 PNA Members (2)
- I25 National Fisheries Authority, PNG (2)

I1 International Seafood Sustainability Foundation (1)

MSC Interview Record

MML Attendees

Team Members: Les Clark, Tony Lewis

Stakeholders:

Affiliation	Representatives
1. Susan Jackson, President , ISSF	
2. Dr Victor Restrepo, Chairman, Scientific Advisory Committee, ISSF	
3. Dr Bill Fox, Vice Chair, Board of Directors, ISSF (also WWF)	

Location: Hilton Hotel lobby, Brisbane

Date: 28th June 2010, 1830 hrs

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to ISSF

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

eNG

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

- The scope of the assessment, which currently defines the fisheries for assessment as “the PNA Western and Central Pacific skipjack tuna (*Katsuwonus pelamis*) free school (Unassociated / non FAD) purse seine fishery, and the PNA Western and Central Pacific skipjack tuna (*Katsuwonus pelamis*) purse seine fishery using opportunistic log sets”,

is not entirely clear from the information supplied on the MSC website. In particular, it is not clear if the assessment includes fishing in adjacent high seas areas and in archipelagic waters. The status of yellowfin and bigeye (taken in the fishery) in the assessment is also not clear. This clarification needs to be provided on the website.

[NOTE: The following information on the website does provide some clarification i.e.,

The certification, if approved, will cover purse seine vessels targeting skipjack tuna free schools without the support of FADs (unassociated), and purse seines targeting skipjack using opportunistic log sets. This would apply to all purse seiners licensed to fish in PNA member EEZs.]

- Information is needed on management processes applying to the fisheries, which occur at three levels – national, PNA and WCPFC. Information is especially needed on processes applied by the nominator (PNA), to address concerns about transparency; this should also be posted on the MSC website, preferably prior to the Honolulu consultation. ISSF will then exercise the option to provide a written submission to the Cairns consultation.
- Given the need to distinguish amongst free schools, log sets and FAD sets, there is a need for more information on the observer activity (extent of coverage and reliability) that will be the primary source of this information. It is necessary to have a second (independent) source of validation.
- It was noted that PNA observer coverage is close to 100% for trips involving activity in more than one EEZ and/or the high seas, but it was not clear if this also applied to single EEZ trips and fishing which only occurs within EEZs. Clarification of this point would be needed in the assessment.
- It was noted that Chain of Custody procedures would need to start at purse seine set level.
- A statement of PNA parties' membership/signatory/ratification of UNCLOS, UNFSA and WCPFC was needed as background to assessing the efficacy of management processes
- The compatibility process within the WCPFC structure, particularly relating to national waters/high seas, PNA management measures vs WCPFC management measures needs to be clarified and documented. Les Clark indicated that this is a two-way process.
- Much more information is needed on the VDS process at national and regional levels; it is perceived to be not transparent and possibly inconsistently implemented and enforced at present, and as a general point, such transparency is required from the client at an early stage in the process. The link between scientific advice and the VDS process (construction, implementation and monitoring) also needed to be made and described.
- There are also US and other bilateral treaty arrangements that will effect how the stock and its management work. Information must be provided about these arrangements and they must be assessed as part of P1 and P3.
- Concern expressed that focusing on PNA national systems would not fully include issues related to management/WCPFC effectiveness associated with non-PNA national systems i.e., the extent to which national influence goes in the overall WCPFC process.
- Concerns that the spatial extent of the fisheries being assessed (the management unit) does not cover the range of the skipjack stock. This was an issue for ISSF/WWF in previous tuna assessments e.g. north Pacific albacore, Japan skipjack; MSC processes needed to take that into account in the assessment; this concern would apply to principles 1 and 3, less so to principle 2.
- The occurrence of bycatch of ETP and small yellowfin and bigeye in log sets was an issue that would need to be addressed in the assessment, under principle 2. In general, FAD and log sets were expected to be little different in this regard
- As a general overarching concern, there was a need for management systems to be properly defined so as they can be assessed/measured; it was noted that management measures are currently not applied within a harvest strategy framework, with limit reference points, target reference points and harvest control/decision rules, other than at national level to some degree.
- There is a need to improve audit processes and rigorous monitoring of any conditions applied to certifications.
- There was a need to know how climate change considerations e.g. impacts on stock distribution would be taken into account by the existing or proposed management systems

5. Other issues

(e.g. any other stakeholders we should contact, any written submissions to follow?)

The assessment team members were asked to describe their work history and experience and clarify if there was any conflict of interest in their involvement in the assessment

Note ISSF intention to participate in Honolulu consultation and provide written comment to Cairns consultation

6. Closing

Confirmed

MML Lead Auditor

Stakeholders

I2 National Fisheries Authority, PNG (1)

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation	Representatives
1. Sylvester Pokajam, Managing Director, National Fisheries Authority, Papua New Guinea	
2. Ludwig Kumoru, Manager, NFA lkomoru@fisheries.gov.pg ; lkomoru@gmail.com	
3. Grace Kaue. AJ's office, PNG grace_kaue@justice.gov.pg	
4. Augustine Mobiha, Executive Manager, Fisheries Management amobiha@fisheries.gov.pg	
5. Noan Pallop, Executive Manager, MCS/Observer npakop@fisheries.gov.pg	
6. Philip Polon. Licensing and data management, NFA ppdon@fisheries.gov.pg	
7. Darren Saunders, VMS/VDS Darren@quickaccesscomputing.com.au	
8. David Karris, NFA dKaris@fisheries.gov.pg	

Location: NFA HQ, Port Moresby and Forum Fisheries Committee

Date: 5-6 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to National Fisheries Authority, Papua New Guinea

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

3. MML Questions

Assessment team questions for stakeholder response

Discussion on governance and fisheries management issues

4. Stakeholder Key Issues

VDS: VDS system implemented in 2004/05 as extension of the PNA. Effort limits set at 2001-2004 average catch rates.

VDS introduced as a trial in 2006 and applied from 2008.

Weighting system takes account of real effort, with differences in capacity of active vessels.

PNA initiative to introduce VMS but was slow because of other issues. Some countries signed different bilateral contracts with different expiries, leading to delays in implementation.

PNG was the first country to apply to VDS to 205 purse seiners. 12,244 days to PNG. Ended up getting less days, and need additional days from other parties.

PNA transfers between parties. At moment netting off TAEs without provision for roll over, next year will exchange and buy and sell on party to party basis as have a low number of days relative to a share in catch. This was agreed by PNA Parties in April. Now looking at a formal mechanism. Each country has its own limits.

Main problem is USMLT which at the time of the reference period had 2700 days, but has since increased to 8000 days. The Treaty allows access for 40 boats, whereas days at the time of 2004 reference period was much less.

4 boats moved from PNG FSMA to US Treaty. PNG did not increase the boats to take up the slack. PNG fleet now at 30.

VMS: VMS wasn't upgraded to take up the challenge. NFA took the initiative. Absolute system introduced exclusive to PNG incorporated monitoring of VMS and VDS combined. FFA now operate a separate VMS on behalf of all other Parties

VMS access only to boats licensed by PNG. FFA can see all

FFA VMS system in Honiara with user access specific to each country. No country can see others activities.

VMS unit programmed for every one hour. The system is automatically set to report GPS positions, via satellite IMNAMRSAT C and Iridian.

Weighting system built in. Provides physical number of days in zone and calculated against VDS.

FFA and the PNG systems now integrate the use of automated alerts (entry/exit, on/off, entry into closed zones) to improve monitoring.

Observer system: 2010 100 % observer coverage, replacing 20% observer coverage

Exchange observers between countries.

Long-time, experienced observers in 6 PNG ports. Run by Senior observers who coordinate placements. Senior observers undertake the debriefing. Check on data quality and infringements or violations at sea as well as many other things. Incident Reports are passed to NFA Enforcement officers. Debriefing successfully spots issues and mistakes.

Not a high observer turnover. More and more people want jobs so can select / screen for good people.

Problems

- Probably to coordinate increasing numbers. Key issue is to ensure good quality of work.
- Observers wanting feed back, reporting incidents.
- Intimidation/observer obstruction. When it happens will address. Heavy penalties, so less likely but too recent serious issues on Long Liners

PNG trained 180 trained observers, increasing the total pool to 400. Observers trained at national Kavieng fisheries college. 2 month intensive observer training programme. Every quarter, 15 trainees pass through the system. Month 1 basic officer training – safety at sea, fire fighting and first aid. Month 2 observer training – species ID, log book recording. Other countries have access to the training school - Vanuatu, are presently participating.

Annual observer refresher courses. 1 each year.

Observers are trained to estimate species, length frequency. For all tunas, but PNG has requirement to land all (live) bycatch - rainbow runners trigger fish, sharks by species and record sightings – dolphins, whales etc.

Data quality is something requiring improvement. Identifying juvenile big eye and yellowfin may be difficult. This is a regional issue. SPC presently reviewing estimating system.

Observer communication – not a problem with Filipino as speak English. For other boats, radio operator has to speak English. Foreign boats must have at least 5 national crew on the boat.

Logsheets: SPC logsheet adopted. PNG proposing transition to E-forms to capture catch details electronically, as well as unloading, transshipment in ports, bunkering, entry and exit. A target of 80 %, to be completed by September 2010.

Catch reporting is slow. Some catch reports received from DWFN, 6-7 months after.

Brails/Wells hold one tonne. Best estimates are usually accurate. But do cross check transshipments with observer observations when in port.

Pre fishing inspections

Japan pays for NFA staff to fly to Japan to inspect vessels.

General MCS issues

NFA maintains an ongoing commitment to enforcement officer training, both inhouse and supported by Kavieng College

FAD management:

No issues with free schools. Highly selective on SKJ

Log sets distinguishable from drifting FADs. Completely natural. Observer identifies and records.

However, Log sets may become drifting FADS with Beacons and Lights added.

Anchored FADs, up to 25 /boat. Eaah PS has 3 light boats which examine FADs. Each FAD has GPS position, surface tem and current on all light boats, anchored within management plan. Proposing to include FADs in VMS system

Drifting FAD, not much control

FAD closure respected and no violations reported. One FSMA incident known with skipper trying to bribe observer.

PNG reports no High Seas activity from 1 January. FFA also closely monitoring.

Compliance: When VMS introduced, compliance increased. All fish outside 12 mile limit. Big boats are fishing in EEZ. If come into territorial or AW waters, get alarm call. If VMS is off, 4 hours annual position report required.

No tampering with ALC in the last 2 years. Pretty tamper proof. If opened automatic notification..

Violations: 1 million kina for serious offence applied to boat owner, 100,000 to skipper for any violation. Submitted to Grade 5 Court. Violation schedule specified in the Fisheries Act. The NFA Board is also empowered to establish a Summary Administrative Panel to hear enforcement matters that can be dealt with by administrative sanction.

Governance issues:

Reference to precautionary approach contained within the Act.

The Act endorses international conventions and includes reference to the ecosystem approach.

Lagging a bit behind in introducing PNA 3IA measures. These are being incorporated into new legislation. The process includes drafting and consultation. The consultation process, followed by legal clearance by AJ's office, then submitted to Parliament.

Legislation does provide for NFA to implement through licensing Terms and conditions.

Once the Court makes the decision is binding

Constitution recognises customary law. If legal rights are interfered with, have basis to challenge. This is typical of the legal constitution throughout the Region.

Old tuna management plan revised in 1998 and 2001. A dynamic process –

Handline / FAD management plan developed post 2001

Management Plan now undergoing major overhaul. Tuna covered by the National Plan. Early industry consultation meeting in Industry (companies) and NGOs consulted. TNC (more understanding) and other line departments. The new management plan will cover Long line, hand line, purse seine and gears.

Bilateral Agreements: Korea, Taiwan, Japan, China and some individual companies from Philippines (3 Philippines and 1 Taiwan). SSTC – FSMA 63%, of Taiwanese as fish in the same manner, charge lower because offload into Wewak. Fairwal also charging same amount. When offload into PNG will lower. All Bilateral agreements include reference to MTCs.

Fleet components are

- Archipelagic
- Foreign locally based – SSTC and Fairwell 66%
- Koreans and Taiwanese – 33%

Consultation: Fishing industry Association (FIA) covers all domestically based and foreign vessels managed locally: Frabell PNG, RD Fishing, SSTC (South Sea Tuna Corporation), Fairwell. Consultations are interactive, and NFA will take up and consider particular points.

DWFN – annual consultation through access arrangement – meet each country separately.

All stakeholders invited to international tuna consultations FIA and DWFN. Also have access at WCFPC meetings.

Peer reviews:

Corporate Plan sets indicators Performance is assessed by Managing Director against these indicators

International obligations evaluated by WCFPC and SPC.

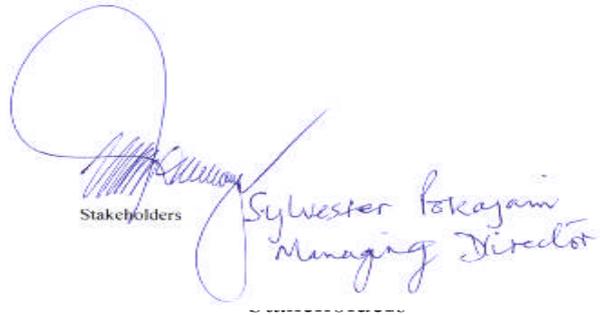
NFA given autonomy in 1998. The autonomy means that NFA is independent of political intrusion for operational issues. Minister is involved in setting policy. NAF Daily management issues rests with the Board.

6. Closing

Confirmed



MML Lead Auditor



Stakeholders
Sylvester Bokayam
Managing Director

I3 Marshall Islands Marine Resources Authority (1)

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Glen Joseph, Director, MIMRA and Doreen deBrum, Fisheries and Planning Advisor

Location: Forum Fisheries Committee

Date: 7 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

MIMRA

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Party Fishery Management Organisation

3. MML Questions

Assessment team questions for stakeholder response

Discussion on governance and fisheries management issues

4. Stakeholder Key Issues

VDS: Proposal is to cap effort and reduce it in the immediate future.

Model used to determine PAE (Parties Allowable Effort) and TAE (Total Allowable Effort) with support from SPC. Model allows for flexibility between historic access and EEZ biomass. However, still some negotiation taking place. PAEs do not equal TAEs allocated with a need to reconcile between the two to create scarcity.

Next step is for parties to finalise allocations. Set up a hard limit. Implement hard limit in the form of TAE/PAE and a trading mechanism between parties, then to standardising implementation systems at Party level, so all working off the same structure. Need to explore existing systems and draw from Best practice.

VDS mechanism has to be reviewed constantly. Each year with larger review every 3 years.

The VDS should link to both stock assessment, and Party development aspirations.

VDS is a partial solution, but other measures have to work in tandem with VDS. Such as closing off the high seas, reducing fishing vessels and restructuring for domestic developments within the Parties.

It is recognised that technology is evolving to the point which need to be taken into account in amendments to the VDS scheme. Technological advances are especially significant in last two years. E.g. Stretching boats; modification of net boom to increase haul and setting; putting monitoring systems on FADs, surface and sub surface.

TACs, an alternative/supplement to VDS would be really difficult to monitor and manage.

Compliance:

Capacity to monitor the fishery is good.

Focussing on capture, rather than carrier. Need to focus more on transshipments, especially since RMI is a focal point. Need to know where catcher goes to. Catch certification is also a useful add on. Landings into Flag States covered by WCPFC measure. Possible problems, when don't do what they say. WCPFC has created opportunity for all stakeholders to address. Problems are raised by CCMs. Issues are raised, and are quite to resolve. Then apply as MTC, or leave the fishery.

When landing, monitor transshipment, catch logs and wells. Run offloading with enforcement officer present. Volume of off-loading run against Observer data. SPC also supports cross checking activities, or FFA if multilateral.

Regional MCS policy provides strong joint deployment opportunities between parties and larger nations. Micronesian Trilateral arrangement (Palau, FSM and RMI) Agreement Operation Bigeye and Island Chief are examples where sharing info assets, and support from NZ, France, US, Australia and Japan

At national level, MCS continues to be a priority. Financial support needs to be improved.

Through WCPFC Technical Committee process, Port State and Flag state issues are being strengthened.

MTCs are standardised to WCPFC CMM norms. FFA and PNA ports apply the same applications.

Governance:

FA takes account of all the international conventions. Fisheries Act, 1997, includes provision for dynamics to allow changes through Regulations or amendments.

The 1997 Act changes the country legal text and Institution and set up MIMRA.

MIMRA is a Government Autonomous Agency. Implement measures through licensing arrangement. Regulations are formed from the Act.

Precautionary Principle and ESBFM contained within the Act

Open and transparent legal system. If a successful challenge, would amend legislation accordingly. When promulgate regulations, open to challenge. Gazetting submitted to Board, before passing through to the through AJ's office and then Governor.

RMI implement 3 IA, as a component of its regulations, and incorporated into MTCs.

Policy Balance: It is important to retain a balance between domestic access and revenues from DWFNs.

Sustainability is a priority, and long term objective. However, policy focus is both on economic growth and sustainable development, To ensure sustainability to develop strong locally based industry. RMI integrity in this area upheld by MIMRA role.

Outsiders don't have the confidence of PNA to hold it together, or there are forces to undermine what PNA is doing. Setting a hard cap and a working VDS system will illustrate the PNA resolve. This is already demonstrated by 3 IA, which led to WCPFC CMM. More measures proposed such as additional closed areas.

Bilateral agreements comprise 7 agreements – Japan, China, Taiwan, Individual companies (Vanuatu flag), FSMA, and US Treaty. Korea on hold. Bilaterals do not cover all DWFN vessels in their fleet. Each agreement specifies limits on days allocations. Regular meetings – annual/biannual take place with joint Ministry/Administrations and industry representing these groups.

PNA very positive for the region. Couldn't implement before. Held back by FFA with too many masters.

Consultation: No formal structure, but are seeking to develop. Three main industry players that are domestic. This is likely to develop into cooperative. However, industry / government interaction is strong.

Observer scheme:

30 observers, aiming at 50. 7 Senior observers, and 1 coordinator, and 2 Trained Trainers

Observers trained in RMI. Certified by WCPFC, to international standards. SPC and FFA also central to training functions (Definitions and interpretation, and curriculum, respectively). Recently sent observers to participate in US sponsored WCPFC and EPO (Eastern Pacific Ocean) workshop. Observers have the capacity to switch EPO/IATTC as qualified observers.

The constraint is that RMI doesn't have the numbers. Need to be supplemented by FSM and other PNA observers. PNA will act as the placement agency, and facilitating training where appropriate (pooling expertise) such as Trainers (e.g. PNG school of excellence).

Debriefing, Policy guide-book and Code of Conduct all endorse the observer scheme.

MIMRA has strong confidence in the observer system, otherwise wouldn't have moved from 20% to 100%. Perceives that this system allied to VMS leads to very high levels of compliance.

Industry also fully onside. Pressed for observer coverage, because of historic lack of confidence in data recording but now, has a shared level of confidence in the results.

Observer attrition can be a problem, especially with some local weaknesses in capacity.

VMS:

RMI has a control centre linked to FFA system. Have access to all boats fishing in its zone (through bilateral accords), not just RMI.

VMS is primary tool to evaluate VDS uptake, so is critical to the success of VDS.

Violations:

If any wrongdoing face the consequences of heavy penalties.

An example of observer hindrance in RMI, but reported and heavy fine imposed. Particular problem relates to FAD sets during closures and the prospect of bribery. 3 such cases in RMI.

6. Closing

The image shows a handwritten signature in black ink on the left, which appears to be 'M. Sul'. To the right of the signature is a rectangular stamp with the word 'Stakeholders' printed in a bold, sans-serif font.

Confirmed

MML Lead Auditor

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Wez Norris, Acting deputy Director, Forum Fisheries Agency

Location: Forum Fisheries Committee

Date: 6 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to FFA

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fisheries Management support organisation

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

- Focus is on management organization and supporting role of FFA to the parties
- The success or failure of management measures
- Some compliance and reporting issues

4. Stakeholder Key Issues

The role of FFA

The PNA countries are all members of the FFA. FFA provides ongoing support in terms of:

- MCS (Regional VMS, Vessels of good standing and coordination of regional operations).
- Fisheries Management: directing advice in considering management options, MCS policy advice, developing the regional observer programme and on going legal support vis a vis strengthening of national legislation and capacity, especially ensuring the implementation of UNSFA and Minimum Terms and Conditions incorporated into Law and Bilateral Agreements

Fisheries management issues

Management measures introduced under CMM 2008-01 will at worst ensure that tuna fisheries remain within 0.5 BMSY. The 2008-01 provides a strong basis for management actions, to the extent that PNA countries and CCMs are well advanced in the management process.

The FAD closure increased the focus on management measures aimed at protecting juvenile BET.

VDS provides a strong economic basis for the fishery. Effort benchmarks were established based on activities in 2004. VDS / TAE options were explored (Langley and Reid (2006) for the management options workshop). VDS can be seen in the medium to long term as a means of ratcheting down the effort to increase fish prices. Other measures (more directly related to controlling fishing mortality for biological reasons) such as FAD closure have been introduced and could be strengthened.

The Observer support programme, coordinated by FFA, is setting very high standards. Four hundred observers are now trained and deployed. The parties have significantly strengthened their observer capacities, with an ongoing commitment to continuous training and debriefing processes. Observer outputs are checked through the debriefing process, but equally for the quality of returns at various levels including SPC.

Observer participation is encouraged, and low turnover encountered because of high wages structures

Some species identification issues have been experienced in the use of FADs, with observers eyeballing catches etc. This issue is being dealt with through extensive training and operating standards under the guidance of FFA, SPC and WCPFC. Log sheet recording has also understated some species and over stated others. These issues are being addressed by SPC.

Fishing in high seas pockets were the cause of concern, but with the closures, monitoring, reporting is made easier and compliance is now strong. This includes the DWFNs which are perceived as being compliant/good players.

6. Closing



Confirmed

MML Lead Auditor

Stakeholders

FFA Supplement: W. Norris, Email response of 7 September

How does FFA report its Performance. Is it possible to get a copy of the latest Performance Report

The development and operation of FFA's Annual Work Plan and Budget is driven by the Statement of Intent, which is rolling three year bridging arrangement to ensure achievement of our longer term Strategic Plan. Performance against the Statement of Intent is through the Director-General's Annual Report. The 2009-10 Annual Report is attached.

In addition, a comprehensive independent review of FFA performance was conducted in late 2009/early 2010. This review focussed on the relevance of FFA programmes as well as FFA's delivery against those programmes. The results of the review were considered at FFC 74. An implementation plan for the recommendations is being developed and will be considered at FFC 75.

Following the work of the MRAG report, what processes were implement to instigate change, and what additional compliance measures have been implemented to support a proposed strategy

The MCS Analytical Studies were commissioned by FFA to inform the development of a Regional MCS Strategy. Following submission of the analytical studies, the RMCSS was developed using an iterative approach of consultation with members that included FFC 71 (November 2009), and RMCSS Workshop (February 2010), the MCS Working Group (March 2010) and FFC 74 (May 2010) as well as several intersessional opportunities for input.

The RMCSS (attached) was endorsed by FFC Ministers in July 2010.

What actions is FFA taking to support PNA countries in implementing these actions

This is a difficult question to answer in anything less than about a dozen pages. At approximately USD6.5 million, the budget of the FFA Fisheries Operation Division represents approximately 45% of the over all FFA annual budget.

The services provided to members under this allocation are extremely diverse and includes a range of national activities and regional interventions. These include VMS services (including subsidised cost of VMS officer salary and communication costs in each member); VMS training; vessel registration; observer training and administration; direct support to multilateral surveillance operation; national level training courses in investigations, inspections, prosecution; policy support to WCPFC compliance related matters etc.

FFA has also instituted more broad-based in country support for members on priority MCS issues using the national level risk assessments as a basis to prepare national MCS profiles to drive improvements where they will have most affect.

I5 Fishing Industry Association and private sector stakeholders, PNG and Solomon Is
MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation	Representatives
1. Mike McCulley, President of South Seas Tuna Corporation	
2. Pete.C.Celso, RD Tuna Ltd., MD, Chairman PNG Fishing Industry Association	
3. Thomas Negints, South Sea Tuna Corporation	
4. Wayne Golding, Fisheries Advisor, NFA and PNG Manufacturing Council	
5. Adrian Wickham, General Manager, NFD	
6. Phil Roberts, MD, NFD Ltd	
7. Roland Salangsang, Senior Vice-President RD Tuna Canners Ltd.	
8. Philip M Sanchez, RD, VP, Sales and Marketing, RD Tuna Canners Ltd.	
9. Rolly Lamparero. Operations Head, RD Fishing PNG Ltd.	
10. Andrew B Cadfit, Quality Control Supervisor, RD Fishing PNG Ltd.	
11. Alex Bernardino, General Manager, Frabelle (PNG) Ltd, Lae, PNG	
12. Rosedean Zaily, IFC, CEO	
13. Rohel Pauden, IFC, Project Manager	
14. David Voss gier, Director, ECOEz	

Observers:

1. Glen Joseph, Chairman, PNA Office
2. Ludwig Kumoro, NFA Manager
3. Bill Holden, MSC

Location: Forum Fisheries Committee, 6 July, 2010

Date: 6 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment

- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to FIA and other private sector stakeholders

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Cross section of Fishing industry stakeholders:

Boat owners operating ships licensed in Papua New Guinea and the Solomon Is

Fish processors and exporters from Papua New Guinea

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well-informed stakeholders

Confidence in data collection and observer systems

Fishing practices – including by catch and ability to accurately record

Perceptions on compliance

Governance and industry consultation processes

4. Stakeholder Key Issues

Industry expresses concern in the justification for separating out the units of certification. Why only free school and log sets? General support for subsequent extension of assessment to include all FAD fisheries

Bycatch interactions conformed as low. Some rainbow runners, trigger fish and mahi mahi. But all in terms of low numbers – eg no more than a few hundred kilos and most definitely under 1% of the catch total. This is consistent across fisheries, but bycatches in free schools are rare.

Free school fishing which dumps the by catch and therefore, nothing can be seen and be accounted for. Not all boats have observers, but this is because the 100% programme is at its initiation stage.

All bycatches brought on board, as per the National / Regional regulation. This includes non tuna species. This is the regulation but may not necessarily be happening or strictly monitored.

Interactions with ETP very rare. Some small numbers of silky sharks taken, usually up to 4 or small sharks taken in a set. These are more likely in FAD associated fisheries. For smaller boats, divers will release sharks

Tuna species primarily skipjack. This species is the principal market driver, hence broad agreement that this should be the unit of certification

Sets on FADs occur at dawn. 1 set / day for anchored / drifting FADs, **free schools** more opportunistic. 1 set is around 3 hours.

Log sets may be targeted, but subsequently become drifting FADs with Radio buoy added so can relocate. Some boats will add long net, with bait. BET found in deeper than skipjack, but some signs of BET in early morning sets, hence also why free schools don't encounter.

Panels are set with reinforcement brading. If one brakes will not extend Bring nets back and sold for clams use and fish cages. 12-10 strips. So **no discarding of net materials**.

Fuel costs for Free schools are 50% higher. More carbon foot-print.

Consultative systems very strong. PNG FIA consulted regularly on management plans, measures and industry development initiatives. Very inclusive.

Solomon IS has regular interchange with officials. No formal system, but opportunity to consult with the Industry.

As and when there are international meetings, the industry will participate as part of the national delegations.

Industry has strong confidence in the **data recording**. Log book quantity estimate is around +5 to -5 % variance with actual catch. Sometime problems differentiating between small YFT and BET. Observes can estimate correctly, and observation is that since 100% observer coverage, records are more accurate. Good lessons learned from PNG observer system and record keeping. Are the shining stars in the Pacific.

Confirmed

By: 
Stakeholders



MML Lead Auditor

I6 Fisheries and Marine Resources, Solomon Is

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks (P3) and Antony Lewis (P1)

Stakeholders:

Affiliation

Representatives

1. Dr Christian Ramofafia, Permanent Secretary, MFMR

Location: Forum Fisheries Committee

Date: 12-13 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
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- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to Fisheries Department

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fisheries and Marine Resources, Solomon Island

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

VDS: Very important tool. However, there is room for improvement. SI is a strong advocate to cap and reduce days. Sustainability of stock is really important. Solomon Is is a driver to ask PNA to reduce days.

Currently weakness in VDS is USMLT not following the process.

Problem is too many days were allocated to Parties. As an individual country of PNA, can only allow x number of boats into the fishery. Control production will increase competitiveness and address the issue of stock conservation. When reduce capacity only the best players will be left and marginal players will be excluded. This requires a mind set change in PNA worried about potential loss in income. However, the PNA has realised the

importance of change, linked to capping VDS and using transfers between countries to account for any shortfalls.

People agree that parties would not increase the number of vessels. Provision can be made for replacements only.

PNA has a small working group to look at VDS under the Chair of SI. Needs to improve as more a conversation.

SI accept, as well as VDS, may also need quotas as a supplementary management measure. Possibly looking at NZ support to implement RBFM.

Observer scheme: 80 observers, big increase from under 20 (now Senior Observers), when at 20%. Advanced in just 12 months. SI has its own trainers – 2 ToT. SPC and FFA to train observers.

Debriefing undertaken by an Observer Coordinator and Senior Observer.

80-100% – confidence level in outputs. Requires more training on debriefing and collection/quality if data.

Quality check is in house, but SPC provides secondary evaluation of the data outputs. Perhaps strengthening the process to identify violations, but perceive that these are picked up, if they occur at all. Any Violations reported to fisheries inspectors.

Catch reporting: Log-sheets, All now providing at right time. Expected within 1 month from the end of the trip. 15 days after completion of the trip. USD 30,000 / boat if not completed in time.

Log sheets checked against weekly reports (Wednesday each week). When exiting require a report, and cross check against observer log-book.

Don't have an automatic cross checking procedures. All done manually.

Violations:

Infringements don't appear to happen very much. Japan had some inconsistencies. But rectified when cross-checked with State authority.

One example of a violation. In 2008, dropped an observer on an island. Fined 100,000 SBD

Fines are pretty low, so Act amended to increase the penalties. Still waiting for AJ to review penalties

SI lowest fines across the region. Penalty units for different breaches. Penalty Act. Up to 1000000 SBD, or USD.142,000. Is a need to standardise penalties across the Parties.

VMS evidence is admissible in Court to secure penalties.

Governance: Sustainability overrides growth issues. The latter depends on the former.

Working on a new Bill, after elections. Bill will address management and development issues. Sustainability linked to development. PP and ESBFM are already in place.

Legal system is flexible and subject to change as and when required. Considerably improved with strengthened participation of AJ. Any infringement or breach of conditions. They provide advice. Also seek legal help from FFA, and submit this to AJ office.

Master Plan Tuna Strategy exist for offshore fisheries - Offshore strategy that has 5 pillars. Fisheries management is one. and Tuna Management Plan.

SI had a history of corruption. Permanent Secretary new in 2008. Had high levels of corruption in Ministry. Corruption, licence fees not TT'd into Government account, went to licensing (Bilateral Agreements) officer accounts. Agents were trying to influence licensing officers. New Zealand Institutional Strengthening Programme developed criteria for licenses, (Process – Director Under Sec and Permanent Secretary). assessment of applications. Under the Fisheries Act, Director issues licence, the process has to be endorsed.

Now the processes are subject to audit from Public Auditors.

Bilaterals: Taiwan, Korea, Japan, EU, New Zealand. 2 local companies. Meetings are held regularly or on demand.

Truly local based - NFD local company, owned by Trimarine. 2 under FSMA arrangement and 1 can fish locally in SI EEZ.

MTCs incorporated into Bilateral agreement sand as licence conditions (Domestic).

6. Closing



Confirmed

MML Lead Auditor

I7 Ministry of Fisheries and Marine Resource Development, Kiribati

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Taberannang, Minister of Fisheries and Marine Resource Development, Kiribati,
2. Ribanataake Awira, Permanent Secretary, MFRD. Kiribati
3. Beero Tioyi, MFRD, Principal Fisheries Officer

Location: Forum Fisheries Committee

Date: 8 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
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- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to MFRD

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Government Fisheries Department

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

VDS system: Proposed endorsement of change in the process of Cabinet submission.

Any changes to the system are referred back to Cabinet

Negotiations between group still taking place.

Parties that don't use days will exchange, but have to establish basis for PAEs.

Having VDS rates for different vessel sizes is good. Have to look more closely at catchability. Need to include a provision to revise VDS weighting to take account of efficiency.

Observers: 60 observers, 10 Senior observers and 1 National observer coordinator. ToT still to do under FFA/SPC supervision.

Debriefing – National observer coordinator MCS section.

Observer vesting processes demonstrates selection of a high calibre of observers. Need to look more closely at validating quality of observer outputs in house.

Violations:

One reference to small fish dumpings as against catch retention policy. Witnessed by another observer and fellow observer from other ship. Otherwise very strong/high levels of compliance.

Confident that catches are recorded and that observers are trained to differentiate between species, bycatches are minimal. All species retained (Check Regulation).

Observers able to differentiate between log sets and drifting FADs, as definitions are set out in the Observer hand-book.

Minor breaches handled by Fisheries Administrative penalty submitted for assessment through FAPCOM (Fisheries Administrative Penalty Committee). FAPCOM comprises a nominee from Immigration, Customs, Police Maritime Unit and Fisheries and the AJs office.

Governance:

New Fisheries Act presently being tabled in Parliament. Amendments include an increase in fines from min \$30,000, \$ 100,000 to \$ 1 mln. 1 mln is for breach of licence conditions (MTCs) e.g failing to report, entry exit and 3 IA Compliance. 3 IA s is incorporated into MTCs.

New Fisheries Act supported by AusAid, working with the AJ office with TA provided from Australia. Legislation endorsed all International conventions.

No corruption. Ministerial operational plan reviewed every 6 months by Ministry of Finance and Economic Development, Planning.

All New Legislation is submitted from the AJ office through to the Cabinet and then to Parliament.

Four Year Fisheries Master Plan, reviewed once every 4 years. Focus is to maximise benefits from tuna fisheries, but not to override sustainability. Have a balanced approach between sustainability and promoting islands development – 11% of EEZ is a protected/exclusion area. Sustainability a priority against growth.

Tuna Management Plan is old, with the intention to review. Outputs and indicators, haven't implemented. One recommendation of the plan, but never implemented is the recommendation for an independent Authority.

Stakeholder consultation: Consult domestic industry on legislation.

Bilaterals: are with Korea, Japan, Taiwan, China, New Zealand, Ecuador, Specific individual deals with China and Ecuador (Associations). Regular meetings – annual/biannual take place with joint Ministry/ Administrations and industry representing these groups.

Some problems with Ecuador boats fishing in the High seas, registered with WCPFC but not Ecuador. Potentially a problem with 6 boats. WCPFC unable to report activity to countries. Need to allow for full transparency in vessel movements.

EU recent new entrants fishing High Seas and Kiribati. 4 very large Spanish boats, now fished for three years.


Stakeholders

Confirmed

MML Lead Auditor

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Nannette Malsol, Director, Bureau of Marine Resources,

Location: Forum Fisheries Committee

Date: 8 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

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- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to BMR

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Government Fisheries Department

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

VDS endorsed at the highest levels by leaders of PNA. Palau now need further improvements to optimise exploitation prospects, but to place a more commercial emphasis on operations for the benefit of all Parties.

Believe that there are some underutilised VDS which can be allocated to possible additional opportunities within Palau.

PNA office to act as Secretariat to facilitate change with roles to include VMS, Observer placement activities and commercial aspects. PNA operates on instructions from the Parties.

FFA's future role to deal with development opportunities and Training.

Observer scheme: Political priority set to improve observer system

Observer pool will be 25, 11 presently certified, with the aim to have access to a reserve pool

Training supplied from FFA but looking to others through PNA e.g. PNG, to assist in training

FFA presently debriefing observers but also investigated and interrogated by coastguard to assess for possible violations. A programme coordinator will be added to the staff. –

Given educational standards in PNA countries, it is unrealistic to expect to find graduates, and provided competency tests are up to speed, observers can be recruited from the islands

Governance: 3 IAs updated in the Palau National Code, and incorporated into then Regulations. Marine Act is now being implemented.

All Bilateral Agreements agree Minimum Terms and Conditions. Licences also include provisions.

Fisheries tuna management Plan includes reference to Precautionary Measures.

The current Act contains a penalty schedule linked to offence type, and the amendments will incorporate changes to increase charges. There are min and max fines. All violations go through court procedures.

Compliance: Palau has one patrol boat, provided with support from Australian Navy patrol programme. Also supported by regional patrols eg USA.

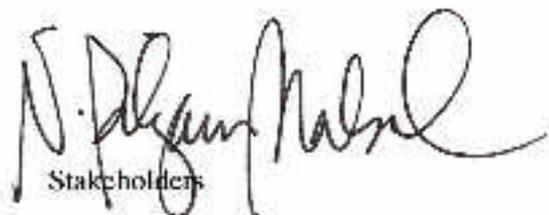
Main non compliance issues are UUU from Philippines/Indonesia. The Japanese fleet is well behaved. Regular meetings held with the Japanese, and usually annually.

Consultations with Bilateral parties in the margins in Meetings (China and Taiwan). Japan visits the country for discussions. Japan historically refused to have observers on board. Now inter jurisdictional MoU through PNA, prevents the Japanese from undermining the system.

Ministry Board covers off national views. Small country, are fully aware of local interests and needs.



MML Lead Auditor



Stakeholders

I9 Nauru Fisheries and Marine Resources Authority

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Charleston Deiye, CEO, Nauru Fisheries and Marine Resources Authority (NFMRA)

Location: Forum Fisheries Committee

Date: 8 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to NFMRA

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Government Fisheries Department

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

VDS is a good way to go, much more appropriate than the capacity ceiling under Palau arrangement (Vessel cap). It is the most effective way of managing the fishery in the Region, with the view to also increasing the economic benefits for the PICS. The future focus will be on creating scarcity and increasing value. Target is possibly to reduce days and to allow a balancing opportunities through exchange.

However capacity penalties need to be improved. Refined so that it will reflect catch/carrying capacity.

VDS is a quick response to a requirement for action with link, through the biomass criteria to stock availability. PNA members needed to action as lack of momentum from other support organisations.

PNA Office goals are to develop MCS, VMS and to exploit commercial opportunities under one umbrella. All under the direction of the PNA countries. Ideal if observer placement to be coordinated by PNA office. with FFA dealing with training.

Observer programme: Strong confidence in the observer scheme, but accept some gaps exist.

Observers: Nauru has 6 active observers, but striving to 20 observers.

Observers are debriefed FFA debrief N. A programme and coordinator will be added.

Other patrol resources: Nauru doesn't have any patrol activities – small island country. However, Ship rider – coastguard comes into waters, one enforcement officer gets on board. Niue Treaty – Other countries can come and explore e.g. Kiribati, and working with FSM.

Relies on International support and but compliance elements are strengthened with observer deployment.

Compliance: Only minor infractions noted

Governance:

Fisheries Act 2009 implements 3IA. Earlier 1997 Act incorporated International Conventions. Regulations are also a tool to implement Management measures.

All processes require Authority to AJ to Cabinet to Parliament

Bilaterals: Japan, Korea, Taiwan, China, New Zealand, EU, Ecuador under the Spanish

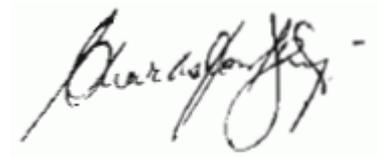
Bilateral Agreements agree Minimum Terms and Conditions, and licences incorporate MTCs. Nauru has a global TAE. As fished will close the fishery for all.

Consultative takes place with local fishery industry. TNC also included in the consultation process.

Confirmed



MML Lead Auditor



Stakeholders

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks (P3) and Antony Lewis (P1)

Stakeholders:

Affiliation

Representatives

1. Dr John Hampton (DFP Manager) Shelton Harley (PFS Stock Assessment), Peter Williams (PFS Data Management), Tim Lawson (PFS Fisheries Monitoring

Observer: Seremaia Tuqiri, WWF

Location: Forum Fisheries Committee

Date: 12-13 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to SPC personnel

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Stock Assessment Commission

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

Stock status (1.1.1) – current assessments

Skipjack – will be completed before SC and available on SC page on WCPFC website; will incorporate tagging data for 2006-2008 and long time series of Japanese DW pole-and-line data; P1 assessment will cover range of the stock, not just PNA waters; expect some decline in SB/SB_{msy} but probably not down to 0.5 B_{MSY} or 0.2 B₀ (default LRP)

Yellowfin – no new assessment; need to rely on 2008 assessment; note that CPUE for longline and purse seine continues to trend steadily downwards, whereas skipjack unadjusted CPUE continues to rise ;

Noted that SPC interpretation of the result of the YF model were conservative; no potential to increase catch, especially in region 3, where over exploitation is already occurring; high % of juveniles in FAD catches, especially in Philippines and Indonesia

Bigeye – in progress; will also be available before SC

Reference points (1.1.2)- no formal RPs adopted by WCPFC; work being done by CSIRO but unlikely to be completed this year and incorporated by WCPFC; SC applies proxy reference points (F/F_{MSY} , SB/SB_{MSY})

Stock rebuilding / limiting Fishing effort (1.1.3)

Strategy is in place for rebuilding YF and BE stock (CMM 2008-01); Hampton and Harley work suggest will not be effective for BE (IP 17); further details in submission to WCPFC (IP 18)

More work will be done on YF impact (not done yet)

Harvest control strategy (2.1)

CMM 2008-01: Robust HSF in place for YF but not BE (not for SJ – not necessary). USMLT growth, and some additional activities by the Latin fleets will prevent CMM 2008-01 reaching its objectives for BET. Any cut back in effort in the Central/Eastern Pacific. Or closure of the high seas area, will have a positive impact for BET, and will likely improve the benefits resulting from the CMM. Long Line catch limits could also increase fishing mortality, and the exclusion of Indonesia and the general lack of knowledge on actions undertaken by Philippines.

VDS: Estimates of biomass distribution are provided to PNA by region by SPC. These are in turn applied to national EEZs to reconfigure VDS national shares based on 7 year cycles. The information is not as yet, applied as an input to determine overall VDS limits. The link between stock assessment and VSD is tenuous

When the 7-year time series linked to biomass was used as an alternate to CMM 2005-01, there was very little difference in the VDS estimates.

Effort not standardized for vessel size in allocation of PAE, but may be adjusted by individual parties when calculating days used. Some preferential adjustment of PAEs still on-going, by varying proportions of biomass and catch history. When calculating PAE; impact of exemptions (especially archipelagic waters) needs to be assessed, and note that USMLT not included in PNA TAE.

Sum of PAEs may not reconcile with TAE.

Work well advanced with long-line VDS but much more complex.

Effort creep: VDS needs to be adjusted to take account of effort creep and increased effort on Associated sets.

Long terms species specific solutions for bigeye & YFT required. Total effort control should be about optimizing.

SKJ effort: Still some potential to increase effort for unassociated sets, since BET interactions are minimal. No potential to increase effort on associated sets, because of BET interactions. It is noted that CPUE on associated sets is higher, fuel efficiencies are also higher, so still need to create disincentives for associated activities.

Catch retention (relevant to by-catch estimation)

Some uncertainty re application on bycatch recording – tuna in CMM cf. all species in 3rd IA and as applied by PNG; needs clarification.

Data requests

Catch by species/flag/set type for past 5 years – data provided by P. Williams, based on two databases to achieve exclusion of archipelagic waters; additional caveats apply to Japan data (footnote)

Comparable data for by-catch unable to be provided, other than in aggregated form (across fleets and EEZs), but all species less than 1% in all set types

Observer data

100% coverage of purse seine effort between 20°N and 20°S since January 1st 2010, in contrast to 20% for USMLT and FSMA vessels, and low (<5%) for other fleets.

Intention was that data entry following this large increase on coverage would be shared between FFA, SPC and PINs but little or no capacity in PINs, FFA does FSMA and USMLT, leaving SPC to do the rest (a very large task); no funds provided by WCPF or PNA, but funds obtained from New Caledonia (and NZ ?) for enhanced data entry capability; huge task – most countries have scanners.

Observer data crucial in estimating species composition of catch (see below)

Set type

Need to see definitions used by observers. Little misreporting suspected in the past on log-sheets, but more pressure now. Possibility to use VMS to confirm set type – timing of sets (Associated made just before dawn). Though requires hourly transmissions.

Estimates of species composition (Tim Lawson, after initial discussion with JH/PW/SH)

Logsheets not reliable for estimating species composition in WCPO because spp. not distinguished accurately onboard and few opportunities for collection of accurate landings/unloadings data by species., because of transshipping/mixing wells. Other tuna fisheries use port of landing to record data, and this is not an available activity.

Observer data historically based on grab samples but seem to be unreliable/uncertain, with skipjack over-estimated and YF/BE possibly underestimated (selectivity bias). This may vary with size also.

Skipjack ~ 80% by logsheet, ~ 55% from grab samples (former overestimated, latter under estimates); % “YF and BE” conversely underestimate, but grab samples possibly OK for estimating % BE in “YF plus BE”.

Possible solution was to look at spill samples – some practical difficulties, but maybe useful; also size selectivity estimated (small < 49cm, medium 50-105cm, large > 106cm); initially selectivity lower for large small, more recently for small but unsure re large; medium generally over-selected.

Species composition “radically different” (BE catch doubles, skipjack reduced by ¼, YF increases slightly). With good coverage by spill samples could in time go back and correct S_BEST (currently based in grab samples, except for US, Japanese and EU/Spanish boats)

Now looking at paired samples (spill and grab); so far, only 18 trips (and most from PNG) sampled so very preliminary; lower BE % ? no samples from eastern part of WCPO (and features are very different).

All in all, very preliminary but implications considerable.

Available corroboration - US fleet 72% skipjack, other spp % not known; Japan – less SJ, more BE

General observation/expectation is that for associated sets, SKJ would be around 75%, Yellow fin 20%, BET 3-8%.

All current inputs to stock assessment with MFCL use S_BEST database, which is currently based on grab samples for spp. composition, but assessments have included runs with varying assumptions re species composition and sensitivity analyses of assumptions re spp. comp. – little difference

Confirmed



A handwritten signature in black ink on a light background. The signature consists of two lines. The top line starts with a large, sweeping loop on the left, followed by the letters 'T', 'H', 'I', 'L' in a cursive style, and ends with a horizontal line extending to the right. The bottom line starts with a large, sweeping loop on the left, followed by the letters 'H', 'I', 'L', 'L', 'I', 'E' in a cursive style, and ends with a horizontal line extending to the right.

Stakeholders

MSC Email communication

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Stakeholders:

Affiliation

1. Dr John Hampton (DFP Manager)

Representatives

Location: email communication

Date: 3 September 2010

1. MML Questions and responses

What services does SPC provide to WCPFC

1. Core scientific services in stock assessment, evaluation of management options and measures, data management.
2. Implementation of projects regarding estimation of purse seine species composition, bigeye tuna biology, tuna tagging, and others.

What proportion of the SPC-OFP budget comes from the provision of services to the WCPFC.

Approximately 15%

What are the key services provided to SPC Members, particularly to PNA

1. Provision of advice on the regional status of stocks and national implications thereof.
2. Scientific support for the development and implementation of national fisheries management plans.
3. Capacity building in stock assessment interpretation.

4. Provision of data processing and data management services and capacity building.
5. Capacity building in fishery monitoring, particularly in observer training, debriefer training and the development of in-country observer training capabilities.
6. Provision of data and data summaries to the PNA in support of implementation of the purse seine VDS.
7. Provision of data and analyses to PNA in support of the development of a longline VDS.
8. Provision of analyses of management options being considered by FFA and/or PNA at the sub-regional level.

What are the other major sources of funding of the SPC-OFP work programme

1. AusAID
2. New Zealand Aid Agency
3. France
4. European Union
5. GEF
6. PNG (tagging)
7. Korea (tagging)

What is the logsheet coverage for the PNA purse seine fishery? How does it compare with the coverage for the longline fishery?

Rates of coverage (% of total tuna catch covered by logsheet) are in the following table:

	PS	LL
2006	85.7	40.7
2007	86.0	38.1
2008	85.8	23.0
2009	82.9	18.2

1. Longline coverage rates for 2008 and 2009 will likely continue to improve over the next year as further logsheets are received.
2. Data includes EEZs and the High Seas
3. Purse seine coverage rates exclude the domestic fisheries of Philippines and Indonesia.

I11 Western, Central Pacific Fisheries Commission (1)

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Karl Staisch, WCFPC

2. Deidra Brogan, SPC

Location: Observer conference, Cairns

Date: 14 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
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- Moody Marine as independent CB accredited to carry out MSC assessments
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- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to WCPFC

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fisheries Management support organisations

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

Operational issues associated with the Regional Observer Programme

Recruitment and Training

Perception on compliance

Peer Review Processes

Logistical issues

4. Stakeholder Key Issues

Operational issues: The programme is required to cover 100% observer coverage for 230 purse seiners and 5% for 6000 long liners.

Each party has specific priorities – purse seining or long lining.

The historic coverage was 20% for purse seiners, when the system was working well.

It is quite a task to extend the observer system to 100% coverage. Some critical issues relate to:

- Extending the training network
- Ensuring complimentary in application throughout the countries
- Logistical deployments between the countries – island and distant waters.

However, Training of Trainers/Observer coordinators are now deployed in almost every country. FFA/SPC/WCPFC Observer Trainers will travel to each country, which represents an ongoing commitment. PNG has established a Centre of excellence, to which countries can send observers for training. The Training of Trainers programme has been taking place over the past 12 months.

Qualifications: Observers have secondary level qualifications. They are required to sit a Criteria Test (Basic mathematics and English skills). The Pacific island education standards are generally high. The CT is good at weeding people out. There have been some political appointments, avoiding the CT, but the modular system means that these trainees generally fall out of the system, or require a lot of work to get them up to speed.

The training system itself is a Competency Based System linked to Australian/New Zealand vocational training standards. The training is modular with trainees require to sit exams after each module. Tim Park, FFA is responsible for the training schedule. WPCFC has responsibility for setting standards based on observation and international best practice. SPC also contributing to formulation of the training programme e.g sampling techniques, weight and length frequencies.

Observer training, including the Sea Safety, etc is about 5 weeks. Also it is ideal to have the sea safety etc completed before the course but this is not always possible in some countries. And can get incorporated during or after the course.

Operational issues:

Trips average about 45 days on purse seiners. But can be out for longer periods (depends on the fishing), also long line trips can be a lot shorter or a lot longer depending on type of long liner

Debriefing for a purse seine trip takes 1:1.5 days

Regular workshops are held to discuss problem issues. The workshops include the principal management support (FFA, WCPFC and SPC) organizations and party Observer coordinators.

Observer deployment can be an issue with observers left in ports foreign to their home ports. Parties generally do a very good job at getting them pack to their home port.

Observer Turnover: The training programme needs to be ongoing. Attrition is normal for an observer programme and is not large but some find that they are not suited to a life working on vessels at sea. Some move onto higher positions using the expertise they have picked up as a result of being an observer . Salaries are attractive within the region which leads to reasonably high demand. Some trainees may also leave to other Observer programmes outside the region.

Audit.

WCPFC has responsibility for auditing the performance and to ensure Commission ROP standards are maintained of the observer programme including the training programme. 1 Audit undertaken to date in the Philippines. The results have not been released and a process for making audits public is under review in a TCC scheduled for the end of September, early Oct 2010.

Basically the audit reports are to highlight deficiencies in the programme and then to sit down and work out ways the ROP Secretariat and others can assist programmes to overcome those deficiencies,

For an audit to occur all ROP interim authorized programmes must request an audit, the ROP Secretariat cannot tell a programme they are to be audited, However all programmes have to be audited by June 2012 or they lose their authorisation to be part of the ROP. To avoid a last minute rush the ROP Secretariat are continually reminding Members to ask for an audit of their national and sub regional observer programmes as early as possible.

The audits are not carried out to close programmes down, or point the finger at anyone, but are to try and get all programmes operating to the standards that are required by the Commission. This means the ROP Secretariat will look at deficiencies and see how best they can help the programmes rectify these deficiencies.

The Audit assessment includes:

Operating and management according to requirements

Are the data outputs produced according to the required standards

Is the Party Sea Safety Training Standard compliant with International Standards

Evaluating De-briefing Standards (observing a debriefing process).

Request audit guidelines

In addition, SPC has 5 data processors. They check the data for quality.

Data processing component increasing to 15 staff to cater for additional workload

General Observations

Observer confidence very high

Some observers good on reporting others perhaps stronger on technical issues. These discrepancies are detected in the debriefing.

Some countries wanting to process data themselves, think that audit process suggests best to centralize. Problem would be ability to retain know how / expertise, as staff circulate.

Current levels of communication still not strong. Still waiting to receive observer reports at SPC.

Problems:

Not enough funds available for the scheme

Continued commitment to training and extending the observer pool

Standards in training and course content need to be high. Some parties weaker than others

Minimal levels of intimidation occur. One recent alleged murder of an observer while carrying out duties at sea.

Logistical issues moving observers around the region. Require VISAs to go through US – Embassies only in Fiji, Papua and Fiji, and observers have to travel through these places. Entry Visas into Australia also problematic.

Observer tasks are very onerous, with many things to report. MSC and Commission Management Measure requirements might require 2 observers per boat. Already sufficiently onerous as is.

Some minor evidence of corruption. These things can be spotted in de-briefing, or when an alternate observer goes on board.

Strong points

100% coverage of purse seine vessels, and to date strong compliance by boats

Observer presence has ensured verified monitoring of the FAD closure

Focus during FAD closures is now on detecting free schools and using helicopters. School fish quality is generally better.

PNA observer initiative extremely positive.

Other issues:

Log books concentrate on commercial catch details. Estimates on target catches by skippers (volume) are generally accurate, with some species discrepancies. Observers pick up by-catch and discard issues, successfully.



6. Closing

A handwritten signature in black ink, appearing to read 'M. Bal.', is written in a cursive style.

Confirmed

MML Lead Auditor

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Eugene Pangelinan, Deputy Director, NORMA
2. Patricia Jack, Chief Management & Development Division, NORMA
3. Rhea Moss, Chief Compliance, Stats and Technical Projects, NORMA

Location: Forum Fisheries Committee

Date: 19 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
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- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to NORMA

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Government Fisheries Department

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

VDS system: Illustrates serious commitment by home parties to fisheries management. The next step is to implement VDS as a mechanism to control effort as a management tool. Presently still resolving final allocation issues between the parties and reducing PAEs to accommodate this (PNA agreement), then will focus on need to ensure scarcity in order to promote environment for a strong market based system

VMS: Subscribe to FFA scheme

Observers: 70 observers, recent new intake of 15, 12 Senior Observers. Also have a joint agreement with RMI for observer sharing.

Confident that NORMA debriefing process is effective.

Compliance: 100% observer coverage, allied to VMS ensures full compliance.

Violations: Only one recorded, attempted bribery of observer, during FAD closure. Vessel licence suspended and owner fined \$ 500,000, then reinstated.

Governance:

Standard Legislature procedures followed – NORMA advises on policy, AJ's office approves legislations and then submitted to Parliament.

Marine Enforcement Act, 1979, gives powers to Agency, NORMA, for specific management of tuna resources.

Marine Resources Act, 2002 incorporates reference to international conventions and ESBFM and Precautionary principle.

Tuna Management Plan. 2000, but currently under review.

MTCs incorporate 3 IA decisions.

Bycatch retention, as per 3 IA, interpreted as tuna only.

Bilaterals: Japan (the largest partner) but also agreements with US, Korea, China, Taiwan and EU. No present EU activity.

Allocations within Bilaterals linked to days. 1004 days allocated to licenses, covering 34 vessels. The allocations take account of capacity weightings.

Some slack in PAEs to allow for additional existing domestic activity should they overshoot.

Stakeholder consultation: Consult domestic industry on legislation. Local industry, two companies, 1 based in Pohnpei (Caroline Fishing Company (4 vessels)), the other in Yap (Diving Seagull Inc (2 vessels))

Workshops held with industry, as well as visits.

5. Other issues



Confirmed

MML Lead Auditor



Stakeholders

I13 Western Central Pacific Fisheries Commission (2)

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Albert Carlot, WCPFC VMS Manager
2. Peter Flewwelling, WCPFC Compliance Manager
3. Andy Richards, Fisheries Consultant / Ex WCPFC Compliance Manager.

Location: WCPFC Offices

Date: 19 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

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Stakeholder comments attributable to WCPFC

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Regional Fisheries Management support organisation

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

Responsible for management activities in the high Seas. PNA parties and other Members of the Commission are responsible for their respective EEZs.

Have a register of vessels fishing in the entire Convention Area beyond areas of national jurisdiction (Active List) including those vessels that fish in the EEZ's, FFA and parties do not license or list a vessel unless it is on the WCPFC Record of Fishing Vessels Authorized to Fish in the WCPFC Convention Area or on the Interim Register of Non-Member Carriers and Bunkers, e.g., parties that are non-members that provide services to Members and are nominated to do so by Members.

Main focus is in management of the high seas, and monitoring and reporting on suspect vessels, produce WCPFC IUU List, and monitor activities of all vessels operating on the high seas with their VMS switched on, both licensed boats where it is mandatory to have their VMS on at all times and any other vessel whose VMS is on and detectable. Do not have access to satellite imagery.

Produce CMMs at the direction of CCMs. Many Management Resolutions produced through assortment of Scientific and Technical Working Committees. Cooperating Non Members (Indonesia and Vietnam (Several other Cooperating Non-Members, but list changes each year), fully integrated into the process, but argue for specific exemption of Archipelagic waters.

Support PNA and other Member International MCS operations – data on high seas operations. Boardings sent to flag State and copied to WCPFC. WCPFC is one of very few RFMOs allowing High Seas Boardings. PNA make up only 8 of the 25 Members and 7 participating Territories and 7 Cooperating Non-Members. About ½ of the international MCS operations were not in PNA waters..

Peer Review reports produced on compliance with CMMs (Meeting docs).

Communications on high seas transshipments, pre activity, and post activity reports, but always under observer observation. Transshipments on the High Seas are discouraged and permitted only on the exception basis which needs to be justified according to certain circumstances to the Executive Director. Transshipments are to become more controlled as the Executive Director guidelines are finalized.

PNA members have been a driving force for stronger management measures for the Region's fisheries. VDS inspired by need to control effort and access for both conservation and economic purposes. Pressure to increase purse seine vessel numbers from 205 vessels, required a change in the Agreement to specific national TAEs/PAEs. The PNA Agreement demonstrated a serious management commitment and competence to manage from PNA partners.

Establishing the WCPFC also provided additional strength to ensure CCMs complied with Regional Management Decisions. Parties, including all DWFNs are accepted as compliant and are monitored by CCMs in EEZs and WCPFC VMS on the high seas as well as 100% observer coverage for purse seiners in all areas between 20N and 20S, and all CCMs have mechanisms in place to respond to queries.

CCMs report infringements to the Commission and propose such vessels for the WCPFC Draft IUU list for final decision by the Commission if the case has not been satisfactorily resolved. The Secretariat reports suspect activities to flag States to assist them in controlling their fleets.

Main problem areas are consistent and seamless monitoring of activities inside and outside EEZs for IUU fishing. Non registered boats, and gaps in monitoring EEZs and high seas due to decisions to block visual monitoring access between the two areas, and unauthorized fishing. VMS tracking can illustrate strong evidence of suspicious activities and possible fishing in the zones (e.g. extensive time to cross zones with no explanation or port calls, pattern of tracks, etc.).

A constraint is the inability for WCPFC to track (by VMS) the boat that is only on its register and not on the FFA Register, e.g. authorized to fish only on the high seas, once inside an EEZ. If not licensed in the EEZ, PNA Parties, are also unable to track such a vessel. There is a need to implement VMS sharing across all parties and with WCPFC. Members are actively considering this option. Also need exchange between IATTC and WCPFC due to an overlapping area in the Convention Area around French Polynesia.

Closure of other High Seas pockets will be a significant positive step to deter unauthorized vessels fishing in the Central Pacific if appropriate monitoring and observer coverage can be met, most particularly with unauthorized fishing inside the EEZs. (for those with VMS on board, as opposed to non registered/unlicensed) This will have the benefit of concentrating authorized fishing activities inside the Party EEZs.

View on WCPFC: FAD closures were necessary because of the increasing technology on FAD fishing. Boats would know exactly where to go when and where by VMS tracking of their FADS and monitoring the sensors on the FADs for amount of fish around the FAD to determine optimum periods to go and fish on the FAD, thus making more efficient use of their days and staying in port where their vessel days were not being counted, but in effect the FAD was still fishing and thus increasing effective fishing effort.

Observer coverage is a clear advance and ensures compliance. The Regional Observer Programme deployment now has Commission Approval to ensure carry over of observers when working across EEZs. In the PNA waters, the PNA has declared that the ROP observer aboard must be from a PNA country.

One serious concern is to reduce fishing capacity. Gillette and Lewis, attempted to detect historical trends in fishing capacity from an analysis of vessel registries, but were frustrated by a lack of consistency in registration details.

TCC currently investigating implementation of Port State controls. Consideration may be given to include a pre fishing briefing as a first check of the vessel to establish base information data upon which to monitor activities whilst in the Convention Area.

See WCPFC Workplan to see what has been achieved, and what still needs to be done. Specifically examine Technical and Compliance Committee workings.

Currently also working on strengthening Archipelagic States/non-FFA Member States capacity, to bring these less management developed States up to speed. Ongoing Technical support from WCPFC provided to Indonesia, Philippines and Vietnam.

5. Other issues

6. Closing

Confirmed

for Stakeholders



MML Lead Auditor

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Transform Aqorau, Director
2. Maurice Brownjohn, Commercial Manager

Location: PNA Office, Marshall Is

Date: 23 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
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Stakeholder comments attributable to PNA Office

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Regional Fisheries Management support organisation

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

GENERAL OVERVIEW

1. What is the purpose of the Nauru Agreement?

Brought together, then 7 countries with common interest. Premised on sustainability. Tuvalu a late entrant.

To provide a framework for the Parties to incorporate for effective management for shared resources – common terms and conditions of access, common licensing and harmonised fisheries policies; and to maximise economic returns from the resources, but with primary emphasis on sustainability.

The purpose of the Nauru agreement provides a forum for the parties to discuss and take initiatives Within framework for Palau and FSM arrangement.

Over time, the conservation and management purposes of measures adopted by PNA have become more important and are the focus of the most recent arrangements

2. Does the Nauru Agreement contain clear and long term objectives that guide decision making on the context of precautionary fisheries management and ecosystem based approach to fisheries management

Nauru initiatives contain elements of Precautionary approach and ESBFM. The Agreement itself predates the sustainability initiatives.

Palau (subsidiary) arrangement A separate legal agreement, and that instrument tried to adopt the Precautionary approach (with emphasis on ESBFM).

3. Are the Nauru Agreement and the various Arrangements including the Palau Arrangement a regional or global fisheries agreement relating to straddling fish stocks or highly migratory fish stocks for the purposes of this provision of the UNFSA on dispute settlement, meaning that this provision would apply to the Nauru Agreement and other PNA instruments.

The provisions relating to the settlement of disputes set out in Part XV of the Convention apply mutatis mutandis to any dispute between States Parties to this Agreement concerning the interpretation or application of a subregional, regional or global fisheries agreement relating to straddling fish stocks or highly migratory fish stocks to which they are parties, including any dispute concerning the conservation and management of such stocks, whether or not they are also Parties to the Convention

4. How is the Agreement implemented – What Implementing Arrangements are in place?

Also provide provision to incorporate and strengthen changes relating to the management and enforcement system.

Agreement stipulates that implementation takes place implementing agreements. Presently 3 arrangements:

iA 1: Setting common MTCs and access, requiring vessels to have a common licensing form, setting data to be provided in catch reports

iA 2: Insurance cover for observers, regulating transshipment in designated ports

iA 3: FAD closure, catch retention, Observer coverage

In addition to above there are two other arrangements. Palau and FSM Arrangement are not under. They are separate legal arrangements.

5. Are the Implementing Arrangements legally binding

All are legally binding through ratification by Governments/ Ministerial Decision making processes. Each country having slightly different systems.

6. What is the PNA decision-making process, including decision-making bodies (Ministerial, officials etc)

- Who participates
- How are agendas determined and circulated
- How are decisions reported and circulated

Annual meeting of the parties required by Nauru arrangement. Agenda is set by the Administrator, historically the Director of FFA, largely based on previous years discussions, but what are of relevance to the fisheries at that point in time

Participation is open to Nauru agreement parties, to FFA members, to observers, including NGOs who apply. There are rules which govern preparation of agenda, circulation, reporting and who can attend.

The record of proceedings is distributed to the Parties.

Industry representative often form part of the Delegation.

Papers are provided to attendees. Observers have attended PNA meetings (See PNA Annual meeting minute, Niue, 5-8 May 2009 in which observers from New Zealand, Niue, the Secretariat of the Pacific Community and Greenpeace attended the meeting. Staff of the FFA Secretariat were also present. After the adoption of the PNA Rules of Procedures of Meetings, Greenpeace applied to Observe PNA Meetings. The application was accepted and Greenpeace did attend one of the PNA Meetings. However, the VDS Committee meetings are generally closed sessions but these relate to the operations of the VDS. On the other hand, PAE/TAE setting meetings are open to others who can apply to Observe. The MSC tuna specialist has applied to attend at the Majuro meeting but he did not turn up for the meeting, as did Seremiah (WWF). He also did not make it to Majuro. Next year the annual meeting will be in Tuvalu so hopefully a few more organisations can actually make it!

7. Are you satisfied that the appropriate legal mechanisms are in place to implement joint decisions

At regional level there are two layers. iAs are legally binding arrangements. When a measure decided under Nauru agreement, it is legally binding. Level 2 at national level. Each individual party has a way of implementing conditions – ideally could be done at the same time, but have to respect different processes in each country.

Measures taken at implementing arrangement automatically become legally binding at the Parties

Making binding on third parties requires implementation through licensing agreements, MTCS and changes to access agreements.

8. How is compliance ensured. What are the consequences if a Party does not comply

Over 20 years of experience, range of measures with a high level of compliance. Decisions have been effective on the past. VDS represents a new level of testing to the system.

Since implementing decision, very few instances. Provisions in VDS scheme there is an obligation on parties to stick to limits. There is a penalty system, for over runs. Focus though, is now on hard limits.

When parties meet, have to explain integrity of decisions.

Parties honour decisions to maintain their integrity in the group.

The establishment of the office with centralised activities provide new opportunities and integrity of function for the Parties as a whole. This process was endorsed at the highest political level.

Rules applied such as good standing.

EXTERNAL RELATIONS

9. What linkages do you have to the following organisations:

- SPC
A critical part of PNA's work in regards to stock, management and measures taken by PNA.
- WCPFC
Work within WCPFC to put forward management and compliance measures. PNA as a grouping within WCPFC.
- FFA
Have provided important Secretarial support in the last 28 years. They are Service Providers to PNA. The organisation has operational activities which PNA Parties rely on – VMS. Analytical work, policy advice.
- DWFN representatives
Coordinated meetings with various groups. But real dialogue is between individual parties DWFNs through bilaterals. We have had consultations with the United States in July in Honolulu, New Zealand in June in Wellington, Korea in Port Moresby in August 2009, Tahiti 2009, and again in Nauru in September 2010, Japan in Honiara in Feb 2009 and Auckland (2009), Taiwan in August in Taipei, Chair of PNA and Maurice with the Chinese in Shanghai in June. PNA met with 8 processors in February in Palau.
- Other third parties including NGOs
Will be increasing role with linkages between PNA office and industry which includes commercial stakeholders and NGOs

9 To what extent does PNA facilitate exchange between these organisations or is this role undertaken by others, and by which organisation

Some of the Other organisations such as WCPFC which has the responsibility to coordinate activities between Regional and other organisations. PNA role is to facilitate actions on behalf of the Parties at their direction.

10. Do you perceive that there are any bottlenecks to effective implementation and how would you propose to overcome these

Bureaucracy is a fact of life, which may slow processes. However, looking to avoid bottlenecks by creating other forms of decision making to remove these. Cooperation amongst parties to streamline decision making e.g. the pooling TAEs allows improved efficiency.

11. Do you perceive that there could be any regional or national incentives which could undermine achieving the outcomes expressed by MSC.

There are no obvious incentives that undermine the management system. EU/China/US provide subsidies. These may be unfair but VDS is designed to ensure that they aren't harmful.

12. How would you assess the ability of PNA members in enforcing and resourcing relevant management measures, strategies and/or rules.

The advances on International Law of Flag State responsibility have empowered poor countries.

An enviable degree of collaborative instruments

Niue Treaty for surveillance operations (Shared patrol boats and exchange in the use of physical access), cross border recognition of observers, FFA Regional Observer Backlist, WCPFC IUU Black List. Coordinated collaborative support from US/Australia/NZ/France, Joint Marine surveillance exercises, ship rider agreements, Common MTCs and VMS and information sharing.

There is scope for further improvements in information sharing such as VMS data.

13. Would you say that the fishery has in place mechanisms to evaluate all parts of the management system and is subject to regular internal and external review.

- PNA reports on annually to the Commission on implementation of VDS
- Part 2 measure Every Commission Member have to report annually against every conservation and Management
- Scientific and Technical Working Groups identify issues and seek to resolve problems
- National Tuna fisheries status reports assesses outcomes

PURSE SEINE FISHERY MANAGEMENT

- What is the role of the PNAO in the management of the purse seine fishery, how is that role expected to develop

See 'Resolution of the PNA Ministers to Give Legal Effect to the PNA Office'

PNA Office is administering VDS system, which will be enhanced by developing VMS capability, own register of vessels, data base on vessels catch and observer reports, to allow for a more effective management system under the direction of the Parties. This role lies now with the Director of FFA. There is a transition phase.

PNA Office will advise on evolution of the VDS and management measures to deal with fisheries management issues and actions

- What is the capacity of PNAO. How is that expected to develop

Small office, but outsourcing to Parties and other organisations. Office administratively will have to grow. Will require outsourcing such as Observer coordination. You ability to draw strong resources from Parties. Also have ability to draw on other technical support organisations.

- What are the key elements at the regional level in the management of the purse seine fishery – vessel register, VMS etc

Highest level of political supporting forums – Presidential summit, Forum etc.

FFA Regional VMS, National VMS, Commission VMS (nowhere to hide), 100% observers, overflights and patrol boats, Vessel Registers.

Presently reshaping VMS to be more of a management tool

SPC is the PNA country science and data functions provider., not just to WCPFC.

Legal and MCS capacity at FFA.

Access Agreements and Regional level WCPFC TCC. Also see Reporting of reporting –SPC data coverage report

Transshipment in port are all monitored/WCPFC catch tracking schemes/Carriers monitored through VMS

- How does the VDS Register work. Is it effective

Direct Registrations with Boat owners to subscribe to VDS Register.

There is no systematic discovery of purse seiners not on registers

Some minor High Seas issues on Eastern and Western extremities: Latin IATTC boats, Some PH and some IDN. PNA EEZs are well regulated. Rogue long liners operate outside the zone. Risks are high through fines and penalties – compulsory loss of boat (forfeiture).

Some additional measures - PNG and Solomons, FSM Lacey – Treated as illegal (importation) crime in US waters

- How is the VDS linked to the VMS, what are the issues – coverage, non-fishing days etc

Uncertainty of the coverage of some Archipelagic vessels working in EEZ. However, covered by PNG

Definition of a fishing day under VDS is clear and application under VMS is being tightened – innocent passage and transit through territorial waters, and transits into and out of PNA waters. Much of this can be tightened by observer coverage.

No fishing days, days in transit, presently being handled.

Manual reporting provisions provided under the scheme

VMS evidence is admissible in court.

- How is the TAE determined

2004 limit WCPFC 2008-01 limit. SPC advised consistent with sustainable exploitation. Paper to be sourced.

The TAE confirmed in Commission Measure.

- Is the TAE linked to the scientific advice/reference points/harvest control rules

The current TAE was developed with a link to science and confirmed by Best Scientific advice as available. What is not there are reference points and HCRs which provide mechanism to respond to stock status concerns.

There is a Harvest strategy, but not a formal HCR. Parties all participate in the WCPFC work to determine and adopt reference points and HCRs.

PNA may seek to adopt its own limit reference points to be consistent with MSC requirements.

- How is effort creep addressed?

There is a length adjustment in the VDS scheme, which is a penal adjustment for fishing power. CPUEs are monitored by the PNA office CPIE results appear to show increasing consistency with the limits set. May need to evaluate fourth class for Super seiners. The scheme has a requirement for monitoring and responses to effort increased.

- What happens when a Party is getting near its PAE, or exceeds it

Administrator puts out monthly reports to evaluate performance. PNA office inform parties on percentage. Administrator highlights possibility of trading opportunities to take them to the end of the management year. Report distributed to all parties.

There is provision to transfer, and penalties if there are excesses, ie reduces allocation in the following year (++). The scheme remains under continuous review.

- What additional management measures to VDS are in place
 - PNA has implemented FAD closures to 2-3 months
 - Catch retention – to prevent sets on small species
 - 100% observer coverage
 - High Sea closures
 - These measures that were PNA measures were taken over by the Commission
- What are the perceived strengths to the VDS scheme
 - High-level political support in the PNA Leadership (PNA, 2010)
 - a long history of cooperative PNA management efforts
 - an extensive consultative process with stakeholders directly involved
 - acceptance of the VDS by the WCPFC and its incorporation into CMM 2008-01
 - centralized monitoring
 - support from the FFA VMS and the Regional Observer Programme
 - monitoring (logsheet) and scientific support from SPC
 - taken together with the various other measures of the 3IA and CMM 2008-01, it provides a central element in the management of the target stocks and is also an important element in the regional strategy to conserve bigeye.
- What other measures are PNA membership considering to improve the management system
 - Long Line VDS
 - Additional high seas closures
 - Prohibiting whale shark sets
 - Development of cross border arrangements for observers – MoUs
 - FAD tracking / registration
 - e forms
 - No bunkerring at sea
 - Extending the FAD closure

A summary of VDS points under review are as follows:

- Latest science advice, effort, CPUE and conservation and management objectives;
- maintaining hard limits, and impacts of resulting scarcity, including DWFN and FSMA vessels;
- internal provisions, allocations and formulas;
- impact of dramatic rise of effort inside Parties waters, but outside the governance of the VDS scheme, due to "other effort" - USMLT growth outside of 2004-01 / VDS scheme;
- the value of retaining provisions under the original scheme to carry forward unused days, special allocations, to year variances;
- looking at a better trading mechanism between Parties to ensure all allocations are used within each management year;
- compliance and prosecution provision and data transmission technology.

- MRAG identified a number of non compliance risks in their 2009 assessment. What actions have been take, or are being taken to date to rectify these issues:
 - Many of the non compliance risks are associated with the long line fleet
 - 100% catch retention (for bigeye, skipjack and yellowfin) strengthens the reporting and validation of log book records, though automatic cross checking procedures need to be put in place
 - Increasing observer coverage to 100%, allied to a comprehensive debriefing process strengthens the ability to accurately record catch data, but also to observe other infringements such as fishing in the High Sea and fishing during FAD closures
 - Setting an observer MoU between PNA parties to allow for more efficient deployment and consistency in training and debriefing processes
 - Transshipment in ports and inspections is compulsory, and only the Japanese fleet lands outside the region
 - Penalty systems and prosecution laws have been revised through changes to legislation. All National Acts contain schedules with the facility for forfeiture has occurred, with fines of up to US\$1million for major offences
 - Joint initiatives in data exchange are happening between countries
 - All countries maintain an ongoing commitment to fisheries inspector enforcement officer and observer training. PNG has its own nautical college (Kavieng College) which supports access to all island countries

5. Other issues

Concern USMLT is presently excluded from VMS. PNA working with US to incorporate into the scheme. Meanwhile parties have provided an allocation of days consistent with the 2004 measure.

6. Closing


 Stakeholders: Dr. Transfrem Agorau
 Director PNA Office



Confirmed

MML Lead Auditor

I15 Koos Fishing Company and Pan Pacific Foods, Marshall Is
MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Eugene Muller, Vice President, Marshall Island Fishing Company/Koo's Fishing Company
2. Don Xu, Vice President, Pan Pacific Foods (RMI) Inc

Observers:

1. Maurice Brownjohn, PNA Office

Location: RMI

Date: 21 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fish vessel owners and Processing companies in Rep Marshall Islands

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

Industry characteristics:

10 locally owned/part owned boats from two companies

Marshall Island Fishing Company (3 vessels) / Koo's Fishing Company (4 vessels)

PDF (3 vessels) and a loining plant

MIFC and Koo focus on supplying partially the Katsubishi market (20%), with the remainder going to canneries..

Vessel size, around 1,000 GRT, with carrying capacity of 900 MT. Well sizes around 50-60 t

80-90% FAD fishery dependent. Free school fishing < 20%.

During FAD closure half loading. Now moving to hiring helicopters.

Recognize the reason for the FAD closure, but has lost around 20%-30% catch quantities. Free school fish usually larger.

When FAD fishing 3-4 sets in one day, commencing 3-4 am and finishing around 9-10 am for one set.

Net size – 1,500 length; 200 metres deep. Net mesh around 90 mm in the bunt centre) and 8 inches in the wings

One trip 3-12 weeks.

4. Stakeholder Key Issues

Bycatch Fish species include Rainbow Runner, but very small, Drifting FADs about 0.5%, or less than 200 kgs. Free schools only skipjack. Bycatches are usually landed and sent to fish meal.

Interactions with ETP Shark interactions are very rare. MIMRA policy prohibits the catching of sharks. Turtles also rare in open ocean, but if and when caught are released. If dolphins are seen in the net, will release catch.

Gear loss: Gear, if lost is recovered. Very high value. Old netting is used for FADs. MARPOL prevents dumping at sea, and liable to \$ 300,000 fine.

Tuna species primarily skipjack. BET is usually no greater than 10% in Drifting FADs, non existent in free schools.

Skipjack is the principal market driver, hence broad agreement that this should be the unit of certification

Data collection: High degree of confidence in data collected and ability of observers to identify the quantity caught.

Fisheries management: Very high caliber management restrictions. Fleet highly compliant. No incidents of non compliance amongst RMI companies.

Observer: Coverage in RMI has always been high, around 90%. RMI/FSM observer capacity is quite weak. Much better in Yap.

Consultation: MIMRA has workshops to educate ship masters on regulations. MIMRA day to day contact with the companies.

Industry participates in all the international meetings – incl WCPFC and FFC, USMLT negotiations

5. Other issues

Stakeholders


6. Closing



Confirmed

MML Lead Auditor

I16 Marshall Islands Marine Resources Authority (2)

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Witten Jacob, Observer
2. Jacob Keju, Senior Observer
3. Ajobi Clanny, Observer
4. Paul Victor, Observer
5. Dike Pozanski, Observer
6. Berry Muller, Chief Fisheries Officer, Oceanic Division

Location: MIMRA Office

Date: 23 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Fishery Observer, RMI

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fishery Observer

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

Background: Marshall Is observer programme.

Observer qualifications.

Qualified with Secondary school level passes.

Some of Seniors, trained at Fisheries and Nautical Training Center in RMI, in Nautical Qualifications

Pre selection test: Basic navigation, maths, conversions, tables, species identification

If pass eligible, 70% is the passing mark. More than 50% fail the test.

Modules are on forms based on SPC / FFA Regional Purse Seine Fisheries, Observer Workbook. When pass, move to next module

Failure 1-2 out of 20 persons.

Practical training during course, half a day spent observing unloading and loading on ships and getting experience on ships

Some times test to see if observers are sea going

Training done by SPC and FFA, in RMI.

Some attending ToT in specialised courses in FSM and Kiribati.

Certified as observer and then do trips

FFA might select 2-3 and send on FFA trips

Occasional refresher courses, for refreshers, ie sit in with new observers.

Gen 5 form is new. FAD form. No training. With instructions at the back. No briefing training provided.

Some restrictions on movement for observer training because of VISA issues (e.g. Australia)

Boat deployment:

Some small cases of intimidation. Such as preventing to use GPS. Sometime prohibit access to deck.

Now cases processed because of in house lawyer.

Can differentiate between log (natural) and drifting FAD and explained the definitions

FADs have higher rates of bycatch, free school tend to be much more skipjack orientated. FADs have scads, RR. Logs have higher levels of bycatch, RR, Mahi Mahi, Mackerel, triggers, sharks, silky sharks, trigger fish. Mackerels can be sometimes large in number.

Bycatch is thrown over-board, sometimes retained Rainbow runner kept on board and recorded on the log sheet.

Some small tuna discarded, and record. Generally gear damaged fish. Not aware if the rule applies to damaged fish or not.

Sometimes crew cut off shark fins for consumption

Size taken from Brail. Estimate with confidence.

Sample of 5 fish from Brail selected randomly. Then will do stomach samples, length frequency

Cross check captains observation against captains.

Captains will extract data from the gear engineer.

Debriefing:

Debriefing by Senior Observer. Debriefing takes 4-5 days per observer. More Senior observers takes less time. Debrief based on debriefing modules, per debriefing form.

Not subject to audit debriefing yet.

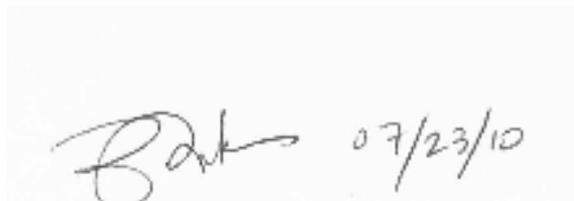
General:

One case of bribery. He reported the bribe to MIMRA – FAD fishing. Purse seiner – US / Taiwanese boat

Happy, salary is good.

Aware of the value of the programme.

6. Closing



Confirmed

MML Lead Auditor

Stakeholders

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Alick Jerry Tada, Solomon Is Observer (arky.Jahi@gmail.com)

Location: PNA Office

Date: 23 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Fishery Observer, Solomon Is

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fishery Observer

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

Background: Solomon Is Fishery observer - 1 of 70-80 observers. Has been observing for 2.5 years.

Observer qualifications.

Qualified with Secondary school level passes.

Literacy and arithmetic test taken at Fisheries Department, Solomon Is.

If pass, safety/first aid training

Observer course taken in local conference centre. Under the guidance of 3 FFA observer trainers, and SI Senior Observers

Modular Training based on SPC / FFA Regional Purse Seine Fisheries, Observer Workbook. When pass, move to next module

2 out of 45 failed the course.

Pass a test on module before next stage, passed. People failed and left. 2 out 45 failed.

Boat deployment:

First ship, 2 month on Ocean Warrior, Taiwanese purse seine (American Flag).

All were cooperative on the boat, very kind and no evidence of intimidation

Recording differences between set. Usually have to refer to different definitions as per the code by checking in the manual. Look for differences between Drifting, log set and anchors. Aware that log sets are total natural. Free schools, when fishing during trips away from FADs.

Differences noted. Higher non tuna bycatches on log sets than drifting FADs. eg higher frequency of sharks, rainbow runners and trigger fish

Free school sets have mixture of Tuna species, but low levels of BET. Train to differentiate between BET and YFT. Can estimate by sight from Brail, but will take samples.

By catch discarded but crew chop fins off sharks for own consumption. This is recorded in the log-book.

No comparison between captains and observer estimates on catches. Completely independent, but confident on estimates taken.

Debriefing:

Debriefing by Senior Observer. Debriefing takes 1 week to de brief, split into separate modular sessions, Will reference to any non conformity issues, but no feed back received.

Not witnessed any secondary debriefing/observing by WCPFC.

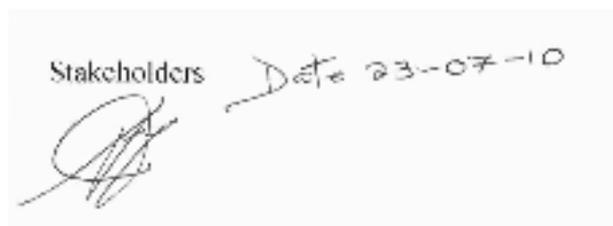
General:

Never witnessed serious offence.

Money is very good, Very happy on board. My colleagues and I enjoy the job.

Never been threatened.

6. Closing



Confirmed

MML Lead Auditor

I18 Japan Seas Purse Seine Fishing Association

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Kazuo Shima, President, Kaimaki, Japan

Observers:

Location: Forum Fisheries Committee, 24 July, 2010

Date: 24 July 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to DWFN stakeholder

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fish vessel owners

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

Industry characteristics:

One of three large fishing companies

4. Stakeholder Key Issues

Stock assessment: Concerned that there is a decline in skipjack. Migrating skipjack to Japanese waters has halved, indicating some problems in recruitment

Consultation: Never consulted by PNA members. Vehicle for dialogue is national Ministry. Japanese Ministry very passive and support WCPFC measures. New measures have not been good for the industry.

Compliance: Japanese industry always highly compliant, Best data recording systems in the industry. Japanese enforcement systems and checking processes are very rigid, unlike the others – singles out Taiwan.

Perceives that the existing observer coverage is excessive, and adds cost to the sector

Confirmed



MML Lead Auditor

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Stakeholders:

Affiliation

Representatives

1. Tim Park, FFA

Location: Honolulu stakeholder meetings

Date: 27 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to FFA

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Fisheries Management support organisations

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

Operational issues associated with the Regional Observer Programme

Recruitment and Training

Perception on compliance

Peer Review Processes

Logistical issues

4. Stakeholder Key Issues

Observer curriculum development:

SPC, WCPFC and FFA have developed the Observer curriculum jointly. Tim Park (respondent) was directly responsible for the input into fisheries management components.

The curriculum is based Pacific Regional Standards, competency base standards to Certificate 3 level (end of High school).

Debriefers (Senior Observers) are trained to Certificate 4 level.

Pre selection and training

The screening process is very robust.

Examples include:

Kiribati, 2,400 applicants for 30 spots, 700 made it through the screening process;

Solomon Is, 700 applicants, 210 passed through the screening process

Marshall Is, 20 applicants, 3 got through the screening process.

Most applicants are to High school level standards. Some of the applicants are to graduate level. Salaries are good, therefore attract strong interest.

Management and Debriefing

PNG, Marshalls and FSM do well in terms of Debriefing and general observer quality checks. Data checking procedures are particularly rigorous.

Quality of debriefing is scored. Observations from PNG and RMI are that there is an 85% satisfactory rate.

Audit processes

There are essentially two levels of audit: national and subregional programmes are audited by the WCPFC;

While observer performances are essentially audited by the respective national and subregional programmes, with collaboration of SPC.

Training and accreditation audits are being developed by SPC, FFA and by NFA Fisheries College, Kavieng PNG (Peter Sharples). WCPFC Still at its early stages. More attention focused now on expanding Observer coverage. Based on audit assessments, the programmes and standards are revised.

Some relevant issues

There were some grey areas, including interpretation of different FAD sets. These have been rectified with clear definitions and instruction. Free schools refer to sets 1 mile away from a FAD. In the event that logs are found in sets, the definition reverts. Clear distinctions made between drifting FAD and natural Log set. Sets are also coded, for example animals in and around sets are coded and observer reporting clarified accordingly.

PS 2 forms record the activity of the vessels including the “Association” of any schools that are investigated or set on – these codes are:

SCHOOL ASSOCIATION	
(tuna)	
1	Unassociated Free schools
2	Feeding on Baitfish
3	Drifting log, debris or dead animal

4	Drifting raft, FAD or payao		
5	Anchored raft, FAD or payao		
6	Live whale		
7	Live whale shark		
8	Other (please specify)		
9	No tuna associated		

While the FAD information form among other information such as how detected and the materials comprising the FAD also record:

Floating Object	
"as Found" or "as Left"	
1	Man made object (Drifting FAD)
2	Man made object (Non FAD)
3	Tree or log (natural, free floating)
4	Tree or logs (converted into FAD)
5	Debris (flotsam bunched together)
6	Dead Animal (specify; i.e whale, horse, etc.)
7	Anchored Raft Fad or Payou
8	Anchored Tree or Logs
9	Other (please specify)

Problems

Weakness is that coverage is extensive. There is a need to establish a regional profile for stronger follow up processes to ensure maintenance of standards

Observer reporting overload



Tim Park

Stakeholders

6. Closing



Confirmed

MML Lead Auditor

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks

Les Clark, P3 Assessor

Stakeholders:

Affiliation	Representatives
1. Transform Aqorau, Director PNA Office	
2. Maurice Brownjohn, Commercial Manager, PNA Office	
3. Tion Nabau, Legal Officer, MIMRA	
4. Simon Kofe, Legal Officer Tuvalu,	
5. Charlie Deiye, CEO, NFMRA, Nauru	
6. Sylvester Diake, Under Sec, Ministry of Fisheries, Solomon Is	
7. John Tuhaika, Dept of Foreign Affairs & Trade, Solomon Is	
8. Wayne Golding, Advisor, NFA, PNG	
9. Justin Ilakini, International fisheries Liaison Coordinator, NFA, PNG	
10. David Karis, NFA, PNG	
11. Ludwig Kumoru, PNG	
12. Nanette Malsol, Compliance Officer, Palau	
13. Berry Muller, MIMRA, RMI	
14. Wez Norris, FFA	
15. Manu Tu Pou Roosen, Legal Council, FFA	
16. Steve Shanks, FFA	
17. Chris Reid, Consultant to FFA	
18. Eugene Pangelinan, Deputy Executive Director, NORMA, FSM	
19. Terry Amram, Manager, Oceanic Fisheries Dept, NFMRA, Nauru	
20. Beero Tioti, PFO, Oceanic	
21. Anton Jimwerely, PNA Coordinator	
22. Ribanataake Awira, permanent Sec, MFMRD, Kiribati	
23. Kintoba Tearo, Director, MFMRD,	

Location: Hawaii Hilton

Date: 28 July 2010.

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client)
- Assessment Team
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
- MSC Principles & Criteria and Assessment Process being followed
- That stakeholder comments may be non-attributable if required

Stakeholder comments attributable to PNA Parties

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

PNA Party representatives and FFA Officers

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Stakeholder Key Issues

Reference Points:

- is recognised as an area of priority. The MSY-based reference points illustrated by the Kobe plots are recognised as default reference points
- is also recognised as the setting Limit reference points is the right thing to do, and was supported by participants

Harvest Control Rules and Tools

- the VDS is a powerful tool for management, consistent with CMM 2008-01, but there is need to improve its effectiveness
- the weaknesses in the VDS arise from the flexibility for carryovers in the design of the scheme
- the Parties have committed to implementing hard limits in the VDS, but these still need to be put in place
- other elements will also be covered in the ongoing review process
- the link to the science also needs to be clarified and strengthened. When the Scheme was established, SPC analysis showed that the TAE was consistent with, even below, sustainable effort levels in the Parties' waters
- currently advice on stock status and the impacts of alternative management measures is obtained from SPC by FFA and the Parties on an ad hoc basis.
- Noting that there are other tools for achieving harvest control outcomes such as the FAD closure and high seas closure
- notwithstanding these weaknesses, the real weaknesses in skipjack management at the stock-wide level lie outside the PNA, particularly to the west in Indonesia and to a lesser degree in Philippines

Bycatch

- Yellowfin and possibly bigeye are the stocks identified as retained species
- Other species interactions are insignificant
- The performance issues in respect of bycatch are largely focused on the uncertainty in data on purse seine catch species composition, the accuracy of classification of set types and whale shark mortality

Purse seine Catch Composition

- Additional work is needed to reduce the uncertainty of the estimated catch composition, particularly in respect of bigeye
- Parties see the improvement of catch composition data as a critical priority and are supporting and funding additional work with FFA and SPC on sampling and monitoring methods to improve the accuracy of the observer estimates of species composition

Classification of Set Types

- The quality of the observer programme is high overall
- To apply certification there will need to be a new emphasis on classifying set types, particularly in distinguishing log sets from drifting FAD sets
- This element can easily be strengthened in the observer training and debriefing programmes
- Work is being done to strengthen onboard monitoring with catch documentation processes to track catches from the set to processing

Whale Sharks

- The PNA has already been considering steps to reduce whale shark mortality at Officials and Ministerial level
- The Parties are ready to adopt a whale shark conservation measure
- Some additional work is needed on the practical aspects of dealing with the incidental occurrence of whale sharks being taken in sets

Compliance

- The level of violations are extremely low indicating the effectiveness of deterrents including observer coverage, forfeiture and penalties and other control measures as applied

Governance

- Confidence that appropriate governance systems are in place, with strong and continual back up and support from the PNA Office and FFA
- There is a high degree of transparency in all levels of activity including formal and informal consultations at all levels
- Peer review systems are in place with regular assessment of country performance through working group reports submitted to WCPFC and country assessments and studies undertaken by SPC and FFA

5. Other issues

Certification Process

- If the fishery is certified, there will be conditions and recommendations to address shortcoming in performance identified in the assessment

- these will be followed up by annual audits and the fishery will be re-assessed every 5 years

6. Closing


Stakeholders Dr. Transfaran Agerman
Director PMA Office



Confirmed

MML Lead Auditor

I21 International Seafood Sustainability Foundation (2)

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks (LA))

Team Members: Les Clarke (P 3)

Stakeholders:

Affiliation

Representatives

1. Susan Jackson, President, ISSF
2. Dr Victor Restrepo, Chairman, Scientific Advisory Committee, ISSF
3. Dr Bill Fox, Vice Chair, Board of Directors, ISSF (also WWF)
4. Dr. Joe Powers, ISSF consultant

Location: Pagoda Hotel, Honolulu

Date: 30th July 2010, 1000 hrs

Stakeholder comments attributable to ISSF

1. Points of clarification from Moody Marine

LA: The Pre assessment initially looked at SKJ and YFT. YFT was dropped because of a) uncertainties in stock projections and b) a large percentage of YFT, especially juveniles, caught within Indonesia and Philippines, where there is inadequate management.

Natural Log sets were identified for certification because of reported lower bycatch interactions, although it is now known that this is possibly higher than the current data reflects, and new sampling methods are being trialled by SPC to address this – so far 80 samples taken to date.

BET is a retained species under P2

Other bycatches existed, but these were relatively small, i.e. less than the MSC FAM guideline and below 1 %

eNGO

2 . ISSF summary views

ISSF: Summary of key points

- ISSF will be submitting a formal written position the week of August 9, 2010 to the assessment team.
- Bill Fox is a WWF employee but in this consultation case representing ISSF, but stressed that submissions were on the same lines.
- RFMOs are not doing the job well enough for tuna to be sustainable.
- The lack of P 1 details, for example reference points, and fisheries management plans is a concern.
- Necessary to have adequate management covering the whole stock.
- A particular concern was that it is not a normal assessment, but a government specified fishery.

- It is unclear that there are laws and regulations relating to this fishery and if there are, that they are being equivalently interpreted and enforced within each of the 8 PNA countries. The lack of information about the fishery regulations and their implementation is a major concern.
- Even if there are 8 countries, there is likely to be a tendency for fish other than certifiable fish to be declared as sustainable and there is a need for really good monitoring and control to include technological solutions in addition to human observers.
- The resulting economic differences between sets qualifying for certification and those that would not, will affect observer quality and requires independent electronic verification. This concern is further exacerbated by the fact that the determination of whether a school is free school or log set as another type of floating object set is not clear and will necessarily require some amount of subjective judgment which is inappropriate given the resulting economic impact of the resulting decision.
- The fishery under assessment in a contrived fishery.
- Log bycatch and lack of mitigation measures needs to be addressed.
- Lack of information available on the domestic implementation of the vessel day scheme by the PNA countries.
- Lack of understanding of how the applicant countries are managing the fishery. No transparent documentation is yet available. This information which should be accessible on the web.
- Good information on WCPFC, but poor on sub-regional and poorer on national regulation and implementation / enforcement.
- When in operating in the fishery, the vessels will be operating in a manner that they will be making sets on schools that would be eligible for certification and sets of schools that will not. This fact adds a critical need for extensive chain of custody control subject to the same observer concerns referenced above. Also, it raises questions about the certification overall, as the certified “fishery” is merely a subset of the total fishing activities of the vessels.
- It appears that the relevant information will not be available for comment until the draft report is available for review and comment. This is unfortunate.

Overall, these concerns are significant to a point that could result in failure, with a number of elements scoring less than 80.

LA: Vessels enter and exit, but vessels aren’t specified as part of the unit of certification, but the assessment is evaluating vessel movement and compliance and will outline strengths and weaknesses.

Aim of the consultation was to receive comment from the well informed stakeholders

4. Exchange on issues considered in the FAM

1.1.1/1.1.2: Stock Assessment

LA: Noted that there were no limit reference points though there are the KOBE plots which could be seen as a substitute for limit reference points. However, the lack of limit reference will be taken into account by the assessors, and this has been discussed with PNA and they will move to incorporate limit reference points into their decision making process.

ISSF: Can PNA alone consider reference points? LRP’s have to be adopted for the whole stock, which would have to be adopted by WCPFC. – The only management authority that covers the entire stock is the WCPFC. So WCPFC (including the country members) has to adopt the target and limit reference points. This is an issue for us. The RFMOs are not adopting target and limit reference points. The RFMOs have to do the key jobs that need to be done.

LA: What’s wrong with countries adopting LRP?

ISSF: It has to be applied to the stock as a whole and regarded by all nations fishing the stock, which requires action by the WCPFC which has responsibility for the entire stock.

PNA could accept LRP as a statement as to what needed to be done, but that isn't the end-point. It is merely a statement of what the WCPFC should do. If PNA established these, the Commission could follow, but Commission action is necessary.

Notes that Japanese pole & line fishery is now not working to LRPs despite the condition set.

LA: PNA has demonstrated its capacity to influence the important decisions made at WCPFC.

1.2.1: Harvest Strategy

LA: Around 75%-80% excl Indonesia and Philippines is covered by Harvest strategies (WCPFC and PNG Fisheries Management)

PNA purse seine fishery is around 50%, in addition to that there are other significant fisheries which lie within the ambit of WCPFC that are covered i.e pole & lone; as well as PNGs Archipelagic fishery

However, the lack of coverage of the target species represents the most vulnerable point in the assessment

Noting though that VDS applies to all set types

ISSF: If the coverage of the fishery were 80%, there would be less of a problem with fish that shouldn't be certified getting into the certifiable catch.

P3A: Skipjack in unassociated and log sets 250-320,000 over the last 5 years; and 100,000 to 350,000, from 1,600,000 to 1,800,000

ISSF: The VDS needs to be tied to a harvest control strategy and the way the days are counted needs to be standardized. There is no robust and precautionary harvest control strategy now.

LA: Harvest strategies apply to all purse seine activities

1.2.2: Harvest Control Rules and tools

LA: The assessment is focussing on the VDS. The system is comprehensive, but no caps have been implemented as yet

SPC indicate that for skipjack that there may be room for expansion

VDS needs to be tied to harvest control rules and be tied to stock assessments

The original derivation was evaluated by SPC

Weighting structure applies capacity limits based catches, which were probably over draconian for the higher capacity vessels. However, these needed to be reviewed to cope with the new super seiners (Latin and other new constructions), but only account for around 10%.

P3A: Most new entrants are in the lower category group.

ISSF: No one knows what has happened since the terms of setting the original TAEs.

Counting of days needs to be standardised. Are all the days counted?

What is the interface between the log sheets and VMS?

LA: VMS system counts whole days and reports are prepared by the PNA office for the parties (sample of country uptake shown)_

ISSF: Log sheets and VMS interface?

Is counting consistent and how are they evaluated?

Clarification requested on VMS recording.

P3: Log sheets used to show historical effort, and VMS used to count days over the last few years

LA: Have got a number of tools

ISSF: Are they well defined, are they effective and are they implemented and enforced equally by all PNA countries?

1.2.3: Information and reporting for the Harvest Strategy

ISSF: Under an MSY strategy, the more precautionary the management policy, the more these issues come to the fore.

Maybe information is there to support well-defined HCRs, but need well-defined HCRs first to allow this sub component to be scored. It is hard to give it 60 if you can't find the information.

LA: Assessment would be on the basis that the available information systems are sufficiently strong to support HCRs. In terms of information available to the client, it is the strongest fishery ever seen.

Days counted by VMS, incorporating penalties

Clarification FFA, PNG NFA and WCPFC VMS activities

Monthly reporting from PNA Office reporting to the parties

However, there is a Lack of transparency in vessel list data-base which needs to be resolved

Is the information support system the same across all countries

1.2.4: Assessment of stock status

LA: Assessment of stock status exhibits high standards

ISSF: Concurred, but tempered by the lack of HCRs and reference points.

LA: Need to look at the totality of all management measures

ISSF: Even if stock is in good condition, still need HCRs to set up management contingencies, including for other species. Need to establish controls on SKJ. Good opportunity to take advantage of the favourable state of the stock.

P2 general issues

LA: For P2, the assessment is made in the context of the two different fisheries

ISSF: Are log and DFAD sets both made on the same trips?

LA: Yes

ISSF: A strong verifiable mechanism is needed to deal with different sets made on the same trip.

LA:

- relies on observer coverage
- critical issue is species identification
- fleets differ on their ability to properly report BET
- SPC state generally 70% SKJ/ 25% YFT/ 5 %BET

ISSF:

- the actual fishery is PS.
- theoretically, with observers, the different types of set can be kept distinct.
- the fisheries being assessed can't exist without DFADs and their environmental footprint.
- if this approach was applied to a trawl fishery, it would simply mean that trawls with lesser environmental consequences could be simply pulled out and treated separately but not other trawls on the same trip.
- there is a real difficulty with this "contrived" fishery.

LA: If that is an issue, it is an issue for the MSC. Previously advised by MSC that fisheries could be separated in this manner

ISSF: It's an interpretation of the FAM and needs rethinking about how the assessment is approached, otherwise an operation can simply get away from the environmental effects by choosing those parts of their operation with less environmental impacts. The assessment should either:

1. look at other activities in terms of P2; or
2. do an economic analysis to determine if the unassociated fishery could operate economically on its own, and then certify only that independent fishery

ISSF: If the observer is responsible to note the classification of the sets, the result is they will be acting as certifiers.

LA: There would be an additional responsibility on the observer, over and above monitoring tasks

Attempts to bribe observers had been picked up through debriefing

We have checked the following:

- Qualifications/Screening processes
- Training programmes
- Remoteness makes debriefing difficult, debriefing processes were extremely thorough

ISSF: In EPO problems were minor until there was a major economic factor with the dolphin safe certification, which has undermined the observer system.

The assessment should look at monitoring well sealing electronically.

It is unreasonable to expect an observer to be at sea alone and have to make these calls. You need an immediate electronic validation system to help the observers.

LA: Accept the pressure, and there are strong processes that needed to be extended and strengthened

This is outside the jurisdiction of the FAM and is a CoC issue

2.1.1: Retained species: Outcomes

LA: SPC says YFT 2008-01 likely to be effective for YFT

BET: Serious or irreversible harm.

ISSF: But BET maybe overfished.

The problem with serious overfishing is that we don't know until it happens.

P3: Identified in the FAM 7.1.12, the measure of serious recruitment overfishing, which is difficult to apply to tuna stocks, because they are robust and continue to have effective recruitment even at relatively low levels of spawning biomass

ISSF: Marlins are over fished.

The issue is whether the fishery hinders the recovery of depleted bycatch.

LA: Marlins are well below 5% from the data available.

ISSF: These are relatively small populations and significantly overfished and need to be included in the assessment. If there is a species that is less than 5% - small catches of small populations that are significantly overfished need to be considered. One difficulty with serious recruitment overfishing is you don't know it until it happens.

LA: Will communicate this to the P 2 specialist.

2.1.2: Retained species Management

LA: JH, SPC has a concern about the growth in PS capacity but additional high seas closures will reduce this effort. SPC did suggest a transition to catch limits

ISSF: Relative importance of long line and purse seine is important. You can have much higher TACs if you have only longline fisheries. What is MSY is dependent upon the mix of fisheries.

Other RFMOs use catch limits and CCMs can use appropriate methods such as effort limits to keep catches within catch limits.

P 3: WCPFC is like the other RFMOs, has catch limits for the LL fishery, and effort limits rather than capacity limits as other RFMOs have for the purse seine fishery.

2.1.3 Retained; Information

LA: Monitoring is strong

ISSF: Uncertainty about species composition and work undertaken on species distribution.

LA/P3: Now working on spill samples and measurement of whole brails

2.2.1. Bycatch

LA: Sharks would be included as ETPs

ISSF:

- The major issue is that the effects of the fishery should not hinder recovery of bycatch species.
- Black marlin are retained and blue marlin largely discarded.
- Is the take sufficient to hinder recovery?

Is the 5% rule set in stone in the FAM? It should not be. It is a good rule of thumb for bycatch species that no one knows the status of. But you should look at bycatch species when you know they are depleted even if under 5%

2.2.1 ETPs

LA: 5% is a guideline, but if there are other reasons, species less than 5% can be evaluated. Factors such as relatively high catch or low fecundity could trigger investigation, but much would depend on assessors' interpretation of main and minor.

ISSF: That is a good rule of thumb but what about species that are overfished, such as Oceanic white tips?

LA: Stakeholder observations / ground truthing provided some evidence of small interactions, mostly in West. Zero interactions in the East.

Occasional sets on whales and whale sharks, PNA current looking at measures related to this

If objects are found in the set, it changes the classification of the set

P3: There are clear FAD set definition. Defined by WCPFC which can be the basis for defining log sets

ISSF: Does the observer have the capacity to add CoC to these other responsibilities?

LA: Our concern has been raised about the heavy responsibility on observers,

ISSF: There needs to be a bycatch best practices and research strategy to find ways to mitigate bycatches rather than defining %s and ruling out species. There should be an actual bycatch reduction strategy, best practices determined and required, and a research program to improve the best practices over time.

2.3.3 Information

LA: High standard of information available

Stakeholder dialogue with foreign fishers. Japan, indicated strong compliance, but didn't sign off on the consultation

Had consulted widely with FSMA industry and domestic stakeholders.

All fishing stakeholder had been contacted, not all had responded

2.4.1 Habitats

ISSF: Is an introduced log an artificial log or an artificial habitat?

Logs are part of the natural ecosystem.

Sets have a big effect on accumulated pelagic ecosystem under a log.

The effect of the introduction of FADs on habitat is an issue.

In this fishery log sets disrupt and destroy the ecosystem under the logs, the question is whether it causes irreversible harm, and related to what period it takes to an ecosystem to recover under a log.

LA: Clarification from MSC not to treat natural logs as artificial Habitat enhancement

Gear discharges covered by MARPOL and no evidence of gear discharge

ISSF: This is the first time a tuna purse seine fishery has been assessed.

There is major concern in the environmental community about this.

Addressing these issues helps to answer questions from the environmental community.

LA: Will refer to bycatch specialist

2.5.1: Ecosystems

ISSF: Removing 4 million tones has to have a major effect on the ecosystem.

Work has been undertaken on the ecosystem effects on these large-scale removals but it is not definitive.

3.1.1 Governance

LA: All ratified the relevant instruments and principles contained within their acts

The 3 IAs are reflected in MTCs, licence conditions, and overall the process is strong

Structures are strong on consultation

All have fishery management plans and have, or are working on EAFMs

ISSF: It is difficult to evaluate the effectiveness at national levels and this evaluation is critical. The FAM requires a judgment of effectively. That is information that is not public.

LA: Assessment looked at implementation

- Offences

- Forfeiture and fines

Message from stakeholders is that non compliance is negligible

In the objectives sustainability overrides economic growth

ISSF: The assessment needs to look at other nations beyond PNA. The effectiveness at national levels needs to consider every nation member and cooperating non-member to WCPFC. And, consider if nations are not members or cooperating non-members of WCPFC but are fishing the stock. The tuna are migratory and the RFMO management system should be in the foreground, because the other countries have an impact on the sustainability of the stock.

LA: P3 is specific to PNA, We cover WCPFC to the extent that it supports PNA

ISSF: This approach is problematic. MSC has to think it through,. It is the RFMO management system that is important, e.g. example of national fishery compliance (State Federal Model).

This is important for highly migratory stocks and shared fisheries.

Where should the management component be? P1 as output and P3 as an input? The assessment cannot assess only part of the stock. You need to assess BOTH P1 and P3 on the total stock. Not just part of the stock.

LA: Will look again at the FAM and will seek advice from MSC at the scoring

P 3.1.2 Consultation, roles and responsibilities

LA: Consultation is effective. Participation being inclusive is not a requirement

ISSF: There may be a process. But if it doesn't notify stakeholders it cannot be effective. When and where is it publicized? What is the process for becoming an observer? Is observer participation meaningful? PNA does not take input from interested parties.

Are you looking at "effective" as of now?

Precautionary approach is not in the PNA documentation.

LA: Is in national instruments and management plans and highlighted in ecosystem policy

3.1.4 Incentives

LA: We didn't find distorting incentives for unsustainable fishing

ISSF: The certification is sought by governments, and lacks vessel buy in, so more controls are needed.

Problematic because normal incentives don't apply. . This gets to the point of difference between this assessment and a normal MSC fishery. Usually there is some buy-in by the fishery. Here, if you are not buying in at the vessel level, then you really have to have controls. The question is who really wants this. Vessels are contract vessels and incentives have to be at the country level. The actual vessels don't really care. They will do what the countries specify. The incentive itself has to be at the country level.

3.2.1 Fishery specific objectives

LA: They are laid out in WCPFC measure

In national Acts

Not all the management plans are linked in legal terms to the acts

Management plans have supported policy stability (Gillette (2009)

One case of corruption and was dealt with

3.2.2: Decision making process

Good understanding of WCPFC but not much of PNA decision-making processes

LA: Process of decision making from PNA to WCPFC and a fairly robust system

3.2.3: Compliance and enforcement

LA : There are comprehensive systems in place and a high level of compliance

ISSF: Is there an established port inspection program as is important for CoC? What is the scale and timing of enforcement? Does an offending vessel not get a license to fish next year? Does it have to stop immediately?

P3: WCPFC hasn't adopted a port state policy, and there are not systematic port inspections. Discharging/transshipment is monitored in PNA ports, and this accounts for the bulk of the catch

3.2.4. Research Plan

ISSF: Was there a commitment by PNA countries to the SPC and WCPFC research plan and has each adopted the plan? P3 requires the fishery being evaluated to have a research plan. Bill – research plan needs to be asked of all 3 levels. They could each adopt the WCPFC plan, but they have to do something.

P3: SPC both serves the Commission and the SPC Member countries, including the PNA, and that there is a range of research capacities among the PNA. Some depend wholly on SPC, others undertake research with SPC, and there had been some substantial scientific tagging.

3.2.5: Monitoring and management performance evaluation

ISSF: WCPFC hasn't completed a performance review, as agreed at KOBE 1, and there needs to be reviews at WCPFC, PNA and national levels

There needs to be a system of reviews rather than an amalgamated set of individual reviews - a haphazard collection of activities. It goes well beyond annual review and status of stocks. It is an annual review of the management system as a whole.

Final comment

ISSF: Major message is that this is a different kind of fishery and the onus is on the PNA to demonstrate current performance in all necessary measures.

5. Questions for clarification from MSC

Clarification from MSC sought on the following points:

1. The rationale to allow the fishery to be split into 4 sets, when a trip can encompass multiple activities.
2. Whether 3.1 issues should embrace the RFMO region or fishery specific governance issues, i.e., to the country and country support structures via PNA or WCPFC
3. Flexibility to interpret from the 5 % rule
4. Habitat issues on natural log sets, not artificial, but still an important issue.

Note ISSF to submit written response for the week commencing 9 August

Confirmed

MML Lead Auditor

Stakeholders

I22 Secretariat of the Pacific Community (2)

MSC Interview Record

MML Attendees

Lead Auditor/Coordinator:

Team Members: Tim Huntington (P2)

Stakeholders:

Affiliation

1. SPC

Representatives & people met

Simon Nicol (Principal Fisheries Scientist); Tim Lawson (Principal Fisheries Scientist - Statistics); Peter Williams (Fisheries Database Supervisor); Valerie Allain (Fisheries Scientist - Ecosystem Analysis); Shelley Clarke (Shark Assessment Scientist); Don Bromhead (Fishery Scientist); Peter Sharples (Observer & Port Sampler Manager); John Hampton (Oceanic Fisheries Programme Manager)

Location:

Noumea, New Caledonia

Date:

03- 05 August 2010

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

- Fishery Unit of Certification (and client): PNA PS (unassociated & log) PS SKJ fisheries (PNA Office)
- Assessment Team: Richard Banks (LA/P3); Tony Lewis (P1); Les Clark (P3)
- Moody Marine as independent CB accredited to carry out MSC assessments
- Purpose of meeting – information collection and identification of issues relevant to fishery assessment
 - Principle 2 – Ecosystem issues
 - Discarded bycatch (numbers, proportions, status, mitigation and information robustness)
 - ETPs (numbers, proportions, status, mitigation and information robustness)
 - Habitats impacts (eg logs as mini natural ecosystems) -knowledge (recharge time), mitigation & information
 - Ecosystem impacts (trophic impacts, severity and information)
- MSC Principles & Criteria and Assessment Process being followed; FAM Assessment Tree
- RBF (if applicable)

- That stakeholder comments may be non-attributable if required

Comments: Assessor provided some background and information on the MSC assessment process and clarified the units of certification for this assessment.

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Scientific provider to the WCPFC

3. MML Questions

Assessment team questions for stakeholder response

Discarded bycatch (numbers, proportions, status, mitigation and information robustness)

ETPs (numbers, proportions, status, mitigation and information robustness)

Habitats impacts (e.g. logs as mini natural ecosystems) -knowledge (recharge time), mitigation & information

Ecosystem impacts (trophic impacts, severity and information)

4. Stakeholder Key Issues

What, if any, specific substantive issues or concerns are identified regarding the fishery? (P1 – P2 – P3)

What information is available to allow us to determine the status of the fishery in relation to each issue?

Sharks species (Shelley Clarke): WCPFC has designated certain species as 'key' via a historical (and not too well documented process), reflecting concern. Blue, oceanic white tip and silky shark, short-fin, long-fin makos and three thresher species (pelagic, bigeye and common). RPOA is useful particularly for the Whale shark which is not currently under formal consideration by WCPFC. In 2008 estimated total catches of shark by raising observer data. Tim Lawson paper SC-4. Maybe shark estimates came from there. Silky sharks have been assumed to be 10-20 kg each by Bonfil (2008). Shelley has estimated shark catches based on fin trade and indicates is 2-3 times the Lawson estimates (SC-5). New document (SC6) research plan for key shark species. Includes a review of shark work to date, inc. species sheets. Inc. also protection listings. 3rd section takes as step back and looks at an inventory on data availability. Also looks at country-related recording of shark species (Table 2). Table 3 shows other countries. PNA license conditions to report shark catch? Observer data may be geographically skewed. Very little landings and market data. Table 5 shows specificity of shark reporting in national Annual Reports to the Commission. Need to cross-check Fig 3 with our figures. Inc. Timetable of forthcoming shark assessments. ISC International Scientific Committee do assessments for north Pacific stocks. Responds to WCPFC Northern Committee.

Finning (Diedre Brogan): Confirmed that traditionally considerable levels of shark finning has been practiced across all fleets. This is now banned by CMM 2009-04 as well as discouraged by the RPOA sharks, but implementation is weak. Note: Diedre was not given the opportunity to sign off on this so do not quote.

Ecosystem issues (Valerie Allain): SPC is currently conducting stomach content sampling to build predator-prey relationships (Trophic diet matrix) and, with Shane Griffiths (CSIRO) and are putting together a more developed EcoPath model (building on the 2007 preliminary EcoPath model). As well as the TDM, this also includes catch & discard information and SG is currently validating this model. The move into EcoSim provides a non-static approach (EcoPath is mainly 2005 data) to add 2005 – 2007 data series and allow cross-checking against actual catches. Validation is expected to be completed by Oct 2010. Includes 5-6 fisheries, including the associated and unassociated PS catches (all flags). This will give the ability to simulate the impact of FAD closures. Accuracy depends upon robustness of the bycatch data, which has been historically patchy but with new 100% observer coverage (for PS) will be much better. Another concern is over the accuracy of species identification e.g. between marlins. Now focusing on observer training.

SEPODYM was developed by Patrick Leahy. Is not trophic/diet based but focuses in target species, with separate models developed for SKJ, YFT, BET and ALB. SEPODYM provides spatial elements (over 1 degree cells), fish movements at different life stages. Also incorporates oceanographic parameters, inc. currents, temperature & primary productivity. Main use is to model climate change.

Catch and discard data (Peter Williams): A formal data request was made to Peter Williams for the provision of (i) catch and (ii) discard observer data for purse seine fishing within the PNA EEZs (by PNA licensed fleets) utilizing (i) unassociated sets and (ii) log sets. These data were swiftly provided to the assessment team.

Observer data on the fate of key species (Don Bromhead): A formal data request was submitted to Don Bromhead for the provision of discard fate data for four key species (whale sharks, silky sharks, oceanic white tip sharks and false killer whales. These data were swiftly provided to the assessment team.

5. Other issues

(e.g. any other stakeholders we should contact, any written submissions to follow?)

A debriefing meeting was held as SPC on 5th August 2010. A number of issues / points were raised:

1. Current rules now state that there must be 100% retention of all tuna species, inc. SKJ, YFT & BET eg no undersize discarding or slippage.
2. SC stressed that the objective of CMM 2009-04 is full utilization and beyond that if shark populations are threatened then a reduction in mortality through discarding, given the possibility of post-discard survival
3. The low catch of turtles from the log sets was attributed to the lack of netting or other forms of entanglement
4. If natural (virgin) logs are changed in any way (eg addition of a beacon or netting) then they become dFADs and thus no longer can be included in either of the units of certification.
5. It was generally agreed that the depletion of natural logs did not represent a serious and irreversible threat to the ecosystem. Fishermen want the logs to replenish as quickly as possible and usually leave the smaller fish to encourage reestablishment of the FAD community.
6. Given the fact that the main tuna species are reasonably representative keystone species in the pelagic ecosystems, their relative health indicates that fishing pressure has not yet caused serious or irreversible harm to the underlying ecosystem. However it is important to monitor population and stock status trends and indicators to assist monitor overall ecosystem health and well being.

6. Closing

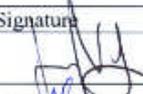
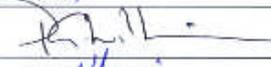
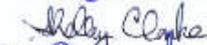
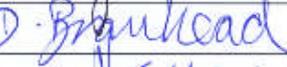
MML Lead Auditor:

- Summary of key points – stakeholder to confirm in writing (sign if hard copy)
- Are comments to be attributed?
- Timescale for completion, including further opportunities for stakeholder input

MML Lead Auditor

Tim Huntington (P2 assessor)

Stakeholders

Name (Position)	Signature
Simon Nicol (Principal Fisheries Scientist);	
Tim Lawson (Principal Fisheries Scientist - Statistics);	
Peter Williams (Fisheries Database Supervisor);	
Valerie Allain (Fisheries Scientist - Ecosystem Analysis);	
Shelley Clarke (Shark Assessment Scientist);	
Don Bromhead (Fishery Scientist);	
John Hampton (Oceanic Fisheries Programme Manager)	

- That stakeholder comments may be non-attributable if required

Comments: Will go through Principle by Principle. LA clarified Units of Certification and explained exclusion of US & archipelagic fleets. No problem in dividing different sets, but ISSF have an issue with observers ability to judge. Have met many levels of the observer programme and have absolute confidence on their ability to interoperate different set types. Interviews with observers, coordinators and scheme managers will be available in the Draft report. Only concern is that the requirements for Observers are extensive and that there may be difficulty in dealing with additional CoC issues, but on a compliance level is very strong in response to the implementation of the Observer scheme. Re Chain of Custody issues have checked with the industry over their ability to separate product. We consider that there may be additional observer coverage to reinforce the system (on top of 100% coverage). Confirm that CoC commences when the species goes into the well (e.g. on the vessel).

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

PT: WWF is neutral with no position. Have a number of issues and concerns, that will need full justification in order to look at the fishery in a favorable light. We believe most are not insurmountable. Very supportive to the 2 peer reviewers and good to see. Extremely happy that the CB responded to WWF concerns on the team's composition, and impressed with the quality of the team selected.

WWF submission in two parts – one within the FAM and secondly outside the FAM e.g. climate change, traceability, external governance issues. Will be picked up with the London MSC office (all WWF global concerns). On chain of custody, see differentiation of sets as an issue, but probably not insurmountable and not a massive issue so long as addressed appropriately. Will also cover transshipment and on land.

Main element is the natural log setting, esp. on BET. Partially accuracy, but mainly volumes (6-8%). Overfished and vulnerable species. Both overfished and overfishing, in our view. Vulnerability is vulnerability to fishing gear and population status. Could argue that overall volume compared to total associated fishing volume is low, but think that natural log sets' catch is not insignificant in comparison to the population status. Impact from Log Sets on the fishery should be brought out in the assessment report.

3. MML Questions

Assessment team questions for stakeholder response

LA stated that RFMO is very solid with many processes in place that are implemented at EEZ level. Are issues with cooperating non-members.

A note on data. Had a lot of data provided directly. Are critical issues over the way observers data is integrated. Different sampling methods which have evolved (spill still experimental from current 'pick/grab'). The client supported log set as unit of certification on the basis of lower levels of BET interaction, but changes to the way observer data has been interpreted, has painted a slightly different picture.

Principle 1

(AL): Applies to the whole of the stock. Since WWF submission 2010 assessment has been produced which is more robust re partial incorporation of the tagging data (still being submitted, and not fully incorporated in the assessment); and 3 regions under consideration (were 5 before).

AL: Will strengthen the assessment for all areas of the SKJ stock (was previously poorer in the Japanese area) but now much better e.g. inc Japanese fisheries. Conclusions are the same – way outside MSY, does not impact recruitment and fluctuates around the TRP. There are a range of proxy LRPS available e.g. 0.Bo or 0.5 BMSY. You may have noted no formal process of setting LRPs, but appreciate your recognition of the fish stock agreements as generally understood RPs that we could apply and have less concern over the fact these have not been formalized.

PT Will tagging data support stock assessment

AL: Yes, will reduce uncertainty as no tagging results since the 1990s.

PT: Would like to see official RPs & HCRs set. We know they are being worked upon (e.g. CSIRO, Campbell Davies) so hopeful something will happen soon, but is currently a deficiency.

AL: see HCRs as an issue and that a condition will probably be applied.

PT: Believe this (RPs) will score in the middle, but will not be a failing issue; would like to see RPs set for this fishery.

AL Believes that the current proxies are sufficient, but will need to be developed as part of the HCR definition process. But don't see that these will need to be invoked soon.

PT: Would like to see a recommendation or something stronger to support this and justification in the report.

AL:1.1.3 not relevant.

1.2.1 Looking at the harvest strategy in the broad sense and inc M&E, assessment, etc and that they are specific to SKJ with a commitment to reviews of the performance of the management e.g. 2008-01.

1.2.2 / 1.2.3

PT: Worried about implementation of 2008-01 and the capacity of the PNA group to implement MCS measures. Number of reviews of the CMM (esp. for BET) shows that it may be ineffective in constraining effort esp. via the VDS and could undermine some of the conservation benefits from that CMM. We would like to get more info on the VDS scheme and its implementation. Need to strengthen the VDS to ensure a greater reduction in effort.

AL: We have focused on SKJ, but agree that greater transparency on the effectiveness of the VDS and there are obvious deficiencies e.g. exclusion of the US fleet and archipelagic waters. Would probably need some form of a recommendation / condition.

LA: Notes that it is binding on cooperating non-members (CNMs). Have had verbal commitments from PNA that VDS will be implemented, but need to reinforce this via a recommendation / condition. Other issue is over the opt out of the archipelagic fleet and they would need to demonstrate equivalent HCRs to the EEZ fisheries, as would the US fleet.

PT: regarding setting conditions – find it difficult to force the WCFPC to implement something on behalf of the PNA. Recognize PNA agreements with great potential, but WCFPC is fragmented. It is possible for a condition to persuade WCFPC to act in unity.

LA We have a strong degree of confidence that the PNA can guide and influence WCFPC and USMLT members. But have a possible problem that cooperating non-members are brought into line. Looked at dependence upon SKJ. PNA 64%, US 10% and archipelagic 5-10%. So 15% lies outside the influence of PNA (that we know of). Very high level of SKJ juv mortality so exclusion of Indon/Philippines does not greatly reduce the overall impact of fishing (on SKJ, but not the case for YFT/BET).

PT: agreed concern over archipelagic nations & SIDS with very large domestic fleets catching unreported catches of juv YFT and SKJ. A number of CMMs excludes SIDS and archipelagic waters from actions. Need to check though. Cannot be wiggle room for PNA to claim things outside their control.

1.2.3

AL: Feel fair amount of information available. Some concern over lack of HCRs. Concern over one cooperating, non-member and accurate members on fishery removals. But is a new data collection project underway in Indonesia, Philippines and Vietnam. Building on IPDCP. Philippines now pretty good, Indonesia showing some improvement.

LA: Indonesia main problem with district level small-scale fisheries and collation of existing data

PT: Have strong feelings on the lack of data and would like to see strong moves to fill these deficiencies.

1.2.4.

AL: Assessment of SKJ is adequate if not a good bit better. Also need for additional external review. Is a process in place but not yet achieved.

Principle 2

P2.1:

TH: need to consider YFT & BET. % of BET for unassociated sets is a small proportion, esp. against LL fisheries. But will include.

PT: Think that current data suggests that 50% reduction in effort is needed. Even quantities taken in log sets are sufficient to hinder recovery. If no data available then must take a precautionary approach. Needs robust scientific review after 3 years will only tell if is effective. Undermined by the way CMM was set up which might increase BET catch (from 2008). Last SC meeting ran various models and stated that a reduction of 40 odd % was required. Need some good recruitment years to rebuild the stock. Large risk for MSC to have a certified fishery that

has on over-fished species. Would like to see the SC recommendations. Not an issue for unassociated sets.

AL: FAD closures appears to indicate that the reduction of capture of BET over the FAD closure period has been very effective.

PT: Don't think this will have an impact on overall catch required. But happy to be disproven. Happy to see more information and good science, but based on what we have seen and how we have spoken to there is concern over the volume of fish coming out of these fisheries (not unassociated sets)

LA: Will go back to SPC to separate out the impact of the log sets and not other associated sets. We need to be sure ourselves.

AL: With YFT, not particular issue. Within biologically-based limits and have a partial strategy. Issue is BET for log sets.

PT: Have concern over YFT, but glad to see more positive recent assessments.

P2.1.2

AL: CMM partial strategy effective for YFT which is borne out in the Hampton & Harley paper (SC6 MI WP03). In the case of BET, too early to demonstrate if the strategy will be effective. Also concern that it demonstrably effective and reducing juv bycatch from log sets in particular.

LA: For unassociated, reaches SG80. BET might hit SG 60 and would definitely have a condition if the fishery was retained within the assessment

PT: Would like log sets to drop out and it would compromise the certification of the whole fishery.

2.1.3 Info and monitoring

In terms of information for both species that a reasonable score was available, disregarding the Indonesia / Philippines. Score of 80 to 100 was possible.

PT: Will be strengthened by the 100% observer coverage that is currently in place.

Need clear definition of what is associated and unassociated. Needs to be clear on distance of vessel setting from FAD.

P2.2 Discards

Observer data provided by SPC.

Evaluation took MSC 5% threshold and its caveats for log sets and unassociated.

Unassociated: Silky shark/blue marlin.

Log sets: silky sharks and blue marlin – rainbow runner not identified as vulnerable based on extremely low levels of catch.

Silky sharks: No assessments undertaken to date, but IATTC undertaking research. Current indications are no decline in length frequency over time. Although no full stock assessment, not a depleted species, but substantial measures are being put in place.

PT: Limited CMM (2009-04)but doesn't bind nations to do this. It is a reporting measure. 5% fin to carcass ratio also required. If stock assessments show over exploitation, there is no effective conservation. RPOA, but not an effective binding conservation measure.

P3: Recommendation, if stock assessments show concern, appropriate measures would have to be put in place as a binding CMM.

Black marlin: coastal species and PS is offshore

Blue marlin: 2003 Kleiber assessment, demonstrates that the stock is not fully exploited. ISC stock assessment proposed in 2012

P3: Recommendation, if stock assessment

Management: Management measures are non-binding but can be reinforced.

PT: Require additional measures placed in CMM were there stock issues.

P3: Research/evaluation would take account of additional measures required under CMM.

Based on observer observations, number of sharks finned on board is low, and some encouraging information on survival of discards. 30% post survival rate.

PT: Watching brief on rainbow runners, and note the low levels of catch.

P2.3 ETPs:

No national protection for marine ETPs. PNG and Solomon Is and Palau are signatories are CITES. Whale shark 0.1%, and almost zero in log sets. False KW listed by SI, and 0.01% in unassociated, and virtually nil in log sets.

False KW, low catches and over 90% survival in unassociated sets. PNA about to implement a prohibition on setting on whale sharks.

PT: Need to be clear of association, up to 1 nautical mile, a further definition may be required.

P2.4 Habitats

TH: Logs are natural habitats. Feel no serious or irreversible harm because residence times on the FADs are low. When logs are fish, small fish escape with it. Or discarded to promote re-establishment. Oceanic Trigger make drumming sounds which to attract tunas. Logs sets are dynamic and may sink. Teuquet et al, and Laurent Digorn evaluated FAD sets and interactions, residence times and demonstrated rapid turnovers.

FAD recolonisation 1-3 weeks.

P2.5: Ecosystem Impacts

Status. Still looking at the impact on removal of large biomass. Evidence suggest that some impact on trophic infrastructure. As tuna are keystone species, no evidence of serious irreversible farm, if otherwise then species wouldn't retain themselves.

Allain developing trophic diet matrices, and considerable effort to undertake analysis. Still in validation stage. SEAPODYM looking at spatial elements. Conclusion is that watched information and enough information around to assess impacts

PT: Concur with general findings.

Principle 3

LA: One issue on 3.1 covering non-PNA activities. MSC definition must be linked to supporting the management P1 and P2. Looking at P1, our general reaction is that it is not a requirement to cover non PNA waters. Clear evidence that all the countries have implemented UNCLOS and other commitments. Issue was also that WCPFC CMMs are binding. We don't agree on low capacity in PNA countries and think there is a strong process of implementing legislation and carrying our compliance measures, even in the small countries. Board structures assist implementation of the measures. Checked incidence of corruption and note there are strong measures in place against this happening as defined in Government audit processes.

PT When looking at governance, what did you assess?

LA Looked at implementation rates. FFA provides strong legal support. Appropriate levels of consultation structures. All countries have implanted 3 IAs through bilateral access and licensing agreements. Very rapid implementation through actions taken. Each country has implemented a tuna management plan. Some are dated and some are binding to legislation. Is a thorough process in train. Every TMP has a reference to precautionary management plan with adoption of EAFMs by 4/8 PNA countries. In the context of 3.1 if we include Philippines & Indonesia, Philippines has a TMP, & Indonesia has eliminated FADs closure in its legislation. Would not reach SG100 but over 80. Regarding PNA not allowing observer attendance, industry is often in attendance and VDS committee also observer meetings. PNA does allow observer attendance (need to check convention). Maybe a recommendation but no need for a condition.

PT: What do you think of the dispute resolution.

LA: has comment to regular meeting, but not are regular as it might be. Usually meet on the margins of other meetings and the fact that PAEs were established suggest a storing degree of dispute resolution.

PT: How many acts were implemented for the PNA countries that include the precautionary principle.

LA: In all we think, and most of the TMP's. Is also embedded in the PNA Third Implementation Agreement. In terms of the management system, rights-based management will be implemented via the VDS. There is no evidence of subsidies or incentives, if anything the opposite.

PT VDS is still in its infancy has had issues and with the lack of explicit information on the VDS e.g. definition of what a day is. Would like to see some clarification on the VDS.

LA: Agree, but are clear rules but still some ambiguities.

P1: Also a matter of transparency.

PT: Also raised questions over the effectiveness of MCS around the VDS.

LA: Yes, but also an issue over the capacity of the PNA office to manage this. In terms of the fisheries-specific objectives, have no issues with S/T & L/T objectives. All laid out clearly in the TIA & CMMs. In terms of decision-making processes are clearly established, reporting obligations, a long track record. Will score highly. On compliance interviewed a large number of stakeholders and received a consistent response. Compliance is very high. Fines for violations very high and a major deterrent. Looked at potential to corrupt observers, but can be monitored and checked so very unlikely to be an issue. Very strong cross-checking process.

PT: Are you satisfied the PNA can service and train these observers?

LA: Are logistical issues and issues of isolation. Aware of issues and planning to develop it. Is a WCPFC observer audit process, but its infancy. VMS system is very strong, managed by FFA or PNG directly. Integrates with the VDS for penalties. Are some holes in VMS coverage, mainly due to inadequate sharing so will recommend options. Joint operations possible with the weaker countries. 100% observer coverage means this should not be necessary. Most issues with the LL activity. Would score close to 100 – very compliant!

PT: Agreed, but still concerned over the quality of observer reporting as coverage increases.

LA: Screening processes very strong – 0.5 days per module. Information provision very strong. Peer review process – is an external review process in place but not yet undertaken. But no external review process for the PNA and will required a condition or recommendation.

PT: An external review of the PNA is extremely important.

End of P3

PT: RE documentation, we can only go on what is publically available. This process will be very interested in terms of what stakeholder interview and the audit have discovered.

LA: Adequate measure in place on IUU but need to verify this in the assessment

PT: Yes, but actual number of convictions is quite important to provide this.

This is the end of the major FAM issues.

Non-FAM issues

Climate changes - welcome SEAPODYM modeling but need to keep monitoring.

Traceability: should be covered by observer coverage so long and implemented correctly and good systems in place.

Indonesia and Philippines, archipelagic waters need to be considered in detail.

Recent draft assessment report for St Helena for justification of failure as seminaries are there.

Strong reliance for PNA to catalyze change in WCPFC and to produce effective CCMs. This assessment process is an important audit process.

LA: Need to identify best way of phrasing conditions. Need to look at capacity and loop-holes.

PT: Regarding the Unit of Certification, are issues over the split of archipelagic waters, but good explanation from the LA. Some issue raised by ISSF over tonnages stated and issues over separated UoC catches form overall catches.

4. Stakeholder Key Issues

What, if any, specific substantive issues or concerns are identified regarding the fishery? (P1 – P2 – P3)

What information is available to allow us to determine the status of the fishery in relation to each issue?

5. Other issues

(e.g. any other stakeholders we should contact, any written submissions to follow?)

Timeframe

Aim to complete report by the end of the month, but want to get it right. The peer review next.

6. Closing

MML Lead Auditor:

- Summary of key points – stakeholder to confirm in writing (sign if hard copy)
- Are comments to be attributed?
- Timescale for completion, including further opportunities for stakeholder input

Confirmed

MML Auditor

Tim Huntington (P2 assessor)

Observers

Maylynn Nunn (Fisheries Assessment Manager, MSC London)

Bill Holden (Pacific Fisheries' MANAGER, MSC Sydney)

Stakeholders

Name (Position)	Signature
Peter Trott (Fisheries Programme Manager, WWF Australia)	

I24 PNA Members (2)

MSC Interview Record, PNA representatives, 10 September 2010

MML Attendees

Les Clark, P3 Assessor

Stakeholders:

1. Dr. Transform Aqorau, Director, PNA Office
2. Maurice Brownjohn, Commercial Adviser, PNA Office
3. Anton Jimwereiy, PNA Coordinator, PNA Office
4. Eugene Pangelinan, Deputy Executive Director, NORMA, FSM
5. Patricia Jack, Economist, NORMA, FSM
6. Kintoba Tearo, Director, MFMRD, Kiribati
7. Beero Tioti, Principal fisheries Officer (Offshore), MFMRD, Kiribati
8. Ruria Iteraera, Legal Officer, Attorney General's Office
9. Glen Joseph, Director, MIMRA, Marshall Islands
10. Tion Nabau, Legal Officer, MIMRA, Marshall Islands
11. Charleston Deiy, Chief Executive Officer, NFMRA, Nauru
12. Dr. Tim Adams, Fisheries Adviser, NFMRA, Nauru
13. Terry Amram, Manager Oceanic Fisheries, NFMRA, Nauru
14. Nannette Malsol, Bureau of Marine Resources, Ministry of Natural Resources, Environment & Tourism, Palau
15. Justin Ilakini, International Fisheries Liaison Coordinator, NFA
16. Stanley Arua, Foreign Service Officer, Department of Foreign Affairs and Trade,
17. Philip Lens, Observer Coordinator, NFA, Papua New Guinea
18. Sylvester Diake, Under Secretary, MFMR, Solomon Islands
19. Ferral Lasi, Deputy Director Offshore Management Unit, MFMR, Solomon Islands
20. Nollen Leni, National Fisheries Development, Solomon Islands Tuvalu
21. Seve Lausaveve, Permanent Secretary, MNR&E, Tuvalu
22. Wez Norris, Director Fisheries Management, FFA Secretariat

1. Introduction. MML P3 Assessor to lead Consultation with PNA stakeholders, including

- Scope of the Assessment
- Assessment Team
- Structure of the MSC Fisheries Assessment Methodology and Scoring
- Purpose of meeting:
 1. consultation with PNA on conditions, meeting MSC requirements
 2. Gathering additional information on national management measures

Stakeholder comments attributable to PNA Parties

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

PNA Party representatives and PNA Office staff
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3. MML Questions

1. Are the conditions achievable and realistic within the time frame.
2. What national management measures are in place beyond the WCPFC CMMs, PNA measures and FFA Minimum Terms & Conditions

Aims of the consultation:

1. consultation with PNA on conditions, meeting MSC requirements
2. Gathering additional information on national management measures

4. Outcomes of the Consultation

MML

- *Presentation made focusing on 5 proposed conditions as follows:*

Requirement (1.2.2): Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. The selection of the harvest control rules takes into account the main uncertainties. Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules

Condition 1: PNA must adopt harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy and act to reduce the exploitation rate as limit reference points are approached (within 2 years of certification). Furthermore this should include further assessment of the main uncertainties e.g. the fishing mortality in archipelagic waters and territorial waters in order ensure that the exploitation rate is reduced as limit reference points are approached. PNA must promote the adoption of appropriate harvest control rules by the WCPFC at annual meetings. There needs to be an independent report that the tools available are appropriate and effective in achieving the exploitation levels required under the harvest control rules (within 4 years of certification). In the event that these tools were to substantially change, then their effectiveness should be re-evaluated within one year.

Requirement (2.2.2): There is some objective basis for confidence that the partial strategy (for managing silky shark bycatch) will work, based on some information directly about the fishery and/or the species involved.

Condition 2: review of all available data (observer, logsheet) to provide the necessary level of confidence that the strategy will work.

Requirement (3.2.2): Decision-making processes use the precautionary approach and are based on best available information.

Condition 4 (1): The link between the VDS TAEs and WCPFC requirements and the scientific advice/information needs to be clearly established by the PNA.

Requirement (3.2.2): Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.

Condition 4 (2): Explanation of decisions by PNA, particularly relating to the operation, monitoring and reporting of the VDS needs to be improved.

Requirement (2.2.2): The fishery has in place mechanisms to evaluate key parts of the management system and is subject to regular internal and occasional external review.

Condition 5: PNA must establish a system of external and regular internal reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery.

The purpose of the consultation is to check with PNA that the conditions are both achievable by PNA and realistic in the time frame specified.

Condition 1

MML

- *There are no reference points or harvest control rules in place in the PNA skipjack fishery, and the 1st condition addresses that shortfall*

PNA Response

- *1. ref pts- condition 1. Has it been decided what ref pts should be used? –*
- *2. Does the decision on BET take into account differences between zones. Some zones have lower BET catch rates*

MML

- *The requirement is that ref pts are appropriate- need to be consistent with international law – WCPFC convention and UNFSA-but the ref pts are to be determined by PNA in accordance with national and international law*
- *However, the MSC FAM does require that the LRP should keep the stock above the level at which reproductive capacity is impaired and the TRP should be consistent with MSY, but whether those are related to MSY or alternative similar measures is up to the managers*
- *BET issue re logs – EEZs vary-there is no scope for exemptions from the results of the assessment. There could be scope for separate assessments on log fisheries for individual zones or fleets, but the results are not likely to be different.*

PNA Response

- *We are working on implementation of VDS so since in process, need capacity. Implementing VDS but with MSC- maybe other elements that need further development beside VDS and wondering if have capacity*

MML

- *The questions today are whether the conditions are achievable and realistic within the timeframe. The view from the assessment team was the capacity within the region was strong, but you will have to review what changes you will need to implement at PNAO level and elsewhere.*
- *That point will arise when the PNAO is required on your behalf to lay out commitments to a plan of action for addressing the conditions*

PNA Response

- *clarification condition 1- are the measures to be applied at national level*

MML

- *this process is more complex with international fisheries, and in this case the assessors have characterised the harvest strategy as including actions at 3 levels – WCPFC, PNA and national. However, the focus for implementation of the Conditions is levelled at PNA actions.*

FFA

- *General comments- 2 yrs is adequate time to develop HCRs*
- *2nd dot point will require PNA to respond to changing status of stock regardless of where eg AUS develop 20 Purse seine vessel fleet to fish high seas which cause decline in stock could trigger the control harvest rules even though you are not causing it*
- *4th dot point - strong focus on VDS but doesn't preclude the use of other measures such as the FAD closure or high seas closures to take action to address the stock concerns*

MML

- *Core of fisheries lie in PNA EEZs based on advice from SPC so fishing in specific areas is unlikely to bring the overall stock down to LRP levels especially as skipjack spawn over a wide area but if that happened PNA would want to see action taken and the adoption of HCRs by WCPFC would be important for addressing that risk*
- *The question is whether the condition is achievable and realistic*

PNAO

- *cannot see anything in the conditions that PNA isn't likely to be doing anyway*
- *Parties are already obligated to all the actions in the condition anyway under the WCPFC Convention*

PNA Response: *it was agreed that condition 1 is achievable and realistic*

Condition 2

MML

- *Silky sharks are the major bycatch species of concern, especially in the free school fishery because of the possible impact of the free school sets on the stock and uncertainty about the stock status*
- *The condition would require a review to check that the current management actions including the finning limits and live release requirements are effective*
- *The question is whether this is achievable and realistic?*

PNA Response: *it was agreed that condition 2 is achievable and realistic*

Condition 4

MML

- *Next 2 conditions address shortfalls identified by the assessors in the extent to which decisions are clearly seen to be based on best available information, and the extent to which explanations are provided for decisions that are taken*
- *These conditions reflect the importance in the MSC assessment framework of management processes that ultimately enable consumers to have confidence that the fishery is really well managed*

PNA Response: *it was agreed that condition 4 is achievable and realistic*

Condition 5

MML

- *Condition 5 also reflects a concern within the MSC framework to ensure transparency in the management processes*

PNA Response

- *What is meant by “other PNA processes related to the purse seine fishery”*

MML

- *This reflects the significance of PNA actions other than the VDS such as the FAD closure which are all elements in the management of the fishery*

PNA Response

- *Are there any implications at national level that need improvement to feed into this. The SKJ fishery starts at ground level and all the national programmes feed into it. Wondering if there are any implications for actions such as monitoring at national level*

MML

- *There will be additional implications at national level, particularly for monitoring. This is not covered in these consultations because these aspects of the management system have been assessed to meet the requirements of the assessment methodology, and this consultation is focused on the conditions which apply to areas in the management system where there are shortfalls*

PNA Response

- *are we in a position to move forward and meet this commitment?*

MML

- *The conditions are very largely addressed to improving accountability to standards and obligations in international and regional legal frameworks that PNA have already largely accepted*
- *There will be implications at national level, at least in terms of monitoring and ensuring compliance generally, not just with the certification requirements, and some consideration will be needed for each administration and each business about their capacity to meet the requirements*

- *The decision to opt in to the certification is a choice to be made by national administrations working with the industries. The monitoring requirements are only applicable to vessels and processors wishing to participate in the scheme.*

PNA Response

- *It seems there is a choice to stay with the Status quo- business as usual. The alternative involves international and world recognition, requiring us to take actions that we are planning to take anyway, but perhaps requiring us to take some of these actions earlier than we would have*
- *If certifications fail- what are implications of that*

PNAO

- *The conditions are setting a high standard but PNA set high standards anyway and the Assessors believe that the PNA observer programmes are world class, so already in strong situation to implement the requirements of the certification*
- *Only US T vessels and Archipelagic waters are not included*
 - *UST- because the UST is not complying with VDS and*
 - *Archipelagic waters – because there is heavy use of FADs*
- *These fleets can join the scheme at a later date or in the case of archipelagic waters can arrange for add on if under the same free school conditions*
- *To join scheme is not compulsory. Those members and vessels that do choose to participate can have their fish separate in separate holds and can choose to have certifiable or not even on a trip by trip basis*

PNA Response: *it was agreed that condition 5 is achievable and realistic*

Recommendations:

- the PNA adopt appropriate limit and target reference points for the skipjack tuna. In addition the PNA should promote the adoption of limit and target reference points for the WCPO skipjack stock by the WCPFC.
- Encouragement of, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.
- PNA provide documented evidence that the partial strategy continues to be implemented successfully for both bigeye and yellowfin.
- if necessary appropriate mitigation measures taken to reduce mortalities of silky sharks and blue marlin
- the results of the proposed ISC stock assessment for blue marlin in 2012 is reviewed during surveillance.
- The assessment team strongly recommends that the PNA process of applying a complete ban on the setting on whale sharks and setting of the rule parameters to control this be completed, and such rules put in place as soon as possible
- Observer status at PNA meetings to be formalised.

- that the Nauru agreement and related instruments be reviewed to ensure that the appropriate principles including the precautionary approach are required to be applied

MML

- *this is an opportunity to discuss these draft recommendations, and provide any information to the assessment team that might be helpful*

PNA Response: *there was no discussion on the recommendations.*

Table of National Measures

- the following table of national measures was prepared in consultation with national delegations

	National Measures
FSM	No fishing around submerged reefs or anchored FADs
Kiribati	Phoenix Island Protected Area (400,000+ sq. Kms)
Marshall Islands	50 miles zone around 3 islands (sportfishing and security), no fishing around submerged reefs,
Nauru	Nil
Palau	EEZ is a Shark sanctuary no retention of sharks, live release where possible No fishing within 24 miles and 50 miles of Malakal Harbour
Papua New Guinea	EEZ: TACs , limit on anchored FAD numbers (total no. and by country), limit on no. of drifting FADs, spawning area closure, western corridor closure, Torres Strait Protected Area; FAD closure – Solomon Sea, no anchored FADs south of 4 th closed area Archipelagic Waters: covered by limits on number of anchored and drifting FADs
Solomon Islands	30 or in some cases 60 mile closed areas around the Main Group Archipelago (MGA). Limits to nos. of vessels and a substantial closed area to purse seine fishing within the MGA.
Tuvalu	Nil

Other Issues

PNA

- *What is the timeline and what will Parties be required to do in the build up.*

MML

- *The draft report for client comment is scheduled to be completed in mid-October, and there are additional consultation processes based on the draft leading up to public consultation by mid December. The overall assessment is scheduled to be completed by 22 April 2011.*

Chair

- *It seems we aren't yet clear about when the process might be completed, but we need to begin to look at arrangements for implementing the scheme if the fishery is certified*


Stakeholders
Dr. Transforan Agorera
Director PWS Office

I25 National Fisheries Authority, PNG (2)

MSC Interview Record

MML Attendees

(Lead Auditor/Coordinator: Richard Banks)

Team Members: Richard Banks and Les Clerk

Stakeholders:

Affiliation

1. Noan Pakop

Representatives

Location: NFA Offices

Date: 22 September 2010,

1. Introduction. MML Lead Auditor to introduce MSC assessment to Stakeholders, including

The respondent was first interviewed at NFA offices on 5-6 July 2010. This interview seeks clarification on a specific issue as highlighted below

Stakeholder comments relating to observer data interpretation and the FAD closure

2. Status

What is the nature of the organisations interest in the fishery (e.g. client / science / management / industry / eNGO etc)

Government Fisheries Department

3. MML Questions

Assessment team questions for stakeholder response

Aim of the consultation was to receive comment from the well informed stakeholders

4. Enforcement of 3IA

The PNA measures did not commence until 2010

Right from the first WCPFC discussion in TCC4 in 2008, the PNA position was that for a FAD closure (and catch retention) to work, they needed to be underpinned by detailed technical rules and specifications

4. Evaluation of observer reports

The entire purpose of the 100% observer coverage is so that we can have analyses along these lines presented to us so we can

assess if people are doing the right thing and hit them with a stick if they're not.

That the GEN-3 forms can not be taken as a measure of non-compliance until they are verified

That observers are encouraged to record any possible issues of non-compliance, including those which they are not sure of, noting that many of the observers deployed for the 2009 FAD closure were new

That the 2009 100% observer deployment has greatly increased the data available which PNG will be analysing,

That some of the reported non-compliance is not in fact in contravention of any laws or measures

PNG sees the logsheet data as best estimates by the vessels, and that in particular the skippers are not able to distinguish between small bigeye and small yellowfin

That is why logsheet data is no longer used for that purpose, and instead observer sampling data and port sampling data are used to estimate purse seine species composition

5. Follow up actions

That PNG follows up on all reported non-compliance activities.

These are usually identified directly by the observers, but also through the debriefing process

Issues of systematic failure such as inaccurate logsheet reporting which appear to be the major problem are followed up in consultations with fishing companies and fishing states - they will give me a schedule used for this purpose

6. Evidence of alleged violations since the introduction of the FAD closure in 2010.

Incidents of serious non-compliance are taken up individually and PNG currently has 7 such cases under investigation

The issues are dealt with through a Grade 5 Court.

The Violation schedule specified in the Fisheries Act. - 1 million kina for serious offence applied to boat owner, 100,000 to skipper for any violation.

Lower level administrative fines can be dealt with through an administrative sanction, authorised by the NFA Board

5. Closing

Confirmed



MML Lead Auditor



Stakeholders

15.7 APPENDIX G: RESPONSES TO QUESTIONS/ISSUES RAISED IN PEER REVIEWS

Response 1: SPC Email, 26 January 2011

Response 2: PNAO Note on the Operation of the VDS to Date, February 2011

1) The MSC FAM requires that recruitment impairment be taken into account when scoring stock status in the assessment ie "default limit reference points for stocks with average productivity as being $\frac{1}{2}B_{MSY}$ or 20% of B_0 . Such points shall be generally consistent with being above the point at which there is an appreciable risk that recruitment is impaired, though clearly for some short-lived stocks the actual point at which there is an appreciable risk that recruitment is impaired may be lower than 20% B_0 and for some long-lived species it may be higher than this".

Can anything be said about a BLIM of 20% B_0 for skipjack being above a point where recruitment is impaired? Given that SJ is a short-lived productive species, we are reasonably assuming that this is the case ...

1) I guess this depends on how MSC defines 'impaired'. As you know we assume a Beverton-Holt SRR. Given that assumption, we also need steepness, and since it's not estimable we assumed 0.75, as for our other tuna species. Does mean recruitment at 20% B_0 of 0.75 R_0 count as impaired, according to the MSC?

On your other point, I'm not sure the relationship between longevity and steepness is strong enough to use for inference about steepness based on longevity, or that it occurs in the direction suggested by the MSC statement. I discussed this with others here and scanned some papers - hard to say. In fact Goodwin et al (2006) suggest the opposite, that small-bodied early-maturing fish tend to have weak density dependence, which implies lower steepness. Myers Barrowman and Hilborn (meta-analysis of compensation) similarly found a positive relationship between longevity and steepness. There's an RFMO meeting on steepness very soon that John and Shelton will attend, which will hopefully provide some guidance. But for now, I guess the point is that if you assume that SKJ has a different SRR from other tunas, you're making a different assumption from the one we made in the assessment.

2) is there a likelihood profile for B/BMSY, as in Figure 57 for SB/SBMSY (and F/FMSY) .. just to support to the assertion that the likelihood of B/BMSY being less than 2.0 (or even 1.8) is close to zero.

2) Unfortunately no, there's no B/Bmsy profile. Pierre did these profiles and he only had time to do F and SB. Re the assertion on the likelihood of B/Bmsy being less than 2 - the likelihood profiles only consider parameter uncertainty, and structural uncertainty is additive, so the actual range of uncertainty is wider than the likelihood profile. The structural uncertainty estimates only consider a few sources of uncertainty - true structural uncertainty is no doubt a fair bit wider. Also, mean B/Bmsy is lower than SB/SBmsy, and the profile widths are usually similar (we don't estimate fecundity), so the B interval probably extends lower than the SB. Unfortunately we've never integrated the two uncertainty approaches into one overall uncertainty estimate. Still, I suspect from looking at the figures that the likelihood of B/Bmsy being less than 1.8 is quite low.

3) The low 2009 value of B/BMSY in Fig 56 (1.8) and the biomass decline seen in Fig 50 (and Fig 47) take biomass levels to historical lows (allowing the uncertainty associated with most recent years). Is this at all influenced by the continuing reliance on Japanese pole-and-line standardized CPUEs and possible weaknesses in that approach? The decline seems quite abrupt
....

3) *Yes, the recent decline is affected by the PL standardized CPUE. The method is a lot better than what we had before, but yes there have to be doubts about its reliability. Still, effort and catches are a lot higher these days so you'd expect the biomass to be more variable, since it relies on fewer age classes. So a steep recent decline might not be unreasonable. There were some really big changes to the assessment last year that might take a while to bed down.*

4) Possibly related question - what impact has the use of spill samples in the base case had on the assessments? Assume the 2010 assessment used the early spill sample data (2008?) and not the most recent (2009?), as described in Tim Lawson's SC6 paper?

4) Using the spill sampling data had only a minor effect on the assessment results (figures 25 and 27). The spill sampling data were only used to adjust the catches. This year Tim will use the spill sampling to adjust the size data as well, and I have a feeling this will have more effect, but we can worry about that then...

There were a few iterations, but I used Tim's final version of the sampling estimates. He says they included both the 2008 and the 2009 sampling, "all 17 trips". Sorry, not well described in the assessment document, I can see a number of gaps as I go through it.

RESPONSE 2. PNAO NOTE ON THE OPERATION OF THE VDS TO DATE (AS OF 2011) SUMMARY REPORT PARTIES TO THE NAURU AGREEMENT



**PARTIES TO THE PALAU ARRANGEMENT
VESSEL DAY SCHEME**

**Operation of the VDS to Date
(revised 2 March 2011)
Summary Report**

Introduction

1. The purpose of this report is to provide information on the operation of the Vessel Day Scheme (VDS) to date, including background information and how the VDS has evolved since it first came into full operation on 1 December 2007.

Background

2. The Palau Arrangement for the Management of the Western Purse Seine Fishery (*Palau Arrangement*) was first signed in October 1992 and came into force in November 1995. The Palau Arrangement was established to regulate the number of purse seine vessels to be licensed by the Parties at any one time, in response to science advice of overfishing of yellowfin tuna and the rapid influx of foreign purse seine vessels into the WCPO.
3. Prior to the coming into force of the Palau Arrangement, the Parties to the Nauru Agreement (PNA) had already set in 1990 a provisional limit of 164 purse seine vessels to be licensed by the Parties.
4. The license allocation limit under the Palau Arrangement in 1995 was for 205 purse seine vessels until when the license allocation management scheme was replaced by the VDS in December 2007.
5. The introduction of the VDS was the result of a review commissioned by the Parties in 2000 to assess the effectiveness of the license allocation management scheme in achieving its objectives under the Palau Arrangement.
6. The review Report recommended the adoption of the VDS to regulate the number of fishing days by purse seine vessels as a long term approach to the management of the purse seine fishery.
7. The Parties adopted the VDS in 2006 following the completion of the signing by all Parties of the MOU for the provisional application of the amendments to the Palau Arrangement to facilitate the implementation of the VDS.
8. A trial operation of the VDS was conducted between 1 December 2006 to 30 November 2007 and the full operation of the VDS came into effect on 1 December 2007.

9. The VDS has now completed its first three year Management Years (MY1-2008, MY2-2009 and MY3-2010) of the first Management Period (MP1) and is now into the fourth Management Year (MY4-2011) of the second three year Management Period (MP2).

VDS Trial Operation (1 December 2006 to 30 November 2007)

10. The provisions of the VDS Management Scheme, as adopted by the Parties in October 2005 (Attachment A), were applied for the Trial Period, in particular:-
- the ability for Parties to transfer days between Management Years of the same Management Period, and between Management Periods (Article 2 of Attachment A);
 - the ability for Parties to seek temporary increases subject to the approval of the Parties;
 - the rolling three (3) year Management Periods (Article 12.6 of Attachment A);
 - unlimited days for the FSM Arrangement (days outside home Party waters) and the US Treaty;
 - the application of the 50% biomass (10 year average)/50% historical effort (7 year average) formulation for the apportionment of the PAEs (Party Allowable Effort) from the TAE (Total Allowable Effort).
11. The agreed Adjusted TAE (total of PAEs) applied was 28,469 days, based on the 2004 TAE in PNA waters.
12. VMS reporting by vessels during the Trial Operation was not mandatory, hence the rate of VMS reporting initially was low but improved towards the end of the Trial Operation.
13. The days in the archipelagic waters were included in the count/computation of days against the PAEs for Papua New Guinea and Solomon Islands.
14. Table 1 below provides a tabulation of the days counted for each fleet against each Party's PAE and the TAE balance, for the Trial Operation period (1 December 2006 to 30 November 2007).

Table 1 - Year to Date (as at 30 November 07) Summary of PAEs/TAE by Party by Fleet (incl. Archipelagic Waters days)

LEGEND	FM	KI	MH	NR	PW	PG	SB	TV	TOTAL
CN	594.25	6.50	26.50	91.25	2.25	1,035.50	9.00	0.50	1,765.75
CN(FSMA)	0.00	0.00	0.00	0.00	0.00	3.75	0.00	0.00	3.75
EU	0.00	4.13	0.00	0.00	0.00	3.00	0.00	0.00	7.13
FM	10.25	0.00	0.00	0.25	0.00	4.25	0.00	0.00	14.75
FM(FSMA)	158.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	158.04
JP	1,144.25	68.25	3.75	56.50	12.75	1,112.50	66.50	1.50	2,466.00
KI(FSMA)	0.00	14.50	0.00	0.00	0.00	0.00	0.00	0.00	14.50
KR	543.89	1,182.39	44.76	321.01	3.00	1,652.26	1,533.41	144.50	5,425.22
MH(FSMA)	0.00	0.00	434.75	0.00	0.00	0.00	0.00	0.00	434.75
NA(FSMA)	0.00	0.00	0.00	0.00	0.00	159.52	0.00	0.00	159.52
NZ	0.00	139.75	0.00	29.00	0.00	0.00	2.25	107.25	278.25
PG	0.00	0.00	0.00	0.00	1.25	586.25	18.50	0.00	606.00
PH	0.00	0.00	0.00	0.00	5.26	2,325.57	0.00	0.00	2,330.83
SB	2.25	0.00	0.00	0.00	0.00	1.50	449.01	0.00	452.76
TW	1,988.38	270.26	146.89	205.75	19.00	2,946.39	467.77	3.75	6,048.19
VU(FSMA)	0.00	0.00	0.00	0.00	0.00	2,124.28	0.00	2.38	2,126.66

VU	85.15	347.91	266.78	125.16	0.00	407.17	547.94	7.13	1,787.24
EC (ECUADOR)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Days	4,526.46	2,033.69	923.43	828.92	43.51	12,361.94	3,094.38	267.01	24,079.34
Agreed PAE/TAE	6,253.00	6,194.00	2,727.00	1,452.00	595.00	7,907.00	2,361.00	979.00	28,468.00
Balance PAE/TAE	1,726.54	4,160.31	1,803.57	623.08	551.49	-4,454.94	-733.38	711.99	4,388.66

15. The UST and the FSMA (outside home Party waters) were not tabulated from the VMS data extracted for vessel position reports during the Trial Operation.

16. The method of counting/computing the days was done manually using the 4 x 6 hourly quarter method whereby if a vessel spends 3 hours or more in any of the 6 hour quarters between 0000-0600 hours; 0600 to 1200 hours, 1200 to 1800 hours and 1800 to 2400 hours) in an EEZ of a Party, that vessel is attributed 0.25 of a day for that quarter in that Party's EEZ.

First Management Year (MY1) – 1st December 2007 to 31st December 2008 (13 months)

17. The full operation of the VDS commenced with the first Management Year (MY1) of 12 months from 1 December 2007 to 30 November 2008 which was extended by an additional month to include December 2008 in order to align the subsequent Management Years of the VDS to a calendar year from the second Management Year (MY2 – 1 January to 31 December 2008) onwards.

18. The same rules under the VDS as applied for the Trial Operation were applied for MY1 except that the archipelagic waters days were now exempted by decision of the Parties in their annual meeting in May 2007 in Wellington, New Zealand.

19. The PAEs that were applied for the Trial Operation were also applied for MY1, except for the addition of the additional PAEs for December 2008 for each Party, as shown in Table 2 hereunder.

Table 2 – Agreed PAEs and Days Used and Transferred by Parties (rounded to the nearest day) for MY1 (13months- 1 December 2007 to 31 December 2008)

Party	Agreed PAEs for MY1 (12months) (A)	Agreed PAEs for Dec08 (1month) (B)	Adjusted PAEs for MY1 (13months) (C)	Days Used in MY1 (13 months) (D)	Credit Back AZ Days in MY1 (E)	PAE Balance End MY1 (F)= C-D + E	PAE Transfers from MY2 to MY1 (G)	Non Fishing Days MY1 (H)	Available Days End MY1 (I)=F+G+H	Days Transferred to MY2 (J)
FSM	6,253	513	6,766	5,047	0	1,719	0	0	1,719	1,719
Kiribati	6,194	540	6,734	3,998	0	2,736	0	0	2,736	2,736
Marshall Is	2,727	227	2,954	712	0	2,242	0	0	2,242	2,242
Nauru	1,452	118	1,570	1,511	0	59	0	0	59	59
Palau	595	51	646	163	0	483	0	71	554	554
PNG	7,907	639	8,546	16,719	4,433	-3,740	4,303	0	563	563
Solomon IS	2,361	201	2,562	4,334	2,032	260	0	0	260	260
Tuvalu	979	83	1,062	588	0	474	0	0	474	474
Totals	28,468	2,372	30,840	33,072	6,465	4,233	4,303	71	8,607	8,607

Total UST Days Exempted	5,838
Total FSMA Days Exempted (cap 3,907 days)	3,122 (provisional)

20. The method of counting/computing days in MY1 was done manually using the 4 x 6 hour quarters methodology for the initial months until around September/October 2008 when the counting was then automated through a software program developed by Absolute in conjunction with FFA on the Functional Specifications.
21. Both PNG and Solomon Islands exceeded their PAEs, however, with the credit back of the archipelagic waters (AZ) days for PNG (4,433) and Solomon Islands (2,032), the PAE balance at end of MY1 for Solomon Islands was within its limit whilst PNG had to apply for a transfer of 4,303 days from MY2 to offset its PAE balance deficit of-3,740 days and have a credit balance of 563 days..
22. Only Palau claimed back non fishing days. The non fishing days were for vessels which were not licensed by Palau but which had their days counted against Palau's PAE.

Second Management Year (MY2) – 1 January to 31 December 2009

23. When determining the Adjusted TAE (total of PAEs) for MY2, the Parties agreed to apply the same Adjusted TAE of 28,468 days as applied for MY1 but the 50/50 % formulation changed as a result of using the latest 10 year biomass average and the latest 7 year historical effort data, resulting in slight variations in the PAE for each Party, as shown in Column A in Table 3 below.
24. The Parties also agreed to the application by PNG for a one off top up of 5,000 days and by Solomon Islands for a one of top up 547 days, bringing the final Adjusted TAE total to 34,016 days, as shown in Column A in Table 3 below.

Table 3 – MY2 (1 January to 31 December 2009) PAEs and Days Used (Excluding Archipelagic Waters Days) and Days Available for Transfer from MY1

Party	Agreed PAEs for MY2 (A)	PAE Transfers from MY2 to MY1 (B)	Adjusted PAEs for MY2 (C) = A - B	Days Used in MY2 (D)	PAE Balance End MY2 (E) = C - D	Authorized Transfers from MY1 to MY2 (F)	Non Fishing Days MY2 (G)	Available Days End MY2 (H) = E + F + G	Authorized Transfers to MY3 and from MY3 (J)
FSM	6,154	0	6,154	4,591	1,563	1,719	0	3,282	-3,282
Kiribati	6,485	0	6,485	5,687	798	2,736	0	3,534	-3,534
Marshall Is	2,725	0	2,725	456	2,269	2,242	0	4,511	-4,511
Nauru	1,418	0	1,418	1,507	-89	59	0	-30	+30
Palau	608	0	608	80	528	554	0	1,082	-1,082
PNG	12,664 ⁵⁸	4,303	8,361	10,606 ⁵⁹	-2,245	563	2,842	1,160	-1,160
Solomon IS	2,961 ⁶⁰	0	2,961	2,202 ⁶¹	759	260	0	1,019	-1,019

⁵⁸ Includes 5,000 days one off top up for PG

⁵⁹ Excludes 5,689.23 AZ days in PG

⁶⁰ Includes 547 days one off top up for SB

⁶¹ Excludes 992.01 AZ days in SB

Tuvalu	1,001	0	1,001	1,022	-21	474	0	453	-453
Totals	34,016	4,303	29,713	26,151	3,562	8,607	2,842	15,011	-15,011
Total UST Days Exempted				7,477					
Total FSMA Days (outside home Party Waters) Exempted (cap 3,907 days)				3,435					

25. Nauru, PNG and Tuvalu exceeded their PAEs, however with the transfer of the un-used days from MY1, the adjusted PAE balances for PNG and Tuvalu were then within their limits, however Nauru had to authorize the transfer of 30 days from MY3 to offset its deficit balance of 30 days at end of MY2.
26. The total balance of un-used days of 15,011 days at end of MY2 was authorized through the authorization by each Party of their respective un-used days, for transfer to MY3 (2010).
27. The Parties had agreed in their annual meeting in May 2009 to amend the VDS Management Scheme (Attachment B) to eliminate the roll over 3 year Management Periods and replace it with sequential 3 year Management Periods with no overlap between Management Years (Article 2 of Attachment B), to avoid the carry-over of days between roll over Management Periods.
28. The Parties had also agreed in May 2009 to provide for the annual setting of a separate allocation for the FSMA days (outside of home Party waters) and the requirement for the FSMA vessels to cease fishing outside of home Party waters once the agreed limit has been reached (Article 4 of Attachment B).
29. The decision to cap the FSMA days (outside home Party waters) at 3,907 days (average of 2004 & 2005 effort levels) was made in October 2007 in a Special meeting of the Parties to the FSM Arrangement in Rarotonga, Cook Islands.
30. The method of counting/computing the days was through the FFA/Absolute software program which came into use during the latter half of MY1 (2008).

Third Management Year (MY3) – 1 January to 31 December 2010

31. The Parties embarked on a different approach to the determination of the PAEs by adopting in June 2009 a hybrid formulation of 50/50% or 100/0% historical effort/biomass formulation and applying whichever ratio results in a higher PAE for each Party.
32. The resultant Adjusted TAE based on the hybrid PAE formulation was 33,798 days. The Parties agreed in the same meeting in June 2009 to strictly apply a limit of 28,469 days for MY3 (2010) irrespective of the hybrid Adjusted TAE total of 33,798 days, which meant that each Party could use up their hybrid PAE provided that the agreed limit of 28,469 days was not exceeded.
33. Table 4 hereunder provides a tabulation of the agreed hybrid PAEs and the days used against each Party's hybrid PAE for MY3 (2010), as well as non-fishing days and transfer of days between the Parties.

Table 4 – MY3 (1 January to 31 December 2010) Hybrid Adjusted TAE and PAEs and Days Used (excluding AZ days) and Days Transferred between Parties – revised 1 February 2011

Party	Agreed PAEs for MY3 (A)	% Effort / Biomass (B)	Days Used in MY3 (C)	PAE Balance end MY3 (D) = A - C	Non Fishing Days by Parties (E)	Days Transferred between Parties (F)	Adjusted PAE Balance (G)=D+E +F	Days Available from MY2 (J)
FSM	6,556	100/0	5,648	908	0	0	908	3,282
Kiribati	6,470	50/50	4,795	1,675	267 (as at 31 Dec10)	0	1,942	3,534
Marshall Is	2,652	50/50	637	2,015	114 (as at 14 Nov10)	-43 (to Nauru)	2,086	4,511
Nauru	1,962	100/0	2,139	-177	0	43 (from RMI)	-134	-30
Palau	610	50/50	118	492	86 (as at 17 Oct10)	0	578	1,082
PNG	11,959	100/0	19,574 ⁶²	-7,615	3,071 (as at 30 Nov10)	0	-4,544	1,160
Solomon IS	2,548	50/50	3,048 ⁶³	-500	480 (as at 31 Dec 10)	0	-20	1,019
Tuvalu	1,041	50/50	973	68	0	0	68	453
Totals	33,798		36,931	-3,133	4,018		885	15,011
Agreed Limit	28,469		36,931	-8,462	4,018		-4,444	
Total UST Days Exempted			8,920					
Total FSMA Days (outside home Party Waters) Exempted (cap 3,907 days)			5,592					

34. The agreed limit of 28,469 days was exceeded by 4,018 days after taking into account the non fishing days claimed by some of the Parties. It is to be noted that Parties had until 31 January 2011 to claim non fishing days for MY3 (2010). Column E of Table 4 above shows the non fishing days claimed by the Parties by the deadline of 31 January 2011.

35. Nauru, PNG and Solomon Islands exceeded their PAEs. Nauru exceeded its PAE on or around 16 September 2010 and took the step to close its EEZ effective from 10 October 2010 to 31 December 2010 and to seek additional days from Marshall Islands through a trading arrangement and to utilize the traded days to sell to vessel operators wishing to fish in Nauru's EEZ during the closure period. A total of 43 days were traded between Nauru and the Marshall Islands.

36. PNG exceeded its PAE on or around 15 September 2010 and informed the VDS Administrator that it would be submitting its claims for non fishing days to offset against the excess days.

37. Solomon Islands exceeded its PAE as late as 16 December 2010 and was advised to submit its claims for non fishing days before the deadline of 31 January 2011.

⁶² Excludes 6,642 AZ days for PG

⁶³ Excludes 537 AZ days for SB

38. Table 4 above is the final assessment of the Adjusted TAE balance after the 31 January 2010 deadline for adjustments. .

Fourth Management Year (MY4) – 1 January to 31 December 2011

39. In determining the TAE/PAEs for MY4 (2011), the Parties adopted the approach of applying the higher PAE of the hybrid 50/50% and 100/50% effort/biomass formulation and this time to standardize the PAEs such that the total of the standardized PAEs equate to the agreed limit of 28,469 days.

40. Table 5 below shows the breakdown of hybrid standardized PAEs for MY4 (2011) as developed through a VDS Workshop conducted in the margins of the annual meeting of the Parties in Majuro, Marshall Islands, in April 2010, and subsequently adopted by the a special meeting of the Parties in Nadi, Fiji, in May 2010.

Table 5 – Standardized Hybrid PAEs for MY4 (2011) – Agreed Limit of 28,469 days maintained

Party	50/50 Effort /Biomass (A)	100/0 Effort / Biomass (B)	Selected Higher PAE (C)	% Allocation of PAEs (D)	Agreed Standardized Hybrid PAEs for MY4 (E)
FSM	6,100	6,556	6,556	19.397	5,522
Kiribati	6,470	4,796	6,470	19.143	5,450
Marshall Is	2,652	922	2,652	7.847	2,234
Nauru	1,332	1,962	1,962	5.805	1,653
Palau	610	83	610	1.805	514
PNG	7,716	11,959	11,959	35.384	10,073
Solomon IS	2,548	1,842	2,548	7.539	2,146
Tuvalu	1,041	349	1,041	3.080	877
Totals	28,469	28,469	33,798		28,469
%			118.7%	100.0%	

41. In agreeing to apply a hard limit of 28,469 days in MY4 (2011), the Parties agreed in their 30th Special Meeting (SPNA30) held in Nauru in September 2010 to further amend the VDS Management Scheme (Attachment C), not to allow transfer days between Management Years and between Management Periods and not to allow temporary increases for special circumstances.

42. In enforcing the hard limit of 28,469 days, each Party will need to ensure that its agreed respective PAE is not exceeded by enabling the transfer/trading of days from other Parties which have surplus days available for transfer/trading, provided the agreed overall limit of 28,469 days has not been exceeded, otherwise for the Party that has reached its PAE to close off its EEZ to foreign fishing vessels under bilateral access agreements and to FSMA vessels of other Parties.

43. The Parties have already considered a proposal by the Marshall Islands which was presented to the 31st Special Meeting of the Parties (SPNA31) held in Majuro, Marshall Islands, in November 2010, to limit the total number of purse seine vessels to 200, in addition to the application of hard limits in future Management Years. This proposal will be further considered in the upcoming annual meeting of the Parties in April 2011.

44. With respect to PAE overruns in 2010, Article 10.3 of the VDS provides that if the level of fishing in the EEZ of a Party exceeds its PAE for a Management Year, that Party's PAE for the following Management Year shall be adjusted by deducting in the case of the overrun 120% of the excess. In this case the Administrator alerted the Parties and those who were likely to exceed their PAEs by the end of the year of the possibility. In agreeing to apply the hard limits in 2011, and also in standardizing the hybrid model as adjusted by the Parties in April 2010, the Parties effectively reduced their individual PAEs by 18% in order to arrive at the Hard Limits of a PAE of 28,469 days.

VDS Committee

45. The VDS Committee (VDSC) was established and held its first meeting (VDSC1) when the VDS was adopted by the annual meeting of the Parties in May 2006 and to date have held 10 meetings, the last meeting (VDSC10) being held in the margins of the annual meetings of the Parties in Majuro, Marshall Islands, in April 2010.
46. The role of the VDSC is to have oversight on the operational aspects of the VDS and provide recommendations as appropriate to the plenary meetings of the Parties to the Palau Arrangement, unless mandated to decide on certain operational aspects of the VDS.
47. The VDSC Chair for the first three years (2006-2007, 2007-2008, 2008-2009) was Federated States of Micronesia and the Vice Chair was Kiribati. The current VDSC Chair for the next three years (2009-2010, 2010-2011 & 2011-2012) is Kiribati and the Vice Chair is Marshall Islands, based on the practice of rotation by alphabetical order.
48. The VDSC had been meeting on a regular basis until 2010 when it was considered that the VDSC membership and its meeting businesses had in effect taken over the role of the plenary meetings of the Parties to the Palau Arrangement and had become too formal in respect of the deliberations on the VDS. The VDSC meetings are intended to be as informal as possible in providing an oversight role on the VDS.

US Treaty Days

49. Although a nominal allocation of days is determined for the US Treaty for each Management Year for the purpose of setting the Adjusted TAE [i.e the TAE less the deduction of the UST seven (7) year average historical effort and FSMA (outside home Party waters) days], the US Treaty vessels days are exempted under the VDS and do not count against the PAEs of the Parties.
50. Table 6 below provides a summary of the total days by US Treaty vessels in PNA members EEZs as well as the number of US Treaty vessels monitored under the VDS in each of the Management Years (MY1, MY2 and MY3) of the first Management Period (MP1).

Table 6 – Summary of US Treaty Nominal and Actual Days in PNA Members EEZs

Item	MY1 (2008)	MY2 (2009)	MY3 (2010)
Actual Days	5,838	7,477	8,920
Vessel numbers	22 (Jan08) 34 (Dec08)	36 (Jan09) 37 (Dec09)	37 (Jan10) 36 (Dec10)

51. Negotiations by FFA/PNA members with the US are ongoing for the US Treaty vessels to operate under the VDS, if not during the current Treaty period ending 14 June 2013, then for the Treaty extension should it be extended after 14 June 2013.

52. The Parties put the US on notice with respect to bringing US effort under the Treaty to within 2000-2004 levels but it requires the consent of all Parties including the US to effectuate these changes. Bringing the US fleet under the VDS scheme would have reduced Parties' individual PAEs and limited their development aspirations and ability to maintain existing fisheries arrangements. Furthermore, the increase in US effort was post 2005 when US vessel numbers declined to 11.
53. US effort is actually taken off the TAE and the remainder is then allocated as PAE to the Parties, and (2) there is a Treaty obligation for the US to have up to 40 licences which is exempted under the 2005-01 CMM adopted by the Commission. The Parties to the US Treaty include other non-PNA members. To restrict the US Treaty effort unilaterally would be inconsistent under international law as it is currently structured and therefore the Parties have been working with the US and other non-PNA members who are also Parties to the Treaty to reduce US effort levels under the VDS to the 2004 level which is 2,773 days. The issue of the US effort has been recognised by the PNA since February 2009 and the then PNA Chair wrote to the US State Department advising the US of the PNA's intention to cap US purse seine effort at 2,773 days. However, this requires the consent of all Parties including the US to effectuate.

FSM Arrangement Days (outside home Party waters)

54. Similar to the US Treaty, nominal allocations were determined for the FSMA days (outside home Party waters) for the purpose of setting the Adjusted TAE [i.e the TAE less the US Treaty and the FSMA (outside home Party waters) days]. The Parties to the FSMA agreed in their special meeting in Rarotonga, Cook Islands, in October 2007, to set a capping on FSMA (outside home Party waters) days of 3,907 days for MY1 (2008), based on the average of 2004 and 2005 levels. The Parties applied the same capping of 3,907 days for the FSMA vessels for MY2 (2009) for days outside of home Party waters, when the Parties met in their annual meeting in Koror, Palau, in May 2008.
55. The Parties agreed in June 2009 on an allocation of 3,907 days for the FSMA vessels for MY3 (2010), for days fished outside of home Party waters, on the proviso that the FSMA vessels will be permitted to continue fishing operations should the limit be reached during MY3 and for any days in excess of the limit to be accounted for responsibly. It should be noted that Article 4.2(ii) of the VDS Management Scheme (amended September 2010 - see [Attachment C](#)) states:-

“For FSM Arrangement vessels operating outside home Party waters, the following conditions apply:-

- i. a separate allocation of fishing days for each Management Year shall be set by the Parties prior to the commencement of each Management Year;*
- ii. once the total number of fishing days allocated to such purse seine vessels operating under a valid licence is reached, such vessels must cease fishing; and*
- iii. if the Parties do not set an allocation of fishing days for such purse seine vessels operating under a valid licence, the allocation of fishing days set for the previous Management Year will apply”.*

56. [Table 7](#) below provides a summary of days capped and actual days for the FSMA vessel (outside home Party waters) for MY1, MY2 and MY3 and the vessel numbers during each Management Year.

Table 7 – FSMA Days (outside home Party waters) in MY1 (2008), MY2 (2009) & MY3 (2010)

Item	MY1 (2008)	MY2 (2009)	MY3 (2010)
Capping (12months)	3,907	3,907	3,907
Actual Days	3,122 (provisional)	3,435	5,592
Vessel numbers	27 (Jan08) 24 (Dec08)	24 (Jan09) 25 (Dec09)	27 (Jan10) 35 (Dec10)

Non Fishing Days

Definition

57. There is no specific definition of a non fishing day under the VDS other than what is described in Article 6 (ii) of the VDS Management Scheme (Attachment C), which states as follows:-

If a Party has advised the Administrator, using the form in Schedule 2, that a purse seine vessel will be in its EEZ but will not be undertaking fishing activities, the days or parts of days spent by the vessel in that Party's EEZ will not be counted as fishing days provided the vessel does not undertake fishing activities during the period identified in the form. For that purpose, a vessel shall be deemed to be undertaking fishing activities during any time that its fishing gear is not completely stowed.

57. Days in port of a Party and days in the archipelagic waters of a Party are exempted as described in Articles 6 (vi) and 6 (vii) respectively in the VDS Management Scheme (Attachment C).

58. The converse to the description of a non fishing day in Article 6 (ii) is the definition of a *Fishing Day* in the VDS Management Scheme (Attachment C) which states as follows:-

Fishing day means any calendar day, or part of a calendar day, during which a purse seine vessel is in the EEZ of a Party outside of a port, but does not include a calendar day, or part of a calendar day, referred to in Article 6(ii).

Process for Application of Non Fishing Days by Parties

59. As set out in Schedule 2 of the VDS Management Scheme (Attachment C), a Party submitting a report to the VDS Administrator on vessels in zone not engaged in fishing activities is required to provide information on the vessel(s) details, the date(s), time(s) and position(s) (latitude and longitude) of cessation and recommencement of fishing activity of the vessel(s) concerned, and reason(s) for being in the zone of the Party.

60. The VDS Administrator has until 31 January of the following Management Year to make any adjustments to the PAE balances at the end of the current/active Management Year (as at 31 December) to take into account non fishing days reports by the Parties as well as adjustments for the transfer of days between the Parties.

61. The Parties have yet to have a common understanding and a collective agreement on the categories of non fishing activities. Some Parties have agreed to apply certain categories of non fishing activities through their respective negotiations with their fishing partners (DWFNs), whilst other Parties have not.

62. In any case, the Parties agreed in their 30th Special Meeting (SPNA30) held in Nauru in September 2010, that the procedure of providing reports of vessels non engaged in fishing activities using Schedule 2 has proven difficult to apply in practice and is to be referred to the VDS Committee for review.

63. The Parties also agreed in SPNA30 to apply the following Interim Procedure for Non-Fishing Days for MY3 (2010):-

- i) For unlicensed vessels, any day or part of a day in a zone shall be counted as a non-fishing day.

- ii) For licensed vessels, a day shall be considered as a non-fishing day in respect of a Party when there has been no set in the zone of the Party on that day for the following reasons:

1. transit/sailing for fishing position
2. bad weather
3. full catch & sailing for port
4. in port for transshipment
5. breakdown
6. repairing net
7. spare parts transfer/provisioning
8. returning back for annual repairing

Further Considerations

64. The Parties have agreed to refer the issue non fishing activities/days reporting requirements to the VDS TWG for review and recommendation(s) for further consideration at the next annual meeting of the Parties in April 2011.

Implementation of VDS Limits

56. Table 8 below summarises the status of implementation of national VDS effort limits by the Parties.

Table 8 - Implementation of PAE Allocations by PNA members at February 2011

Party	
FSM	All agreements incorporated the VDS and fleets allocated days per calendar year – <i>PAE not reached in 2010</i>
Kiribati	No information provided.
Marshall Islands	Each licensed vessel allocated 40 days per year in agreements – <i>PAE not reached in 2010. 43 days transferred to Nauru to trade with</i>
Nauru	Olympic run – monitor days against PAE and close of fishing to DWFNs once PAE reached. – <i>PAE was exceeded in 2010. EEZ closed to foreign fishing vessels effective 10 October 2010. Received 43 days from Marshall Islands to trade with foreign fleets.</i>
Palau	Olympic run – monitored total days against PAE. – <i>PAE not exceeded in 2010.</i>
PNG	Allocated days to fleets in agreements. <i>PAE exceeded in 2010. No transfers/trading undertaken</i>
Solomon Islands	Days allocated to Korea, Japan and Taiwan only in agreements. <i>PAE exceeded in 2010. No transfers/trading undertaken</i>
Tuvalu	Olympic run- monitor total days against the PAE. <i>PAE not exceeded in 2010.</i>

Administrative Systems Requirements

65. The Parties have determined that the current administrative systems supporting the VDS are not adequate for the purpose, and are taking steps to upgrade administrative systems to augment the implementation of the VDS and enable VDS trading to occur. In this respect, Parties have agreed to develop administrative systems that would ensure the integrity of the VDS. Currently, the Parties have engaged a Consultant who is working on the development of a "Total Systems Requirements (Business Needs VDS Systems) Project" that will capture the full value of the VDS, and see the establishment of core administrative systems to ensure the integrity of the VDS. The administrative systems required to augment the implementation of the VDS include having a Vessel Register, Vessel Day Register, Vessel

Monitoring System, Observation System and Compliance System.

Summary Assessment on the Effectiveness of the VDS in the Long Term

66. The Parties have taken steps to improve the effectiveness of the VDS in the longer term through amending the VDS Management Scheme to:-
- a. eliminate the rollover three (3) year Management Periods in order to prevent the automatic carry-over of days between Management Periods;
 - b. disallow the transfer of days between Management Years and between Management Periods, effective MY3 (2010) onwards;
 - c. disallow the allocation of temporary allocations for special circumstances for Parties, effective MY3 (2010) onwards; and
 - d. require the FSMA vessels to cease fishing under the Arrangement once the cap of 3,907 days for days outside home Party waters, is exceeded in a Management Year.
67. The Parties have agreed to apply a hard limit of 28,469 days for MY4 (2011) which means that fishing in a PNA EEZ would need to cease once the hard limit for that EEZ is reached, with the possible exception of domestic vessels and FSMA vessels which fish within their home Party waters.
68. The Parties are also in the process of considering limiting the number of purse seine vessels to be licensed by the Parties to 200 vessels to complement the VDS in managing the purse seine fishery.
69. The Parties have initiated discussions with the US for the US Treaty vessels to operate and have their days limited under the VDS, if not in the current Treaty period which ends 14 June 2013, then in the Treaty extension after 14 June 2013, should there be an extension.
70. The Parties have begun a process to upgrade the administrative systems supporting the VDS.
71. The VMS reporting to the FFA VMS has improved significantly since the VDS commenced in 2007 and the calculation/computation of days for the VDS using the FFA/Absolute software program has also improved significantly.
72. The implementation and effectiveness of the VDS is improving each year to date and should continue to improve as Parties attain a greater appreciation and knowledge of the operation of the VDS and its intended objectives.

Ends

PNA Office
2 March 2011

Att:

Attachment A - VDS Management Scheme (October 2005, amended2007)

Attachment B – VDS Management Scheme (May 2009)
Attachment C – VDS Management Scheme (September 2010)

15.8 APPENDIX H: STAKEHOLDER RESPONSES TO PCDR

15.8.1 Written Submissions

Marine Stewardship Council

WWF

ISSF

OPAGAC

ALBACORA SA

EUROTHON

Marine Stewardship Council

2 June 2011

Sent via eCert

SUBJECT: MSC Review and Report on Compliance with the scheme requirements

Dear Richard Banks,

Please find a below the results of our partial review of compliance with scheme requirements.

Fishery
PNA Western and Central Pacific skipjack tuna

Technical Oversight Document Reviewed
Public Comment Draft Report Posted

CB	Moody Marine Ltd
Lead Auditor	Richard Banks
Fishery	PNA Western and Central Pacific skipjack tuna
Fishery Assessment Product Type	Public Comment Draft Report Posted
Type of Review	Desk Study

No.	Type of Finding	Scheme Requirement	Requirement Description	Report Reference	Description and Evidence of non-conformity
1	Major	FCMv6 Appendix 1:5.2	The report shall set out the scope of the fishery assessment in the context of the assurances the certification body can make about the point to which products from the fishery can be traced	p. 119	Section 13: the report shall clearly describe the point from which CoC certification is required.
2	Major	TAB D-014: 4	The target eligibility date, rationale and assessment shall be included in the traceability section	p. 122	Section 13: the report mentions an actual eligibility date. It should refer instead to a target eligibility date.

3	Major	TAB	D-014	Certification bodies must not be prescriptive about the means of meeting conditions, although they may offer recommendations or suggested solutions.		Conditions: The current wording of the condition does not follow the narrative or metric of the performance indicator and includes prescriptive wording as to how the condition may be achieved.
4	Major	TAB	D-015 v2: 2.4	Any difference in the scores shall be clearly detailed and justified in the scoring rationale for all relevant performance indicators.		Information should be provided on the harmonization considerations taken by the assessment team where required for the Tosakatsuo Suisan pole and line skipjack tuna fishery assessment. Where differences exist in scoring and conditions, justification must be provided for these differences.
5	Major	FCMv6	3.3.3	The assessment team shall document the rationale for the scores for each PI for inclusion in the Preliminary and subsequent Draft Reports.	p. 26	PI 2.2.2: The rationale does not justify the score for this PI. A score of 70 is indicated in the scoring rationale, but the score assigned to the PI is 75. Further clarity is required.
6	Major	FCMv6	3.3.3	The assessment team shall document the rationale for the scores for each PI for inclusion in the Preliminary and subsequent Draft Reports.	p. 35	PI 2.4.3: The rationale does not justify the score. More detail is required on how each scoring issue is met to justify the score of 100 for the unassociated set component.
7	Major	FAMv2	7.2.3	SG100 does not include the qualifier 'main' and all retained species are included in the assessment.	p. 18	PI 2.1.1: The rationale does not support the score for this PI. For a scoring element to meet the SG100 level for scoring issues under this PI, not only main retained species but all retained species must be considered.
8	Guidance					Page numbers throughout the report would be useful.
9	Guidance				p. 43	Explanation of the FAM methodology on main retained/bycatch species is incorrect here, so amendments to wording are suggested. FAMv2 7.2.2 (retained) and 7.3.2 (bycatch)

						explain that vulnerability of the species should be considered in identifying main retained and bycatch species.
10	Guidance				WWF submission p. 56 & p. 63	Are these pages intentionally left blank?

This report is provided for action by the Certification Body and ASI in order to improve consistency with the MSC scheme requirements; MSC does not review all Certification Bodies work products and this review should not be considered a checking service. If any clarification is required, please contact Maylynn Nunn on +44 (0)20 7246 8936 for more information.

Best regards,



Maylynn Nunn

Senior Fisheries Certification Manager
 Marine Stewardship Council

cc: Accreditation Services International

World Wide Fund for Nature



for a living planet®

WWF Response to Moody Marine Ltd's Public Consultation Draft

**MSC Assessment Report for
PNA Western and Central Pacific Skipjack Tuna (*Katsuwonus pelamis*) unassociated
and log set purse seine Fishery**

June 2011

Submitted by:

**Peter Trott,
Daniel Suddaby**

**WWF Australia, and
WWF Smart Fishing Global Initiative**

Introduction

WWF welcomes the opportunity to comment on Moody Marine's Marine Stewardship Council (MSC) assessment report for the Parties to the Nauru Agreement (PNA) Western and Central Pacific Skipjack Tuna (*Katsuwonus pelamis*) unassociated and log set purse seine Fishery.

WWF is pleased to note that a number of concerns raised in its submission of August 2010 have been dealt with. We endorse the assessor's decision on log sets and the rationale provided for it. We have, therefore, excluded log sets from further consideration in these comments. We also note that the assessment report contains information on a number of issues which WWF had indicated should be considered by the assessors.

WWF's comments on the assessment report are structured as follows:

- a review of the assessors' response to the underlying issues identified in WWF's August 2010 submission;
- consideration of scores attributed to indicators under each of the three MSC Principles, including an explicit assessment of any proposed conditions and recommendations; and
- comments on any other issues identified in the Assessment Report.

WWF's underlying issues

WWF's original submission identified a range of underlying issues concerning the potential certification of the PNA Skipjack Tuna Fishery. WWF has reviewed the assessor's response to these issues and the results are presented in Table 1.

Table 1: Assessors' response to WWF concerns

Issue/Indicator	WWF consideration on Assessors' response
That the PNA Group has the capacity to quarantine skipjack taken under the unit of certification from skipjack taken in other purse seine sets	Given the exclusion of log sets from the unit of certification, the issue is now whether catch from unassociated sets can be differentiated from all other forms of catch (logs and all FAD types). WWF understands that there is 100% observer coverage on purse seine vessels and interprets this to mean that there is 1 observer on each vessel. However, it is yet to see, in the assessment report any confirmation that this allows for observation of 100% of purse seine sets. <i>We believe that this issue should be addressed explicitly in the report to provide confidence that all catch can be observed and correctly recorded and stored as certified product.</i>
That uncertainties related to climate change are given sufficient weight in the assessors' consideration of the level of precaution with which the fishery is managed	Section 6.6.1 of the Assessment report identifies the possible broader dispersal of the skipjack stock over a wider area of the Pacific as a possible outcome of climate change. WWF agrees that this could be a consequence of climate change. However, WWF believes that, as indicated in the assessors' citation of the International Panel on Climate Change's latest assessment, marine ecosystem productivity is also likely to be affected by climate change. Changes to productivity might affect the size of the skipjack stock as well as its breadth of dispersal. The assessment does not consider the potential implication of this outcome or how

	<p>those implications should be managed. In particular, <i>WWF is concerned that the assessment makes no reference to the need for the uncertainties associated with climate change to be factored into the setting of precautionary harvest strategies so as to be consistent with the principles of ecosystem-based management.</i></p> <p>While WWF agrees with the assessment report’s assertion that the WCPFC Convention provides a platform for the implementation of ecosystem-based management and the application of the precautionary approach, there is no evidence to date that the Commission has taken the potential implications of climate change into account in its setting of Conservation and Management Measures (CMMs) and the assessment must reflect this.</p>
<p>That issues relating to the assessment of fisheries that are subject, in part, to management and research conducted by an RFMO are considered.</p>	<p><i>WWF remains highly concerned at the assessors’ approach to the sharing of responsibility for management of the Fishery between the PNA and the WCPFC. This issue is discussed in more detail below.</i></p>

Scoring And Condition setting

WWF comments on the scoring of any conditions and recommendations applied are provided in Table 2.

A key issue of concern for WWF with respect to the assessment of Principle 1 indicators is the assessor’s interpretation that these indicators can be met by the PNA in respect of the PNA component of the WCPO skipjack stock. This interpretation is not consistent with the MSC requirements as defined below.

MSC Principles 1: Criteria states that:

“The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.”

MSC Technical Advisory Board Directive 003 states that:

“The Standards Council agreed that Principle 1 applies to the whole of the fish stock(s) exploited by the fishery seeking certification. So a fishery could only pass if the whole fish stock(s) meet this standard, and it would not pass if the standard was not met irrespective of who (e.g. the fishery seeking certification or other fisheries) was responsible for the stock not meeting the standard (MSC,2010a)”.

WWF interprets this as meaning that a fishery as a whole (all fishing mortality on the stock) shall be conducted at catch levels that continually maintain the high productivity of the target stock, for example, with respect Indicator 1.2.2, to meet SG80 would require that robust and precautionary harvest control rules were in place across the whole of the Skipjack stock in the western central pacific. The interpretation adopted by the assessors is that it requires only that the PNA takes into account the whole of the fish stock and all the uncertainties associated with it, in setting the harvest control rules for the fishery under certification.

As the assessors correctly point out “With skipjack exploitation apparently entering into a new phase where greater caution is required, there is a need for a more coherent harvest strategy for skipjack with more explicit objectives, more integrated management actions applying throughout the range of the stock and harvest control rules based on target and limit reference points.” WWF is concerned that the approach adopted by the assessors to condition setting on Principle 1 indicators would allow catch taken outside PNA waters by vessels not included in the certification, to be subject to less rigorous or absent harvest control rules. This would be the case were the WCPFC not able to agree on harvest control rules for the whole stock or if the commission agreed on harvest control that did not meet MSC requirements.

WWF notes that in other MSC assessments for tuna fisheries (e.g. the Tosakatsuo Skipjack Pole and Line Fishery, the north and south Pacific Albacore fisheries and the New Zealand Albacore troll fishery) which are subject to RFMO management, conditions on Principle 1 indicators have not relied on implementation by the client alone but have acknowledged the need for the client to work through the relevant RFMO that is responsible for managing the stock as a whole, to achieve progress on those indicators scoring less than 80.

In particular, WWF notes the following statements in Moody Marine's assessment of the New Zealand Albacore Troll Fishery:

- in relation to Indicators 1.1.2 (Reference Points) and 1.2.2, the assessment states that explicit target and limit reference points need to be defined and that well-defined harvest control rules need to be adopted and that in each case **“This will need to be achieved for the overall stock through the regional fisheries management organization”**;
- in relation to these indicators the assessment applies the following conditions that include:
 - “...within four years of certification, target and limit reference points need to be agreed by the WCPFC, consistent with the management objectives and scientific stock assessment”; and
 - ...within four years of certification a well-defined harvest controls rule need to be proposed, tested and established by the scientific working group and management authority (primarily WCPFC).

WWF acknowledges that, the PNA cannot guarantee any particular management under the WCPFC, despite its best intentions and best efforts, as it is WCPFC, which has management responsibility for the whole of the WCPO skipjack stock...?. *Nevertheless, MSC assessment methodology requires that conditions:*

1. *Be outcome focused (TABD33:3.4.5: closely follow the narrative or metric form of the performance indicators and scoring guideposts used in the assessment tree and are defined in terms of measurable outcomes or results expected, the specific timeframe over which the condition must be met),*
2. *Are achievable (TABD33:3.4.8: changes to management arrangements or regulations, or re-arrangement of research priorities by these entities, in order to satisfy the Certification Body that the conditions are both achievable by the certification client and realistic in the time frame specified), and*
3. *Can be met by the client action plan (TABD 33:2.4.7: The Certification Body shall seek a detailed agreement from the client as to how the conditions and all milestones will be addressed („the client action plan “), by whom and the specified time period, how the action(s) is expected to improve the performance of the fishery.*

In the case of conditions relating to Principle 1 these aspects of condition setting must apply to the whole Skipjack stock in the western central pacific and management of that stock by the WCPFC.

Table 2: Comments on Scoring

INDICATOR	ASSESSOR'S SCORE/CONDITION/RECOMMENDATIONS	WWF COMMENT
PRINCIPLE 1		
<p>Reference points 1.1.2: Limit and target reference points are appropriate for the stock.</p>	<p>Score:80 Recommendation 1: That the PNA adopt appropriate limit and target reference points for the skipjack tuna within two years of certification. In addition the PNA should promote the adoption of limit and target reference points for the WCPO skipjack stock by the WCPFC.</p>	<p><i>WWF believes that the score for this indicator should be <80.</i></p> <p>WWF believes that there are implicit target reference points that, in the absence of explicitly determined stock reference points, the default generic indicators to be applied by the WCPFC. As such the fishery meets SG60 for this indicator. However, in order to score 80 the fishery must:</p> <ul style="list-style-type: none"> • Have limit reference point set and used by management (FAM 6.2.17 also PA12v2:2) and we take this to mean management by the WCPFC. • Have species-specific reference points set and used by management (FAM 6.2.17 also PA12v2:2) that are both explicit and appropriate to the stock, rather than the generic, default reference points currently in place. <p><i>Based on a score of <80, a condition should then be placed on this indicator requiring that appropriate limit and target reference points are explicitly incorporated by the WCPFC.</i></p> <p><i>This condition could then be fulfilled by appropriate client action by the client, such as</i></p> <ol style="list-style-type: none"> 1. <i>the PNA establish and adopt explicit and appropriate target and limit reference points for the PNA fishery;</i> 2. <i>the PNA vigorously pursue the adoption of equivalent reference points in the WCPFC; and</i> 3. <i>that, by the time of the 4th surveillance audit equivalent target and limit reference points have been adopted for the whole of the</i>

		<p><i>WCPO skipjack stock.</i></p> <p><i>WWF notes that Peer Review Report A also supported a condition on this indicator.</i></p> <p><i>Further, in line with TAB D 33 this condition and client action plan must contain specific clear milestones that must be met over the term of certification by the PNA and audited by the Certification Body as it fulfills the requirements of this condition. The recently revised and agreed milestones in the conditions applied to the New Zealand Albacore Troll Fishery provide a suitable template and proposes the following:</i></p> <p>Year 1 (by first surveillance audit)</p> <ul style="list-style-type: none"> • PNA establish and adopt explicit and appropriate target and limit reference points for the PNA fishery; • Initiate active promotion of the adoption of equivalent target and limit reference points within the WCPFC, including through seeking support of FFA members; <p>Year 2 (by second surveillance audit)</p> <ul style="list-style-type: none"> • Evidence of efforts to promote the adoption of equivalent target and limit reference points within the WCPFC, including through seeking support of FFA members; <p>Year 3 (by third surveillance audit)</p> <ul style="list-style-type: none"> • Evidence of progress within WCPFC toward the adoption of equivalent target and limit reference points <p>Year 4 (by fourth surveillance audit)</p> <ul style="list-style-type: none"> • Adoption of equivalent limit and target reference points by the WCPFC. <p>Finally it is worth noting that another Moody Marine assessment on the same stock scored this Performance Indicator at 75 (Tosakatsuo Skipjack Pole & Line Fishery</p>
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		(Western and Central Pacific Ocean))
<p>Harvest strategy 1.2.1: There is a robust and precautionary harvest strategy in place</p>	<p>Score: 80 Recommendation 2: PNA to draw up a management strategy for PNA skipjack which integrates existing elements to apply specifically to the skipjack harvest and is linked to limit and target reference points established as per Recommendation 1.</p>	<p>It is unclear how the harvest strategy for the WCPFC is responsive to the state of the stock. MSC defines a Harvest Strategy as combination of monitoring, stock assessment, management actions and harvest control rules. (FAM Section 9). Given that the Harvest Control Rule are rudimentary, more evidence is required to show how these elements work together to achieve the objectives reflected in the target and limit reference points. Either more evidence is required or the score should be modified.</p> <p>In addition any condition/recommendation should reflect the need for the management strategy to be adopted for the whole of the skipjack stock (i.e. by the WCPFC). Accordingly, <i>WWF recommends that the recommendation require that:</i></p> <ol style="list-style-type: none"> 1. <i>the PNA develop a management strategy for PNA skipjack which integrates existing elements to apply specifically to the skipjack harvest and is linked to limit and target reference points established as per WWF's proposed Condition 1; and</i> 2. <i>the PNA vigorously pursue the adoption of an equivalent management strategy in the WCPFC.</i>
<p>Harvest control rules and tools 1.2.2: There are well defined and effective harvest control rules in place</p>	<p>Score:60 Condition 1: 1. PNA must adopt defined harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy for the stock and act to reduce the exploitation rate in response to the stock approaching limit reference points. This should include assessment of the main uncertainties, including</p>	<p>The absence of Harvest Control Rules (HCRs) that provide for immediate and effective action to reduce exploitation rates for the WCPO skipjack stock, when and as required, is a serious concern to WWF. WWF supports imposing a condition on this indicator. However, in line with earlier comments, that the condition must, according to the MSC requirements, reflect the need for the harvest control rules to be adopted for the whole of the skipjack stock (TAB D:3), WWF proposes that the condition</p>

	<p>the fishing mortality in archipelagic waters and territorial waters outside PNA in order to ensure that the exploitation rate is reduced as limit reference points are approached. PNA must promote the adoption of appropriate harvest control rules by the WCPFC at annual meetings.</p> <p>2. PNA must provide verifiable evidence that effort is effectively limited within overall PAE levels established in accordance with the VDS text, PNA Implementing Arrangements and appropriate WCPFC conservation and management measures and that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.</p> <p>Plans for the development and adoption of appropriate HCRs (including consideration of the main uncertainties) should be in place by the first surveillance audit. Promotion of HCR adoption by WCPFC should also begin by the first surveillance audit.</p> <p>HCRs should be in place by the second annual surveillance audit within PNA.</p> <p>Testing and demonstration of HCRs within PNA should be initiated by the third surveillance audit.</p> <p>Effectiveness of HCRs within PNA in maintaining stock status should be demonstrated by the fourth surveillance audit. In the event that these tools were to substantially change, then their effectiveness should be re-evaluated within one year.</p>	<p>must require:</p> <p>The WCPFC to implement a well defined harvest control rule that ensures the exploitation rate is reduced as limit reference points are approached and evidence indicates that the tools are appropriate and effective.</p> <p>And suggests a client action plan that includes:</p> <ol style="list-style-type: none"> 1. <i>PNA adopting defined harvest control rules for exploiting skipjack tuna in their waters that are consistent with the harvest strategy for the stock and act to reduce the exploitation rate in response to the stock approaching limit reference points. This should include assessment of the main uncertainties, including the fishing mortality in archipelagic waters and territorial waters outside PNA in order to ensure that the exploitation rate is reduced as limit reference points are approached.</i> 2. <i>PNA vigorously pursue the adoption of equivalent harvest control rules in the WCPFC.</i> 3. <i>PNA must provide verifiable evidence that effort is effectively limited within overall PAE levels established in accordance with the VDS text, PNA Implementing Arrangements and appropriate WCPFC conservation and management measures and that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.</i> 4. <i>Harvest control rules, equivalent to those adopted by the PNA, must be adopted in respect of the whole WCPO skipjack stock by WCPFC by the fourth surveillance audit.</i> <p>WWF believes that the milestones proposed should be more detailed, and recommends that the approach adopted in the New Zealand Albacore Troll Fishery be employed in this far more significant fishery. WWF proposes the following milestones:</p> <p>Year 1 (by first surveillance audit)</p> <ul style="list-style-type: none"> • PNA establish and adopt defined harvest control rules for the exploitation of skipjack in their waters;
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		<ul style="list-style-type: none"> Initiate active promotion of the adoption of equivalent harvest control rules within the WCPFC, including through seeking support of FFA members, active advocacy in the WCPFC Scientific Committee, Technical and Compliance Committee and Commission meetings; <p>Year 2 (by second surveillance audit)</p> <ul style="list-style-type: none"> Evidence of advocacy for the adoption of equivalent harvest control rules within the WCPFC;; <p>Year 3 (by third surveillance audit)</p> <ul style="list-style-type: none"> Evidence of progress within WCPFC toward the adoption of equivalent harvest control rules <p>Year 4 (by fourth surveillance audit)</p> <ul style="list-style-type: none"> Adoption of equivalent harvest control rules by the WCPFC.
<p>Information/Monitoring 1.2.3: Relevant information is collected to support the harvest strategy</p>	<p>Score: 90</p> <p>Recommendation 3: Encouragement of, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.</p>	<p>Not enough evidence is provided as to how the final element of the SG 80 is met. It appears that there is not good information on all other fishery removals from the stock, especially in Indonesia, Philippines and Vietnam.</p>
<p>Stock Status 1.2.4: Assessment of Stock Status: There is an adequate assessment of the stock status</p>	<p>Score: 95</p>	<p>WWF notes that the appropriateness of the assessment for the HCR will need to be reassessed following the development of HCRs under the condition for 1.2.2.</p>
<p>PRINCIPLE 2</p>		
<p>Retained Species Status 2.1.1: The fishery does not pose a risk of serious or irreversible harm to the retained species and does not</p>	<p>Score:90</p>	<p>The assessment includes only bigeye tuna and yellowfin tuna as main retained species. It asserts (p.43) that “the majority (i.e. >50%) of all other non-tuna species caught are consequently discarded” and they are therefore treated as bycatch. WWF’s</p>

<p>hinder recovery of depleted retained species</p>		<p>information, as presented in its submission to the assessment team, is that 70% of silky sharks are retained (as fins at a minimum) (Kirby, 2006). However, we note that the assessment report (p. 55) suggests that 80% is discarded but that crews retain fins for human consumption (p. 56). WWF is unclear therefore, whether the 80% discard figure cited by the assessors includes carcasses that have been finned. WWF seeks the assessment to clarify this since it believes that the correct interpretation is that of Kirby (2006) who recorded retention as including only retention of fins, presumably because retention of fins necessarily implies mortality.</p> <p>In addition it is unclear whether the scores are in-line with the requirements outlined for scoring above 80 (FAM 4.4.7) <i>WWF acknowledges that the assessors have dealt with silky shark as a bycatch species and that the quantities of silky shark taken in unassociated sets are minimal. However, as the PIs dealing with retained species are slightly different than those dealing with discards we believe that it is important to confirm the category into which this species most properly falls and score it correctly.</i></p>
<p>Retained species management strategy 2.1.2: There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species</p>	<p>Score: 80 Recommendation 4: PNA provide documented evidence that the partial strategy <i>continues</i> to be implemented successfully for bigeye and yellowfin tuna</p>	<p>WWF agrees that the partial strategy in place, for yellowfin tuna is expected to work and that the partial strategy for bigeye, combined with the low level of bigeye tuna catch in unassociated sets, means that this strategy is likely to preclude the impact of the PNA skipjack fishery causing these species to be fished outside biological limits. Furthermore, should bigeye tuna be assessed as overfished, it is unlikely that the impact of this fishery would hinder recovery or rebuilding.</p> <p>WWF notes however the assessors' statement in the scoring table that "The projections provide some objective basis for confidence that this partial strategy and measures will work to continue to ensure that this fishery does not hinder the recovery and rebuilding of bigeye tuna within the effort limits set by the VDS." (There is a similar statement on p. 50 of the report). <i>WWF considers these statements to be somewhat at odds with the assessment</i></p>

		<i>under 2.1.1 that bigeye tuna is not overfished, since ‘rebuilding and recovery’ would seem to imply that the stock is overfished.</i>
<p>Bycatch species: Status 2.2.1: The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups.</p>	<p>Score: 80 Recommendation 5: Stock assessments of both silky shark (IATTC, under way) and blue marlin (ISC, 2012) will provide greater understanding of the status of these stocks as will planned shark assessments for WCPFC. Results of these should be reviewed and if necessary appropriate mitigation measures taken to reduce mortalities of these species</p>	<p>See comments above whether silky shark should be considered a retained or bycatch species.</p> <p>WWF notes that there is no assessment to show whether the silky shark stock is likely to be within biologically based limits although length frequency information suggests that the population may be relatively stable. Should the preliminary shark assessment being undertaken by the SPC indicate that it is outside those limits, then there are currently no measures in place to ensure that the fishery does not hinder recovery and rebuilding of the species. However, given the relatively low catch of silky shark in this fishery compared to catches in other fisheries in the WCPO, it seems unlikely that the fishery would hinder recovery or rebuilding.</p> <p><i>WWF suggests that the recommendation should also refer to the WCPFC silky shark assessment which is also scheduled for 2011.</i></p> <p>The Client Action Plan in response to this recommendation refers only to blue marlin. <i>The Client should ensure that the response also identifies steps to initiate actions to reduce impacts on silky shark if the stock assessment indicates the need to do so.</i></p> <p>WWF does not believe that the current CMM for sharks in the WCPFC provides “considerable protection” for sharks”. There are no limits on the number of sharks that can be killed. Furthermore, there is no monitoring of the effectiveness of the full utilization and finning ratio requirements of the CMM and the CMM provides no species specific protection. <i>WWF suggests that the assessors revisit their statement on p. 59 of the report that sharks have received “considerable protection in the form of conservation and management measures”.</i></p>
Bycatch species Management	Score: 75	The assessors’ scoring comments do not address the third scoring

<p>strategy: 2.2.2: There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.</p>	<p>Condition 2:</p> <p>1. The PNA conduct a review of all available data (observer, logsheet) to provide the necessary level of confidence that the strategy will work. The review should be initiated by the first annual surveillance audit and completed by the second annual audit.</p> <p>2. The implementation of those elements of the Pacific Islands RPOA for sharks that have “a high likelihood, in aggregate, of delivering improved conservation outcomes for sharks” if information including the review required in para 1, indicates that this fishery has a significant impact. These may include (i) a ban on setting on schools associated with whale sharks, (ii) the release of all live sharks, (iii) that sharks to be landed with fins naturally attached, allowing for fins to be partially severed and folded back against the carcass for storage; and (iv) the prohibition of dumping carcasses after landing. If required, these should become binding to the unit of certification by the third annual surveillance audit.</p>	<p>element of SG80: “there is some evidence that the partial strategy is being implemented successfully”.</p> <p>The strategy under consideration, and to which the condition applies, is the strategy for managing silky shark taken as bycatch. <i>Both elements of the condition must be more closely related to silky shark. The first element, for example, should refer to the “management strategy for silky shark” and, in the second element, the reference to banning setting on schools associated with whale sharks should be removed, since this is not related to managing silky shark.</i></p> <p>WWF believes that this is necessary since the response to this condition in the Client Action Plan does not seem to reflect the focus on silky shark. The Client Action Plan should be amended to ensure that this focus is recognized.</p>
<p>ETP Species Status: 2.3.1: The fishery meets national and international requirements for protection of ETP species.</p> <p>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</p>	<p>Score: 70</p> <p>Condition 3: Requires that the PNA adopts both the RPOA for Shark’s recommended prohibition on schools associated with whale sharks as well as the subsequent PNA decision to prohibit sets on whale sharks (from 1 January 2011). This should be validated by written and agreed rules to implement this by the first annual surveillance audit.</p> <p>Reviews of the level of whale shark interactions should be begun by the second annual surveillance audit and published by the third annual audit.</p>	<p>WWF notes that, given the definition of unassociated sets (i.e. no association with any object (natural or man-made)), the fishery under certification should, in any case, not be setting on whale sharks.</p> <p>As currently drafted the reference in the Condition to the RPOA confuses intent. WWF understands this condition to mean that the PNA must prohibit purse seine sets on whale sharks. WWF notes that the Third Implementing Agreement has been amended to do just this. As required by the condition, WWF looks forward to the PNA’s confirmation of this by public release of the written and agreed rules to implement the decision.</p> <p>WWF notes the information provided in the assessment report that most of the whale shark mortalities resulting from</p>

		unassociated sets is likely to be cause by “hauling animals out of the net by their tail”. <i>WWF recommends, therefore, that the condition be extended to include a requirement to develop best practice handling and release procedures for whale sharks that minimizes their mortality.</i>
<p>ETP species management strategy 2.3.2: The fishery has in place precautionary management strategies designed to:</p> <ul style="list-style-type: none"> • meet national and international requirements; • ensure the fishery does not pose a risk of serious or irreversible harm to ETP species; • ensure the fishery does not hinder recovery of ETP species; and • minimise mortality of ETP species. 	Score: 95	<p><i>No information is provided on how the impact of the management practices for encountering these species comply with national and international requirements, a key component of the SGs, more information should be provide on what these requirements are and how the units comply.</i></p> <p><i>WWF believes that the fishery should be scored at 80 rather than 95.</i></p> <p>WWF remains concerned that there is no evidence that the management strategy comprising CMMs 2008-03 and 2009-04 is being implemented successfully. Further, there is no information available regarding the extent to which the fishing access agreements negotiated by the PNA members impose obligations to minimize interactions with protected species and the immediate release, without further harm, of any protected species taken during purse seine fishing operations in the Fishery.</p> <p>WWF notes that in both the scoring table and in the text of the assessment report (Section 6.4.2), the assessment report states that the RPOA for sharks suggests that a prohibition on the use of purse seine sets on schools associated with whale sharks would provide a ‘high likelihood, in aggregate, of delivering improved conservation outcomes for sharks’. WWF notes that the quotation from the RPOA refers to a range of measures (hence the reference to ‘in aggregate’) rather than solely to a prohibition on purse seine sets on sharks, not only the prohibition on sets on whale sharks. <i>WWF recommends that the text should be amended to reflect this.</i></p>
<p>Consultation, roles and responsibilities 3.1.2: The management system has effective consultation processes</p>	Score: 90 Recommendation 6: PNA to formalise observer presence at meetings	WWF welcomes the clarification provided in the assessment that relates to observer participation at PNA meetings and supports the recommendation to formalize these arrangements.

<p>that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties</p>		<p>WWF notes that the Client Action Plan refers to a meeting in November 2010 in the context of having formalized observer status. The record of this meeting is not on the PNA website so it remains unclear what the current policy is. <i>WWF believes that the PNA should also be required to ensure that the arrangements for gaining observer status at PNA meetings are clearly available on its website.</i></p>
<p>Long term objectives 3.1.3: The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.</p>	<p>Score: 80 Recommendation 7: The PNAO will also review the Nauru agreement and related instruments to ensure that the appropriate principles including the precautionary approach are required to be applied.</p>	<p><i>WWF believes that the fishery should be scored at <80.</i></p> <p>As noted by the assessors, the Nauru Agreement is “the core PNA instrument”. WWF believes that the failure of this Agreement to contain explicit objectives consistent with the precautionary approach means, therefore, that the fishery cannot meet SG80 on this indicator. Further, WWF notes that, according to Table 20 in the assessment report two PNA parties (Kiribati and Tuvalu) have yet to include the Principles of the UNFSA in their primary national fisheries management legislation. WWF believes that it is critical that this legislative commitment to adoption of these principles, including the application of the precautionary approach, is demonstrated by all of the PNA Parties.</p> <p><i>As a result, WWF believes that these elements of a short/long term objectives are not ‘explicit within management policy’ (FAM PI:3.1.3 SG80). We suggest the proposed recommendation should become a condition that includes the requirement for national legislation of each PNA party to reflect the principles of the UNFSA, and the precautionary approach explicitly in domestic fisheries management legislation and regulation.</i></p> <p>In addition, WWF believes that rather than be directed to the PNA Office, the client action plan should be directed to the PNA parties since it is they that will ultimately decide on amendments to the Agreement. WWF notes that the Client Action Plan indicates that the PNA parties are open to a review of the Nauru</p>

		Agreement.
<p>Fishery- specific Objectives 3.2.1 The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.</p>	Score 80	No information is provided on a key aspect of the SG 80, that of 'explicitly included in management' especially with regard Principle 1. Information must be provided on how the 'fishery specific' objectives are explicitly included in management, especially those related to maintaining stocks at a Bmsy and reducing fishing effort as the stock levels nears the limit reference point.
<p>Decision-making processes 3.2.2: The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives.</p>	<p>Score: 70</p> <p>Condition 4: 1. The link between the VDS TAEs and WCPFC requirements and the scientific advice needs to be clearly established by the PNA. Minutes of meetings should demonstrate discussion on VDS TAEs, that scientific advice is incorporated into the decision making process, and that PNA actions are being agreed upon and implemented. 2. Explanation of decisions by PNA, particularly relating to the operation, monitoring and reporting of the VDS needs to be improved. An administrator's report must be prepared annually beginning by the first annual surveillance audit (as opposed to on an <i>ad hoc</i> basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document must be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers.</p> <p>As HCRs will be in place by the second annual surveillance audit (within PNA), meeting minutes reviewed at this stage will have to show the link between the VDS TAE and the science, and that decision makers have taken decisions in line with the recommendations. Similarly any changes brought about</p>	<p>WWF supports this condition. <i>WWF recommends that the condition be amended to require, explicitly, that the minutes of all PNA meetings, especially those of the VDS Committee are made publicly available on a timely basis.</i> This is particularly important, since, as the PNA has advised, the meetings of the Committee are generally closed sessions</p> <p>Given that vessel days is a coarse measure of fishing effort, WWF also believes, that there is a need to ensure that the VDS is a sufficiently accurate way to control effort and hence fishing mortality compared to, for example, mechanisms such as controls on number of sets or on catch. WWF believes that recognition of this is important given the concern expressed by some Parties to the PNA (see Box 4 of the assessment report) about the possible impact of a new class of super seiners. WWF acknowledges that the VDS text requires an annual report be prepared on average effective fishing effort for each fishing day. <i>WWF recommends that those annual reports should be publicly available.</i></p> <p>In addition please see note below about condition setting. This condition must be outcome based.</p>

	following a review of the application of the VDS will also have to show (through minutes of meetings), actions taken in response to problems identified.	
Compliance and enforcement 3.2.3: Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.	Score: 85 Recommendation 8: A biennial review of MCS arrangements in the purse seine fishery should be undertaken, using the MRAG national/regional study as a benchmark	WWF supports the recommendation
Monitoring and management performance evaluation 3.2.5: There is a system for monitoring and evaluating the performance of the fishery-specific management system against its objectives. There is effective and timely review of the fishery specific management system.	Score: 80 Recommendation 9: The PNA should establish a system of regular internal and external reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery. The Internal review should comprise an annual administrator's report prepared annually (as opposed to on an <i>ad hoc</i> basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document must be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers and lessons learned. The external review should be undertaken within 3 years of Certification.	<i>Given the evidence provided a sub 80 score should be defined. No external review has yet taken place of the WCPFC, a key component of the SG80.</i> <i>WWF supports the recommendation but suggests that it be strengthened to require explicitly that the review be undertaken in a transparent way and that the outcomes be made publicly available.</i> WWF is also concerned about the level of commitment to this review by the PNA, given the response in the Client Action Plan. The response does not, in WWF's view indicate clearly that the PNA will establish a system of regular internal and external review of all aspects of the management system. <i>WWF believes that the client's intentions in this respect should be clarified.</i>

Other KEY issues

In addition to the specific comments related to Performance Indicators above we have some general but equally important comments with regard this certification.

Unit of Certification

WWF has some fundamental concerns with the definition of a 'fishery'. In this case what is defined is a type of product that is sustainable or not based on each haul. We believe this undermines the incentive for change in this fishery and also MSC mission of improving fisheries.

The MSC unit of certification is defined as

"The fishery or fish stock (= biologically distinct unit) combined with the fishing method/gear and practice (= vessel(s) pursuing that stock. At its simplest, a single vessel could be the unit of certification, more likely, a number of vessels in the same fishery will probably be assessed. The process of certification will by nature become more complicated for multi-species fisheries and for those fisheries having a significant bycatch of non-target species and/or other environmental impact."

The fishery is defined by MoodyMarine as 'setting of purse seine gear targeting free schools' however on a single trip the 'fishery' could target sets on logs, animals or FADs. In fact it could target on what it thought is a free school and when hauled may have been set on a log, or FAD.

Such a definition has a high risks to the supply chain of mixing/substituting, creates potentially misleading claims that products originate from an MSC certified **fishery** as well as creating public confusion between fish and fish products that have not been certified.

Traceability

The current requirements of the FCM v6 (Section 5.2, Appendix 1):

"In accordance with Section 3.5 of this methodology the report shall describe the system of tracking and tracing of fish and fish products in the fishery. The report shall set out the scope of the fishery assessment in the context of the assurances the certification body can make about the point to which products from the fishery can be traced and describe known risk factors prior to or after the point of first landing that may influence subsequent chain of custody assessments. The report shall specifically state whether products may or may not enter further chains of custody and whether products are or are not eligible to carry the MSC logo."

Policy Advisory 5 makes it clear that the public comment draft report must :

Include an explicit statement regarding which operators and/or businesses and/or points in the fishery are covered by the fishery certificate. This should not be open to interpretation and Chain of Custody certification bodies reading this section will get clarity regarding the requirements for certification for their clients (i.e. can their client buy from their supplier as part of the fishery certificate, or does their supplier need to have their own Chain of Custody).

This report sets out the very large risks with a very novel Unit of certification, one that is defined only when hauling and one that can only be verified by an observer of which the reports notes has its own risks (Box 9 :Moody Marine Report: source: Staisch and Brogan.). WWF believes that the report must provide explicit answers to the following questions:

- What is the point at which fish and fish products may enter chains of custody ?
- What vessels can sell the product?
- Where can they sell the products?
- Where does the fishery assessment ends?
- Which entities are entitled to use the certificate?

Given the extremely high risks of undermining the CoC Principles and rewarding unsustainable fishery practices it is vital that the questions are clear and unambiguously defined. This will have to be provided on the fishery certificate

Condition Setting

Four conditions have been placed on this fishery; however none of them comply with the requirements set out by MSC. This is a systematic fundamental failing of compliance by MoodyMarine that WWF has noted on a number of other assessments (e.g. American Albacore Fishing Association - North Pacific Pole & Line and Troll & Jig Fishery, North West Atlantic Canada longline swordfish etc). We believe that such systematic lack of conformity puts into question MoodyMarine's ability to remain accredited to assess fisheries using the MSC requirements.

Specifically for this assessment, the public comment draft report every condition must conform with TAB Directive 33, that prescribes that in setting conditions, assessors:

- 1. closely follow the narrative or metric form of the performance indicators and scoring guideposts used in the assessment tree and are specified in terms of measurable outcomes or results expected, the specific timeframe over which the condition must be met and the outcome and score that shall be achieved at each milestone,*
- 2. specify conditions that are auditable and verifiable and specify milestones that spell out significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over the time period of the condition. Where possible quantitative metrics shall be specified.*
- 3. consult with all relevant entities (all fisheries management or research agencies, authorities or regulating bodies that might have authority, power or control over management arrangements, research budgets and/pr priorities) if the conditions are likely to require investment of time or money by these entities or changes to management arrangements or regulations or re-arrangement of research priorities by these entities in order to satisfy the Certification Body that the conditions are both achievable by the certification client and realistic in the time frame specified;*
- 4. seek a detailed agreement from the client as to how the conditions and milestones will be addressed ("the client action plan" by whom and the specified time period, how the action(s) is expected to improve the performance of the fishery, and how the milestones and final outcome will be assessed in each audit by the Certification Body can be met by the client action plan (TABD 33:3.4.7: The Certification Body shall seek a detailed agreement from the client as to how the conditions and all milestones will be addressed („the client action plan“), by whom and the specified time period, how the action(s) is expected to improve the performance of the fishery*

We strongly suggest with this fishery MoodyMarine rectifies this lack of conformance in this assessment, and that in future assessments the MSC requirements are followed.

Client action Plan

WWF has identified (see Table 2) some areas where it believes that the Client Action Plan requires elaboration and/or clarification. In addition, WWF is concerned about the: additional note" attached to the client Action Plan. The intent of this note is unclear. If it is to be included in the Client Action Plan, WWF believes that the note requires clarification and its implications for the Client's ability to meet the conditions of certification made explicit.

WWF also recognizes the PNAO has been established to manage the fishing arrangements for the PNA and recommends the use of mechanisms such as compliance bonds to enable accountability through the to the fishing operations.

Peer Review comments

WWF believes that the assessors have been very responsive to the views expressed by the peer reviewers. There are, however, some issues identified by the peer reviewers that WWF consider warrant further consideration by the assessors. These include:

- the difficulties in achieving solidarity between PNA members with respect to ongoing allocation and other key issues associated with the VDS and effort control;
- the failure of some PNA members to comply with the reporting requirements of the WCPFC via Part 2 Annual Reports, and the implications this has for their capacity and willingness to ensure that their commitments to bodies such as the WCPFC and the PNA are met. In WWF's view it also has implications for monitoring and performance evaluation since the information required is necessary to assess progress with implementation of the WCPFC's CMMs;
- in response to Peer Reviewer A's view that a condition, rather than a recommendation, be placed on indicator 1.1.2, the assessors indicate that the Client Action Plan covers both conditions and recommendations. This may well be the case, however failure to meet a recommendation has no consequences for the client in terms of ongoing certification, whereas failure to meet a condition may have serious consequences. WWF does not believe that the assessor's response is adequate: and
- the explanation provided by the assessors in response to Peer Reviewer B's question about "unidentified tunas" should be provided in the body of the report text for clarity.

Concluding comments

WWF has provided comments on a range of indicators and issues in the assessment report. WWF's primary concern about the potential certification of this fishery remains the issue of who has the ultimate responsibility for ensuring that Principle 1 indicators are met to the SG80 standard in respect of the whole of the WCPO skipjack stock. As noted above, WWF does not accept that the PNA's actions in respect of their fishery to achieve SG80 will be adequate to meet MSC Principle 1 requirements. WWF would need to give careful consideration to its support for certification of the PNA fishery should the need for adoption of MSC Principle 1 standards across the whole of the WCPO stock through the WCPFC not be acknowledged in correctly defined conditions applying to the certification of the Fishery. We believe the suggestions we have made above provide guidance on how this can be achieved.

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International Seafood Sustainability Foundation (ISSF)

International Seafood Sustainability Foundation



June 2, 2011

Mr. Richard Banks
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United Kingdom

ISSF Comments on: MSC Assessment Report for PNA Western and Central Pacific Skipjack Tuna (*Katsuwonus pelamis*) unassociated and log set purse seine Fishery (Version: 3 Public Consultation Draft)

Dear Mr. Banks:

We are the International Seafood Sustainability Foundation (ISSF), which is a global partnership among leaders in science, the tuna industry and the World Wildlife Fund. Our mission is to undertake science-based initiatives for the long-term conservation and sustainable use of tuna stocks, reducing bycatch and promoting ecosystem health. To that end, the ISSF is a registered stakeholder in the Marine Stewardship Council's (MSC's) assessment of the Parties to the Nauru Agreement (PNA) Western and Central Pacific skipjack tuna purse seine fishery on logs and unassociated schools (i.e. the "PNA Fishery").

For the reasons more fully set out below, we do not believe that MSC certification of the PNA Fishery is appropriate at this time, and, in the alternative, if MSC certification were to be granted, the Conditions set

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forth in the draft assessment report are inadequate and not in conformity with the MSC directive TAB D-033 v1 of 19 January 2011 ("Condition setting and reporting").

Our position arises from multiple concerns which we elucidate in detail below. Broadly, our conclusions are that the PNA Fishery (a governmental entity rather than an organization of vessel operators or owners) has neither defined nor demonstrated the national, PNA or international (RFMO) management controls needed to assure operation of the Fishery at MSC standards. Harvest control rules and biological reference points have not been established for the skipjack stock as required under Principle 1, and actions have not been undertaken by the PNA Fishery to achieve them. Stocks of retained and bycatch species in the PNA fishery have been sufficiently impacted by fisheries as to warrant stock rebuilding plans which have yet to be implemented, and, thus, the standards of Principle 2 have not been met. Additionally, management controls are insufficient to implement the regulatory system required by Principle 3.

I. General Comments

The PNA fishery being assessed is not a fishery in the normal sense of the word. It is a management system whereby fishing days are allocated by a variety of countries to vessels from a variety of countries, all with many different motivations. Additionally, the “fishery” as defined for the certification process does not yet exist. Participation, incentives, fishing strategies and monitoring and compliance systems are yet to be defined should certification occur. Therefore, the assessment is scoring purported potential rather than existing standard operating procedures. This is not acceptable. Some of these concerns were expressed by the assessors in the Public Comment Report as Recommendations which might be addressed. However, under the MSC process, Recommendations are non-binding. Many Performance Indicators (PIs) were scored at the marginally acceptable 80, therefore not requiring binding Conditions. The report, scoring and Conditions must provide evidence that compliance will in fact occur.

A number of definitional decisions about the Unit of Certification have been made which have sequentially increased the probability of favorable scores using the MSC scoring system. However, these do not appear to be related to the typical operations of the tuna purse seine vessels operating in PNA waters. Specifically, these include: the separation of the fishery into natural log sets versus unassociated sets versus FAD sets. While the failure of log sets to meet P2 criteria is an expected outcome, an individual fishing trip, even if not fishing on FADs (which is unlikely to be economically viable) will typically still make both log and unassociated sets. Additionally, yellowfin tuna comprises 30% of the tunas catch for most fleets fishing in PNA waters. Yet yellowfin is classified as a retained species in P2 rather than as a target species in P1. Both these definitional classifications serve to isolate the positive aspects of a fishing trip without eliminating the negative. For example would the status of stocks under 1.1.1 be scored 100 if yellowfin or bigeye were included as target species in addition to skipjack? The common-sense questions need to be asked: would the operational strategy of a vessel trip be the same if there were no yellowfin or bigeye? If there were no log sets? Will bycatch decrease if a trip takes the same proportion of “certified” unassociated sets and “uncertified” log sets? The success of certification will rely on individual vessel-by-vessel and trip-by-trip implementation of certification into fishing strategies. The report needs more justification on the likelihood of this occurring.

The PNA have control of a major portion of valuable resource and fishing opportunities that multiple users, including distant water fleets, wish to participate in. The PNA has approached this management problem by allocating access to their waters. In so doing, the PNA have the opportunity to impose requirements on that access to assure sustainability. Additionally, because the resource is large and shared with non-PNA countries, PNA must work with the WCPFC to ensure that the resource in its entirety is appropriately managed. These management opportunities have not been translated into strong Conditions in the assessment, such as in the Condition requiring development and adoption of harvest control rules (HCRs) at the RFMO level. A number of actions that should have been taken by the PNA before consideration for certification, are just now being suggested through Conditions allowing a two-year window for implementation. These actions should be in place and MSC should evaluate the fishery for certification after it has been demonstrated that they are in place. The PNA must take aggressive action to assure that MSC standards are in place before being considered for certification.

We also wish to express our view that the scores for many of the PIs in this draft assessment are excessively generous and unjustified, taking into account the concerns and weaknesses that the Assessment Team itself

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has pointed out (we quote some of these weaknesses in **Appendix 1** of this letter). These shortfalls identified by the Team are evidence that these scores are for a system that *Could Be*, rather than for a system that *Is*.

II. Evaluation of Performance Indicators

Following are ISSF's comments related to specific performance indicators (PIs). The format of our submission is: 1) our original (August 10, 2010) comments on the PI, 2) the Moody response to that Aug 10 submission (including their score; in Public Comment Report; and 3) further comments on the PI based upon additional the information supplied in the Public Comment Report.

PRINCIPLE 1	
<p>NOTE: ISSF strongly believes that definition of the Unit of Certification, which classifies yellowfin and bigeye tunas as retained species in P2 rather than as a target species in P1, is wrong and has been done in order to obtain higher assessment scores under P1 (this artificial definition serves to isolate the positive aspects of a fishing trip without eliminating the negative). Under the current MSC policies, this may or may not be technically acceptable (MSC needs to address this important issue and provide more guidance and a rationale). The ISSF scores below are based on this classification for yellowfin and bigeye as P2 retained species; however, ISSF remains very concerned that this classification is misleading.</p>	
1.1.1 Stock Status	
	<p>ISSF Aug 10 2010 comments and scoring ~90. The assessment was based on an application of MULTIFAN-CL (the equatorial model) where 24 fisheries are modeled, catch and CPUE and size frequency and tagging data used. An improvement between the assessment of 2005 and 2008 was the better integration of the tagging model. No indications of changes in recruitment; size frequency of catches only have limited catches less than 45 cm (size of maturity). The assessment includes six areas. Limit reference points have not been established by the Commission (WCPFC); however, the WCPFC scientific committee is using BMSY and FMSY as reference points for their assessments until such time as formal reference points are adopted by the commission. There is a high degree of certainty that the stock has been above its limit reference point, over recent years. $B_{current} > 3 \times BMSY$, $F_{current} < 3 \times FMSY$ and it has been this way for the entire time series; catch has never exceeded MSY. Therefore, the stock status is good and there is no overfishing occurring relative to commonly used limit reference points. There is a high degree of certainty that the stock is above the point where recruitment would be impaired.</p>
	<p>Moody response given in Public Comment Report (score: 100). The most recent skipjack assessment indicates that there is a zero probability that $B/BMSY$ is anywhere close to 1.0, and has been for the past 10 years, although the most recent value is around 1.6. The stock remains well above either limit RPs at which point recruitment might be impaired based on FAM guidance ($B_{current}/B_0 = 0.75$ cf 0.2; $B_{2009}/BMSY = 1.6$ cf. 0.5).</p>
	<p>ISSF June 2, 2011 Response While there is a “<i>high degree of certainty</i>” that the skipjack stock is above the point where recruitment would be impaired, it is less certain that the stock has been above its target reference point over recent years, since targets have not been formally defined. The Public Comment Report has utilized FAM guidance to define a target as B_{msy}/F_{msy} and limits as $B > 0.75B_0$. While these are FAM “guidance” they are not definitive. The ISSF believes that the lack of formally-adopted target reference points and the recent declines in biomass toward B_{msy} (which Annex 2 of the UN Fish Stocks Agreement -UNFSA- considers to be a limit rather than a target) suggest that a perfect score of 100 is not warranted for this stock. Additionally, if targets had included yellowfin and bigeye the score would surely not be high and perhaps not passing. This highlights our previous general comment that the selection of skipjack as the only target species in this fishery is not transparent.</p>

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	For these reasons the ISSF maintains our original position that this PI should be scored 90.
1.1.2 Reference Points	
	<p>ISSF Aug 10 2010 comments and scoring ~60.</p> <p>Generic limit reference points have been used by the WCPFC Scientific Committee and the stock is well within these limits (see 1.1.1). However, formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points, but the Commission itself has yet to formally adopt rules. Target and limit reference points can be estimated from the current assessment. There is no technical reason that it cannot be done. The time needed is to establish the appropriate degree of risk to be implemented. This will take Commission input, as well. This was noted by the WCPFC (<i>In progressing work on reference points the Commission should establish a parallel/joint process for establishing key management objectives for each target species including the possibility of holding an inter-sessional workshop on management objectives in 2009</i>). Additionally, it is likely that whatever the targets and references are that are chosen for skipjack, the current status will be within these limits.</p> <p>While the status of the stock under common reference points is good, the fact that formal reference points and rules have not been adopted creates management risk for the future of the fishery. Therefore, the ISSF finds this PI to be insufficient and a Condition must be imposed to ameliorate this situation. The Condition must require action on the part of the PNA within the WCPFC to establish those rules.</p>
	<p>Moody response given in Public Comment Report (score: 80).</p> <p>The current assessment provides estimates of a range of indicators that can be used appropriately as LRPs and TRPs. Generic MSY-related reference points are used by the WCPFC Scientific Committee to assess stock status, consistent with the WCPFC Convention, UNFSA and current practice in other tuna RFMOs but explicitly determined limit and target Reference Points for skipjack tuna have not yet been adopted by PNA or the WCPFC.</p> <p>In practice, the stock is managed with Bmsy or above as a default TRP. The general observed strategy of the WCPFC and PNA managing regional tuna stocks is to reduce the exploitation rate when F exceeds FMSY, which should ensure for skipjack that the exploitation rate is reduced as the level associated with an appreciable risk of recruitment being impaired is approached – in this sense there is an implied LRP above the level at which there is an appreciable risk of impairing reproductive capacity.</p>
	<p>ISSF June 2, 2011 Response</p> <p>Limit reference points: justification for a score of 80 was based on default language in UNFSA and the WCPFCs Convention language in which it is agreed that the UNFSA language be adhered to. This justification is weak. Scores less than 80 for other tuna stocks around the world have been made under similar circumstances⁶⁴. The report addresses this by making a (non-binding) Recommendation in the report that limit reference points be supported. But recommendations are non-binding for MSC certification. Limit reference points must be established stock-wide and, thus, be implemented by the relevant RFMO, the WCPFC. This has yet to happen. While BMSY and FMSY are calculated in</p>

⁶⁴ St Helena Pole and Line South Atlantic SKJ, ALB, BET and YFT; Tosakatsuo Pole and Line Western Pacific SKJ; New Zealand Troll South Pacific ALB; CHMSF/WFOA Pole and Line/Troll North Pacific ALB.

	<p>WCPFC stock assessments, management has not established their role as limit reference points. ISSF considers that this PI does not meet the passing standard of 80 and should be scored 75 or lower and, thus, a Condition should be imposed. The Condition must require that both limit and target reference points be explicitly established for the PNA fishery, and the whole of the stock. Additionally, the Condition needs to have measurable milestones for PNA governments to work in support of the adoption of reference points by the WCPFC and assure that they are adopted before the completion of the 4th surveillance audit. As an example, refer to the Conditions placed recently for the MSC certification of the New Zealand Albacore Troll Fishery.</p>
	1.1.3 Stock rebuilding (Not Applicable for SKJ)
	1.2.1 Harvest strategy
	<p>ISSF Aug 10 2010 comments and scoring ~70.</p> <p>The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has specified generic capacity limits (driven by concerns for bigeye and yellowfin tuna (<i>“the total capacity of their respective other commercial tuna fisheries for bigeye and yellowfin tuna, including purse seining that occurs north of 20°N or south of 20°S, but excluding artisanal fisheries and those fisheries taking less than 2,000 tonnes of bigeye and yellowfin, shall not exceed the average level for the period 2001-2004 or 2004”</i>; Conservation and Management Measure (CMM) 2008-01, para. 39). The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, these limits have not been formally specified or formally linked to actions at the national level. Additionally, the management effort controls exerted by the PNA are through the Vessel Day Scheme in which fishing days in their waters are to be maintained below that of 2004, and a large closed area of about 4 million square miles of the high seas. The above actions are not formal harvest strategies. However, collectively they appear to be achieving common stock status limit reference points (B>Bmsy; F<Fmsy). Apparently, discussions have been initiated within WCPFC to establish further harvest rules for all species (not just skipjack). But these have yet to be implemented (see 1.1.2)</p>
	<p>Moody response given in Public Comment Report (score: 80).</p> <p>There is a harvest strategy in place based on the application at the WCPFC level of a mix of catch, effort and capacity limits applying to the major fleets harvesting skipjack; at the PNA level, zonal effort limits on the purse seine fisheries and a range of other management actions e.g. closures of areas within the high seas and national waters, catch retention rules, etc; and a range of additional management actions at national level. These management actions are supported by a robust stock assessment and extensive monitoring frameworks.</p>
	<p>ISSF June 2, 2011 Response</p> <p>The ISSF is not convinced that there is a comprehensive harvest strategy that is “responsive to the status of the stock with the elements of the harvest strategy working together towards achieving management objectives reflected in the target and limit reference points.” While the skipjack stock appears above limits, the target objectives are undefined and WCPFC management has been passive (and ineffective in the case of bigeye tuna), whereby no preparatory actions have been taken as skipjack biomass approaches BMSY. For these reasons the ISSF believes that this PI should be scored 75 and a Condition that a harvest strategy for skipjack is implemented by the WCPFC by the 4th surveillance audit.</p>
	1.2.2 Harvest Control Rules
	<p>ISSF Aug 10 2010 comments and scoring ~60.</p> <p>Currently there are no formal control rules in place either domestically within the PNA or within the WCPFC. While overall caps on effort and vessel day limitations have served to maintain catches at adequate levels, the whole point of formal harvest control rules is to develop objectives and contingencies for timely actions should conditions in the fishery change. The lack of these contingencies results in risk to the fishery. This PI is deemed inadequate by the ISSF and should be addressed in a Condition in which domestic and</p>

	WCPFC rules are adopted (see 1.1.2).
	<p>Moody response given in Public Comment Report (score: 60).</p> <p>The assessment includes Condition 1: PNA must adopt harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy and act to reduce the exploitation rate as limit reference points are approached (within 2 years of certification and PNA must promote the adoption of appropriate harvest control rules by the WCPFC at annual meetings.</p>
	<p>ISSF June 2, 2011 Response</p> <p>The ISSF concurs with the score of 60 on this PI.</p> <p>However, a stronger Condition is needed than that introduced in the Public Comment Report. The must address the inadequacy of this PI (as given by a score of 60) leading to development of HCRs and the development of evidence that the VDS is, in fact, controlling effort. The latter is important because it appears that vessel days are allocated unrelated to fishing mortality targets defined in the assessments. A transparent process is important in creating value for vessel days. The report states, though that: <i>“But the VDS is in the early stages of implementation, and therefore has not been fully tested, and does not address the transfer of effort to archipelagic waters, nor how to balance and assess the VDS TAEs against the increasing effort by the USMLT.”</i> This suggests that P3 criteria are not fully operational and that they will not likely become fully operational within the next two years.</p> <p>HCRs are required and there is no evidence that the PNA or its member countries have initiated the process to define their own HCRs independent of WCPFC. Nevertheless, a Condition has been imposed requiring that the PNA develop HCRs both at the PNA/national level and at WCPFC. The Condition gives the PNA two years to develop these when, in our opinion, it should have been a condition for candidacy for certification. Additionally, the Condition requires that the PNA “promote” HCRs at WCPFC. This is weak and not likely to succeed. The Condition must assure that the HCRs are implemented by the WCPFC by the 4th surveillance audit and that the PNA and member countries implement these, as well. As an example, refer to the Conditions placed for the MSC certification of the New Zealand Albacore Troll Fishery.</p>
1.2.3 Harvest Strategy: Information and Monitoring	
	<p>ISSF Aug 10 2010 comments and scoring ~80.</p> <p>A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available. All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.</p> <p>Monitoring of the stock is based on catch and effort data, length-frequency data and tagging data. The stock assessment has been discussed under 1.1.1 and 1.2.4. However, the efficacy of the information relative to management objectives are not known until such time as harvest control rules are established.</p>
	<p>Moody response given in Public Comment Report (score: 90).</p> <p>Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with likely and best practice HCRs, and indicators of catch and effort are available and monitored with sufficient frequency to support catch or effort-related HCRs. In addition there is a very high level of observer coverage (100% since 2010), port sampling and transshipment monitoring. There is good information on all other fishery removals from the stock, except for Indonesia. However there are a number of ongoing initiatives to strengthen data collection in Indonesia, Philippines and Vietnam, supported by GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM), This data has been added to the 2010 assessment.</p>
	<p>ISSF June 2, 2011 Response</p> <p>ISSF fully supports the Recommendation that the fisheries information systems of Indonesia, Philippines</p>

	<p>and Vietnam be improved within the framework of ongoing initiatives of the WCPFC. ISSF believes that Vietnam and Indonesia should also be encouraged to become full members of WCPFC. However, a score of 90 would imply that there is already a comprehensive good range of information on all fishery removals, which is clearly not the case. Domestic fisheries in the Philippines and Indonesia account for 20%-25% of the catches of the skipjack stock in the WCPO in recent years. The lack of catch estimates by gear type in the Indonesian and Philippines domestic fisheries is one of the most significant data gaps (Williams, 2010, WCPFC-SC6-2010/ST WP-1). Also, there are no operational or aggregated catch and effort data, nor size composition data available in the Eastern Indonesian tuna fishery.</p> <p>Therefore, ISSF believes that this PI should be given a score of 80.</p>
<p>1.2.4 Harvest Strategy, Assessment of stock Status</p>	
	<p>ISSF Aug 10 2010 comments and scoring ~60.</p> <p>Stock assessments were conducted most recently using the MULTIFAN-CL model. As with most assessments, MULTIFAN-CL models the population dynamics of the fish and the characteristics of the fisheries based upon a set of unknown parameters that are estimated from observed data. The model makes “predictions” of the data and these are statistically compared to the observations by searching for the set of parameters where the likelihood of the observations and predictions is maximized. The estimated parameters are used to determine stock productivity and status. The basic approach of MULTIFAN is to model multiple “fishing fleets” which exhibit relatively homogeneous behavior in regards to their selectivity by size, areas fished and the efficiency of their gear. In the WCPO skipjack application the fisheries were categorized into 24 fleets encompassing the six areas, gears (pole-and-line, purse-seine and others) and the nations to which the fleets belong.</p> <p>The observed data included catch and effort data, length frequency data and tagging data. The catch and effort data were categorized by fisheries, by area and by quarter of the year. Catch per effort was standardized using General Linear Models for the fisheries for which there were longer time series of data in which factors such as year, quarter, region, bait effects, effects of radar/sonar and satellite data and the targeting of other species. Length frequencies were available by 2 cm size class by quarter, year and fishery. However, sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of ~ 250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model.</p> <p>While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments have not been fully integrated. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points.</p>
	<p>Moody response given in Public Comment Report (score: 95).</p> <p>There is a robust and internationally acknowledged stock assessment programme in place (Allen, 2010). The assessment:</p> <ol style="list-style-type: none"> 1. takes into account the major features relevant to the biology of the species and the nature of the fishery. 2. takes into account uncertainty and is evaluating stock status relative to MSY-based reference points in a probabilistic way. 3. has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored 4. The assessment is subject to internal peer review through the WCPFC SC. The WCPFC is also beginning to apply an external peer review process but this has not been applied to this assessment.
	<p>ISSF June 2, 2011 Response</p>

	<p>Our original ISSF comments and our scoring of 60 were based upon the minimum standard for a score of 80 that the assessment is “appropriate for the stock and for the harvest control rule.” Since there is no harvest control rule, one cannot judge if the assessment is appropriate for the harvest control rule. Setting that issue aside, the ISSF recognizes that this assessment is one of the better assessments of a skipjack stock around the world. Nevertheless, the robustness has not been demonstrated relative to management goals and strategies. The ISSF believes that an important step in the evolution of the assessment is to develop rigorous management strategy evaluations in support of control rule development. This needs to be done. The ISSF supports a score of 80, balancing the quality of the existing assessment against the need for robust control rule and management strategy evaluations.</p>
<p>PRINCIPLE 2</p>	
<p>2.1.1. Outcome Status, Retained Species 2.1.2. Management Strategy, Retained Species 2.1.3. Information/Monitoring, Retained Species</p>	
	<p>ISSF Aug 10 2010 comments and aggregate scoring ~60</p> <p>The retained species in the Certification Unit have been defined as yellowfin and bigeye. Of these bigeye is “in a slightly overfished state, or will be in the near future with high levels of overfishing occurring” (WCPFC 2009 Scientific Committee) and it has been advised that current management measures for bigeye will not reach the needed fishing mortality rate reduction goals for this.</p> <p>The 2010 bigeye assessment (see documents available before the start of the 2010 WCPFC Scientific Committee Meeting) notes that: recruitment in all analyses is estimated to have been high during 1995–2005. This result was similar to that of previous assessments, and appears to be partly driven by conflicts between some of the CPUE, catch, and size data inputs. The attribution of depletion to various fisheries or groups of fisheries indicates that the purse seine and other surface fisheries have an equal or greater impact than longline fisheries on the current BET biomass. These results led to the conclusions that 1) that current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the last decade; 2) overfishing is occurring in the bigeye tuna stock, but possibly at a lower level than previously estimated; 3) bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and 4) <i>MSY</i> levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.</p> <p>These results require that formal recovery plans and harvest rules be established. They have not. Additionally, were it not for the artificial definition of the fishery, the operating fishery would have been evaluated under Principle 1 which it would have failed.</p>
	<p>Moody response given in Public Comment Report (aggregate score: 83.33).</p> <p>It is noted that bigeye tuna represents <1% of the unassociated and ~5 % of log catches, but is still considered due to its vulnerability, economic significance to the longline fishery, and the significant impact of the log fishery on the bigeye stock spawning potential.</p> <p>YFT: Not overfished, within biological based limits (FAM 7.1.11/7.1.12). CMM 2008-01 represents a partial strategy. $B_{current} / B_{MSY} = 1.37-1.88$; $B_{current} / B_0 = 0.57- 0.60$ (Langley <i>et al.</i>, 2009); $B_{MSY}/B_0 = 0.37-0.38$; Likelihood profile indicates highly certain that $B/B_{MSY} > 1.0$. Biomass is therefore estimated to be currently above $BLIM = 0.2B_0$, with a high degree of certainty.</p> <p>BET: $B_{current} / B_{MSY} = 1.39$; $B_{current} / B_0 = 0.42$. (Harley <i>et al.</i>, 2010). Biomass is therefore likely, with a high degree of certainty, to be currently above $Blim = 0.20 B_0$. Fishery impact figures show that the unassociated sets make a very small (<1%) contribution to reduction in the spawning potential of the bigeye stock. The figures also show that there has been no significant increase in the contribution of unassociated sets to a reduction in spawning potential since CMM 2008-01 came into force (Harley <i>et al</i>, 2010). Fishery impact figures also show that the log sets make a larger contribution to reduction in the spawning potential</p>

	<p>of the bigeye stock, currently estimated to have been responsible for 8-10% reduction.</p> <p>For the <i>unassociated schools</i>, due to the limited impact of this fishery on the BET stock, there are no measures necessary. In the case of <i>log sets</i>, the measures in place (CMM 2008-01) are not considered able to maintain the bigeye stock at levels that are highly likely to be within biologically-based limits and they may not effectively limit the impact of log sets on the recovery and rebuilding of the bigeye stock, especially if there is transfer of effort from drifting FAD to log sets.</p>
	<p>ISSF June 2, 2011 Response</p> <p>It remains unclear to ISSF what the justification is for specifying yellowfin as a retained species to be evaluated under P2, rather than as a target species to be evaluated under P1, other than to define an artificial fishery to increase the chances of passing certification. In reviewing the Public Comment Report, it appears that this was a determination of the Client that was given to the assessors and, thus, there was no critical analysis by the assessors. Approximately 30% of the PNA catches are yellowfin (Table 8 in Public Comment Report). It is unlikely that many “skipjack-only” fishing operations would be viable, thus yellowfin are targeted. Since bigeye catches are relatively small (<5%) the Report has made the case for their inclusion as a retained P2 species and by inference not a target species. However, the same justification has not been made for yellowfin. If these species, especially bigeye, had been included in the definition of the target species, then the fishery would have failed P1 due to a lack of reference points, harvest controls rules and an ineffective recovery plan for the bigeye stock which is being subjected to overfishing. Therefore, the justification in the report and in this PI that these species are retained non-target species needs to be strengthened; otherwise, they should be considered under P1.</p> <p>While BET is not overfished, it is undergoing overfishing ($F > F_{msy}$; Figure 7 of Public Comment Report), and it has been undergoing overfishing for about a decade; and, alternative assessment model formulations show that it could be substantially below BMSY (Document WCPFC-SC6-2010-SA-WP-04). This is evidence that the WCPFC is not responsive to changes in a fishery’s status and that it is not acting in a precautionary way as suggested in the Public Comment Report justification for PI 3.1.3. The ISSF maintains that results require that formal recovery plans and harvest rules be established. They have not. The ISSF therefore asserts that all retained species are not likely to be within biological limits and should thus be scored 60 for 2.1.1 and that a Condition be placed to ensure that there will be demonstrably effective management measures in place such that the skipjack fishery does not hinder recovery and rebuilding of the bigeye stock.</p>
	<p>2.2.1. Outcome Status, Bycatch Species</p> <p>2.2.2. Management Strategy, Bycatch Species</p> <p>2.2.3. Information/monitoring, Bycatch Species</p>
	<p>ISSF Aug 10 2010 comments and aggregate scoring ~60</p> <p>Analysis of what is a retained species must be presented. For example, log sets catch a suite of species including shark species which can be retained, have vulnerable life histories and are not presently assessed. Also, current scientific advice stresses that marlin exploitation should not expand. Therefore, there are a number of uncertainties about non-targeted species in the PNA Fishery, regardless of whether they are considered retained or bycatch. Management measures related to non-targeted species (bycatch and retained) have been limited both domestically and within the WCPFC. Requirements for 100% observer programs are relatively new and it is unclear whether these have been fully implemented. Note that an observer <i>program</i> includes not only placing an observer and collecting the data, but the timely processing/transfer of that data such that it can be used for monitoring and control decisions. The ability of the PNA Fishery to respond to these concerns has not been demonstrated.</p> <p>Bycatch concerns arise with log sets, as discarded bycatch with unassociated sets is small. No formal stock assessments have been done on the discarded bycatch species. However, the magnitude of the catches is low and the productivities of the species involved are relatively high (mahi mahi, rainbow runner, frigate</p>

	<p>tuna, oceanic triggerfish, mackerel scad). The exception to this is the sharks and marlins which should most likely be included within the retained species category. Mortality of discarded bycatch (those released alive) does not appear to be known. Non-binding resolutions of the WCPFC encourage fishers to avoid non-target species catches, but it has not been demonstrated that these measures have been effective. And it is unclear if similar measures have been implemented domestically within the PNA Fishery. A comprehensive bycatch management plan has not been implemented at both domestic and international levels.</p>
	<p>Moody response given in Public Comment Report (aggregate score: 81.66 with a Condition on 2.2.2). The observer programme has also been examined in detail (Section 6.3), inc. an analyses of data compilation & analysis capacity. We agree the main discarded bycatch species to be silky shark and blue marlin, but for both set types. The management of discarded by catch is examined in Section 7.3.2. Conditions have been set to review all available data (observer, logsheet) to provide the necessary level of confidence that the partial bycatch strategies work.</p>
	<p>ISSF June 2, 2011 Response In regards to blue marlin, the Public Comment Report in its justification for 2.2.1 states that <i>“catch rates of blue marlin are very low (c. 0.03% of total catch volume for both set types), with total annual catches likely to be less than 100t for unassociated sets and 10t for log sets. Discard levels in the unassociated catches is high (c. 60%) but post-discard survival is unknown, but likely to be low. Although the stock is likely to be fully exploited, it is likely to be within biological limits and this fishery contributes a very small part of overall fishing mortality. An ISC stock assessment for blue marlin is scheduled in 2012.”</i></p> <p>It is unclear what fishery the quote is referring to. Unassociated sets? While catches are small, catches of low magnitude do not equate to the mortality rate and the impact on the status of the population. The PNA licensees may contribute to only a portion of the overall fishing mortality rate, but this does not mean that they have little impact. Additionally, the quote accentuates the result that 40% of blue marlin are retained. Therefore, despite the low magnitude of the catch, blue marlin should be considered a retained species. Also, the quote vacillates between defining a stock to be fully exploited and yet within biological limits. If MSY is “fully exploited” and MSY is also a “biological limit,” then the outcomes are incompatible.</p> <p>The ISSF continues to assert that 2.2.1 be scored at 70 and that a Condition be imposed that (pending the 2012 assessment results) requires control rules and recovery plans (if needed) for blue marlin.</p>
	<p>2.3.1. Outcome Status, ETP Species 2.3.2. Management Strategy, ETP Species 2.3.3. Information/monitoring, ETP Species</p>
	<p>ISSF Aug 10 2010 comments and aggregate scoring ~70 The WCPFC has adopted management measures for sea turtles and sharks to limit the take of these species. In particular the sea turtle measures require release of sea turtles, procedures to enact the release and the recording of interactions. The shark measure simply encourages live release of those sharks not used for food or other purposes without specific requirements to release protected species of sharks. Obviously a primary monitoring tool for ETP bycatch will be a 100% observer coverage program. However, there are limitations to observers in terms of species identification during release.</p> <p>Additionally, as noted above the turnaround of observer data for management purposes has not been demonstrated. Also, market data suggest that observer catch estimates may be underreported. These and other issues must be addressed by evaluations of the existing management measures must be done and insufficiencies ameliorated. Then comparable measures must be part of the PNA Fishery’s licensing agreements.</p>
	<p>Moody response given in Public Comment Report (aggregate score: 83.33 with a Condition on 2.3.1). No ETP species (as defined in the FAM) are endangered by log sets. There are very low interactions with false killer whales from unassociated sets. Given the observed live Condition of released false killer whales of 90%,</p>

	there is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species.
	<p>ISSF June 2, 2011 Response</p> <p>A recent WCPFC report (Summary information on whale shark and cetacean interactions in the tropical WCPFC purse seine fishery. Prepared by SPC-OFP, WCPFC7-2010-IP/01 10 November 2010). Their conclusion was that <i>“It is clear that purse seine sets on whale sharks are a combination of both targeted sets and inadvertent capture. Interactions with toothed whales appear to be mainly incidental, rather than the result of sets specifically targeted at these animals. On the other hand, most sets on baleen whales do appear to be targeting a specific interaction, even if temporary, between the whales and tuna.”</i></p> <p><i>“Any mitigation measure prohibiting the setting in the vicinity of whale sharks and marine mammals will need to consider that the animal may not be detected until the setting operation is at an advanced stage, particularly for whale sharks. There may also be a need for the development and dissemination of best-practice guidelines for releasing encircled animals.”</i></p> <p>These results show the limitations by observers in differentiating whale shark sets from unassociated sets before the set. It also brings into question the observers ability to define set types needed for compliance. Therefore, ISSF considers that management measures are not currently in place which are highly likely to achieve national and international requirements for the protection of ETP species (2.3.2) and should be scored 70 and a Condition be placed to achieve SG80 standards by the 4th surveillance audit.</p>
	<p>2.4.1. Outcome Status, Habitats</p> <p>2.4.2. Management Strategy, Habitats</p> <p>2.4.3. Information/monitoring, Habitats</p>
	<p>ISSF Aug 10 2010 comments and aggregate scoring ~80</p> <p>The “habitat” in relationship to unassociated sets is essentially the surface layer of the water column and thus, there is little effect of the set on that habitat. Conversely, the natural habitat related to log sets presumably includes those floating objects that are not man-made. This implies that for purposes of habitat definition, one would make the distinction between, for example, a floating tree limb versus floating lumber. While the impact of the fishery on the “natural habitat” of logs is expected to small, the ISSF is not aware of any analyses of this issue. Nevertheless, there is widespread agreement that purse seine gear has minimal impacts on benthic habitats, operates only in the surface layer of the ocean habitat.</p>
	<p>Moody response given in Public Comment Report (aggregate score: 100).</p> <p>The report has reviewed the available literature on the impact of purse seine depletion of floating logs which are considered to be low and short-lived (e.g. recolonisation is rapid).</p>
	<p>ISSF June 2, 2011 Response</p> <p>The ISSF has no further comment on PIs 2.4.1,2, beyond that set out in the Aug 10 2010 submission.</p>
	<p>2.5.1 Outcome Status, Ecosystems</p> <p>2.5.2. Management Strategy, Ecosystems</p> <p>2.5.3. Information/monitoring, Ecosystems</p>
	<p>ISSF Aug 10 2010 comments and aggregate scoring ~80</p> <p>The removal of large magnitudes of skipjack over many decades without demonstrable impact on other ecosystem components appears to demonstrate that ecosystem function has not been impaired. However, the fishery has altered the ecosystem. For example, skipjack abundance has increased over recent decades presumably due to reduction of predators due to fishing. The impact of fisheries reduction in the abundance of juvenile bigeye and yellowfin tuna (by FADs for example) and ecosystem structure and function are not well understood.</p> <p>Management of habitat and ecosystem impacts are managed indirectly by VDS and FAD closures. VDS and observer coverage will provide sufficient information to monitor habitat impacts, if any.</p> <p>While recently there has been considerable scientific effort on ecosystem effects within the WCPFC, there</p>

	does not appear to be integrated domestic and international strategies to manage the ecosystem components of this fishery.
	<p>Moody response given in Public Comment Report (aggregate score: 86.66).</p> <p>Sibert et al (2006) analysed available data from Pacific tuna fisheries for 1950–2004 to provide comprehensive estimates of fishery impacts on population biomass and size structure. The results indicated substantial, though not irreversible, impacts of fisheries on these top-level predators and minor impacts on the ecosystem in the Pacific Ocean. Mechanisms to reduce interactions with both target and nontarget species include the preparation of risk assessments at regional level (e.g. Kirby, 2006; Kirby and Hobday, 2007) as well as within the PICT EAFM reports that allow the identification of management measures if deemed necessary by the Ecosystems and Bycatch Specialist Working Group (EB SWG). This is also supported by the recently increased observer coverage of 100% in the purse seine fisheries.</p>
	<p>ISSF June 2, 2011 Response</p> <p>The ISSF has no further comment on PIs 2.5.1,2,3 beyond that set out in the Aug 10 2010 submission, which is reiterated here.</p>
	<p>PRINCIPLE 3</p> <p>NOTE: The governance framework of the PNA Fishery is: 1) the laws and regulations of the nations of PNA; 2) the Nauru Agreement and its background agreements; 3) the Forum Fisheries Agency (FFA); 4) the laws and regulations of the nations of the flag vessels participating in the fishery; and 5) the WCPFC. Assessment of the PNA Fishery relative to Principle 3 must consider the management in total, although ISSF's comments below are limited to items 1), 2) and 5). However, the assessment must recognize that the final implementation of regulations and measures fall to the individual nations.</p>
	<p>3.1.1. Governance and Policy, Legal and/or Customary Framework</p>
	<p>ISSF Aug 10 2010 comments and scoring ~70</p> <p>The Nauru Agreement (1982) provides for terms and conditions governing access of foreign fishing vessels to their zones; agreement on uniform terms and conditions for licensing of foreign fishing vessels; cooperation and coordination of monitoring and surveillance; the development of arrangements to facilitate the implementation of the terms and attain the objectives of the Agreement; and annual meetings of the Parties. Unfortunately, it lacks any specific reference to the precautionary approach. Recent (2009) actions of the PNA have provided for the development of a PNA office, strategic fisheries management initiatives, and planning initiatives to maximize long term economic benefits from the fishery (including MSC certification application). The PNA has demonstrated its ability to implement management measures. However, procedures for dispute resolution within the PNAs have not been established.</p> <p>All of the PNA are members of the WCPFC. The convention under which the WCPFC is formed reflects current international laws and standards relevant to management of migratory species and the ecosystem common to other RFMOs, including specific reference to the precautionary approach, the input of legal experts, dispute resolution mechanisms based on Part VII of the United Nations Fish Stock Agreement, the rights of artisanal and subsistence fishers, the dependence of coastal States and States fishing on the high seas on the stocks concerned and the role of the WCPFC in development of criteria for the allocation of catch or effort. However, to date, the Commission has not allocated fishing rights nor have they invoked dispute resolution mechanisms.</p> <p>However, there are concerns by some parties for the cost of implementing WCPFC obligations including financial commitments administrative and stewardship obligations and the administrative and legal challenges needed to make the changes. Little is known about the individual national legal framework of PNA parties.</p> <p>These concerns suggest limitations in fully implementing a MSC certified fishery.</p>
	<p>Moody response given in Public Comment Report (score: 95).</p>

	<p>The WCPFC Convention, FFA Convention, the Nauru Agreement and associated arrangements and applicable national fisheries laws and plans are consistent with the principles and provisions of UNCLOS, UNFSA & CBD), to which all PNA Members are Parties, as well as a range of other relevant international and regional fisheries instruments, and to relevant local, national and regional laws and standards. The precautionary approach is incorporated into national laws and tuna management plans. All WCPFC Members (including PNA members) are legally bound to apply the precautionary approach as parties to the WCPFC Convention (with its Art. 5 & 7). The WCPFC dispute mechanism is set out in Article 31 of the Convention. The Palau Arrangement sets out a dispute mechanism in Art 8 for issues related to the purse seine fishery and the VDS based on a Pacific way of negotiation, compromise and consensus. The UNFSA dispute mechanism applies to the Palau Arrangement and the VDS Functioning national legal systems provide recourse for settlement of disputes.</p>
	<p>ISSF June 2, 2011 Response ISSF is not persuaded by citations of Convention documents. Our concern is the operational outcomes in which we find the Legal and/or Customary Framework to be lacking in demonstrating its capacity. One thing is to have something on paper that could theoretically work, and another thing is to implement it operationally. Therefore we maintain our original comments and a score of 70, with a Condition to ensure that the WCPFC management system achieves sustainable fisheries in accordance with MSC Principles 1 and 2.</p>
<p>3.1.2. Principle 3 Governance and Policy, Consultation and Responsibilities</p>	
	<p>ISSF Aug 10 2010 comments and scoring ~ <80. The organization of the PNA is clearly identified and their functions defined in the original Agreement. Recent (2009) measures have further defined the organization, roles and responsibilities. While the Agreement allows for other members of the FFA to be observers at PNA meetings, there is no provision for other interested parties to attend meetings or to provide input. Thus, the PNA process lacks transparency and must be addressed. Little is known about the individual national governance processes. The organization of WCPFC has comprehensive participation by Members and Cooperating Non-Members with formal definitions of the roles of each. Participation occurs at meetings of the Commission, Scientific Committee, Technical and Compliance Committee and Finance and Administration Committee. Input of Members and Cooperating Non-Members are considered when developing management measures and procedures. WCPFC rules allow and facilitate observer participation, including interventions at the Commission meeting and at meetings of committees and subcommittees. Written documents prepared by observers can be distributed at meetings as information documents, as provided by the rules. In the opinion of ISSF the primary deficiency of this PI (relative to a score of 80) is the lack of PNA, sub-regional and national transparency mechanisms .</p>
	<p>Moody response given in Public Comment Report (score: 90). Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction at the WCPFC, PNA and national levels as well as support organisations FFA and SPC. There are extensive, regular formal and informal consultation processes at the WCPFC, PNA, FFA and other regional & international fora and national levels, including consultation with bilateral partners and domestic stakeholders. These processes seek and accept information, and demonstrate consideration of the information but while the WCPFC process explains how information is used or not used, other components of the management system do not. The Consultation process provides opportunity for involvement and no information was found indicating difficulties for parties wishing to be involved. Provision is made for formal observer status at both PNA and TAE/PAE setting meetings. However, there needs to be improved explanation of how decisions are made.</p>

	<p>ISSF June 2, 2011 Response</p> <p>ISSF reiterates its concern that the PNA process is not transparent. Note, for example, that (as of May 31, 2011) the PNA website, www.pnatuna.com, blocks the Meetings section unless the user is registered. Furthermore, the Moody Marine draft assessment report provides what to us is the first detailed information on the practical functioning of the VDS. In addition, the Assessment Team itself in scoring PI 3.1.2 recognizes that "<i>the process falls short</i>". Therefore, it cannot be said that PNA meetings are transparent. The ISSF maintains that this PI should not be given a score higher than 75.</p>
	<p>3.1.3. Governance and Policy, Long term Objectives</p>
	<p>ISSF Aug 10 2010 comments and scoring ~ <80</p> <p>PNA fishery objectives of the developed in the 1982 Agreement and in subsequent amendments are to coordinate and harmonize the management of fisheries with regard to common stocks within their fisheries zones for the benefit of the peoples of the Parties, securing greater economic benefits and control of the parties tuna resources through cooperation in the management and development of their shared fisheries resources; to effectively conserve and restore highly migratory stocks while maximizing economic returns; to promote the greater commercial utilization of the tuna resources for the benefit of the Parties; and to enhance commercial and economic opportunities for the Parties through optimum utilization of the tuna fishery. The objectives do not include explicit acknowledgement of the precautionary approach, nor is it clear that these overall objectives are linked to national regulations and to policies implementing precautionary policies. Also, the most recent modification to the PNA objectives occurred in February 2010, so that the implementation into national policy and operations has not yet been demonstrated.</p> <p>The WCPFC convention formally defines its objective as: "to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and Agreement [UNCLOS and UNFSA respectively]". Additionally, the Convention specifically requires that the WCPFC apply the precautionary approach (Article 5) and mechanisms to do it (Article 6).</p> <p>The PNA Fishery must formally establish precautionary policies both within the PNA and within the individual Parties. These must acknowledge the link of objectives between the WCPFC, the PNA and the individual Parties.</p>
	<p>Moody response given in Public Comment Report (score: 80).</p> <p>There are clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, and these are explicit within applicable WCPFC CMMs, and management policy as set out in the Palau Arrangement, the VDS and national laws and plans. The WCPFC Convention and national laws and plans (except for Kiribati) require the application of objectives reflecting these principles. However, the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention. The application of the precautionary approach and the priority for environmental sustainability is not undermined in the national acts by other goals, such as economic development requirements.</p>
	<p>ISSF June 2, 2011 Response</p> <p>The RFMO's (WCPFC's) objectives and precautionary approach elements are vague. Additionally, the lack of a WCPFC response to multiple years of bigeye overfishing does not demonstrate a record of actually applying the precautionary approach by WCPFC.</p> <p>If limit reference points and HCRs had been established then the definition of long term objectives would be more transparent. However, this PI has been scored 80 which requires no Condition. This result coupled with a weak Condition on 1.2.2 and no Condition for 1.1.2 will not achieve the desired result of an MSC sustainable fishery in which the WCPFC has adopted appropriate reference points, HCRs and objectives.</p> <p>The Public Comment Report states: "<i>Objectives relating to P1 and P2 Outcomes are set out in various WCPFC CMMs, especially 2008-01 (bigeye and yellowfin), and CMMs relating to shark and sea turtle turtles as well as</i></p>

	<p><i>national plans, the Palau Arrangement and the VDS. These include short and long term objectives, but the objectives are not all well defined and measurable, especially for the CMMs related to P2 outcomes.... Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system."</i></p> <p>It is unclear that short and long term objectives as expressed by the WCPFC are in fact consistent with MSCs P1 and P2 and, thus, a score of 80 is not justified. A lower score is appropriate, included with a strong Condition addressing WCPFCs performance. The ISSF believes that a score of 70 is appropriate for this PI. Thus, a Condition is required in which objectives are established through the WCPFC and linked to the objectives of the PNA and the individual members of the PNA. These should be established through a transparent process. As an example, refer to the Conditions placed for the MSC certification of the New Zealand Albacore Troll Fishery.</p>
<p>3.1.4. Governance and Policy, Incentives for Sustainable Fishing</p>	
	<p>ISSF Aug 10 2010 comments and scoring ~70.</p> <p>The PNA has incentives to maintain sustainability, particularly if the PNA Fishery were to be MSC certified. However, it is the responsibility of the PNA to create operational incentives for the vessels and gears through its licensing agreements. The VDS may be considered an attempt to do this, particularly through its calculation of vessel-size-related fishing days. However, this is limited. Additionally, to ISSFs knowledge an examination of the VDS and other options relative to vessel operator incentives has not been done and needs to be done. Also, aid to the nations of the PNA and the Pacific Islands in support of fisheries infrastructure has been significant on both the small scale (e.g. fuel costs) or on a larger scale (support by national governments to the industry), or indirect subsidies through exemptions of some sectors from management measures within the WCPFC. The PNA must respond to the need for appropriate incentives that are created operationally through the licensing agreements. Analyses are needed to justify actions. The burden must be on the PNA since the vessel/operators are not the entities pursuing certification.</p>
	<p>Moody response given in Public Comment Report (score: 80).</p> <p>The rights-based management framework of the VDS creates incentives for sustainable fisheries at the PNA and national government level and provides for the creation of a system of positive incentives at the enterprise level that is only partially in place at this point. There are subsidies that undermine fairness rather than sustainability. But the weaknesses in VDS reviews and the clarity in the way that VDS decisions are linked to scientific advice falls short of ensuring that these subsidies do not contribute to unsustainable fishing practices in future.</p>
	<p>ISSF June 2, 2011 Response</p> <p>It is unclear what incentives will be created because "the system" being addressed in the assessment does not yet fully exist (a VDS in early stages of implementation, etc). Moreover, perverse incentives would be created through separation of the normal fishing operation into uncertified and certified units. Additionally, the function of the WCPFC in creating incentives for member non-PNA states is not well addressed. The conclusion in the Report that <i>"the weaknesses in VDS reviews and the clarity in the way that VDS decisions are linked to scientific advice falls short of ensuring that these incentive effects do not contribute to unsustainable fishing practices in future"</i> should be sufficient for a score of 70 and thus a Condition. The Condition should require the PNA to operationally create appropriate incentives through their licensing agreements.</p>
<p>3.2.1. Principle 3 Fishery-specific Management System, Fishery-specific Objectives</p>	
	<p>ISSF Aug 10 2010 comments and scoring ~60.</p> <p>The long term objectives of both the PNA Group and the WCPFC have been specified (see 3.1.3). However, short-term operational objectives are lacking. It may be argued that PNA and WCPFC management measures are statement of tactical objectives, but in the opinion of ISSF operational objectives must be developed and linked to harvest control rules (1.2.1 and 1.2.2) at both the PNA and WCPFC levels. Specification of fishery-specific objectives must be led by the development and implementation of harvest control rules.</p>

	<p>Moody response given in Public Comment Report (score: 80). Objectives relating to P1 and P2 Outcomes are set out in various WCPFC CMMs, especially 2008-01 (bigeye and yellowfin), and CMMs relating to shark and sea turtle turtles as well as national plans, the Palau Arrangement and the VDS. These include short and long term objectives, but the objectives are not all well defined and measurable, especially for the CMMs related to P2 outcomes.</p>
	<p>ISSF June 2, 2011 Response The fishery-specific objectives are only implicit and therefore ISSF maintains its original comment and score of 60, together with a Condition to ensure that appropriate, explicit, short and long term objectives are in place.</p>
<p>3.2.2. Principle 3 Fishery-specific Management System, Decision-making processes</p>	
	<p>ISSF Aug 10 2010 comments and scoring ~ <80. The PNAs decision-making processes are not clearly defined, nor are they transparent. The record and continuity of PNA decisions has demonstrated the ability and will to make timely decisions, but it is unclear how they are achieved (consensus, voting, or other methods). The WCPFC generally makes decisions through consensus, but procedures are available and documented for voting, appealing decisions, conciliation and review should consensus not be reached. The application of the precautionary approach and the use of the best available scientific advice are required by the WCPFC Convention. While these requirements may seem to be unnecessary given the current status of the stocks of skipjack tuna, prior decisions have not always been precautionary. With dynamic fisheries transparent procedures must be in place to assure that the management system can respond in a timely and appropriate manner. These procedures must be developed and made available for scrutiny.</p>
	<p>Moody response given in Public Comment Report (score: 70). At the WCPFC level, There are established decision-making processes in the Convention and these are operationalised in the processes of the SC, the TCC and the Commission itself. Those decision-making processes have resulted relatively quickly in a comprehensive set of CMMs and strategies to achieve the specific objectives in the purse seine fishery. WCPFC decision-making processes are open, use the precautionary approach and best available information and are well documented. Proactive PNA decision-making over a long period has resulted in measures and strategies contributing to, and in important respects, underpinning effective management of the WCPO purse seine fisheries. These decision-making processes use the precautionary approach, and are based on best available scientific information, but do not clearly respond to all issues, nor provide formal reporting etc, so meeting only some of the SG 100 requirements. The assessment requires a Condition (4) to be met: (1) The link between the VDS TAEs and WCPFC requirements and the scientific advice needs to be clearly established by the PNA. (2) Explanation of decisions by PNA, particularly relating to the operation, monitoring and reporting of the VDS needs to be improved.</p>
	<p>ISSF June 2, 2011 Response The ISSF is supportive of the score of 70 and a Condition associated with this PI that links the VDS to the WCPFC scientific advice and transparent reporting of the decision processes how this is done. This is imperative to avoid “effort creep” induced by new technologies and more efficient vessels in the future. It is the responsibility of the PNA to periodically the link between VDS and vessel-size-related fishing days. An examination of the VDS and other options relative to vessel operator incentives has not been done and needs to be done. PNA must respond to the need for appropriate analyses and evaluations that can be used to make licensing agreements for transparent. The burden must be on the PNA since the vessel/operators are not the entities pursuing certification.</p>
<p>3.2.3. Fishery-specific Management System, Compliance and Enforcement</p>	

	<p>ISSF Aug 10 2010 comments and scoring ~ 60</p> <p>Closures, licensing and vessel day limits are actions taken by the PNA to manage fishing effort and eliminate IUUs (illegal, unreported and unregulated fishing). Additionally, requiring a 100% observer programs is a mechanism for monitoring and control. However, it has not been demonstrated that these measures have been fully enforced, particularly at the national level. Logistical problems of maintaining a cadre of trained observers, the timely turn-around of observer data for use in compliance have been suggested to be lacking. The PNA Fishery must demonstrate their ability to monitor and enforce.</p> <p>WCPFC has recently adopted measures to assist regional enforcement such a vessel list; centralized VMS; IUU Vessel listing procedures; high seas boarding and inspection procedures; prohibition or transshipment at sea by purse seine vessels (with specified exemptions); a regional observer program and FAD Management Plans. The WCPFC's Technical and Compliance Committee is also continuing consideration of port State measures, chartering arrangements, catch/statistical documentation, the control of nationals, and compliance monitoring and reporting, but these have not yet been implemented.</p> <p>Overall, each PNA member must be required to demonstrate their ability to meet the MSC enforcement obligations to implement the management measures of the PNA and the WCPFC.</p>
	<p>Moody response given in Public Comment Report (score: 85).</p> <p>The evidence suggests that PNA parties have applied significant resources to enable them to implement the control measures as required. PNA Parties have rapidly adopted a 100% observer programme. The observer programme has in place a series of checking procedures to identify both observer compliance, but also to identify non compliance or other issues, such as reporting deficiencies that are not in contravention of any laws or measures. It is correct to say that the transmission of catch data to SPC is slow, but at the same time, observers and observer debriefers are identifying and acting upon issues. PNA compliance structures, aided through coordinated actions under the Direction of FFA hosts an additional variety of other activities including inspection on transshipping, as well as comprehensive VMS system. Joint Deployment Actions also support PNA Parties.</p>
	<p>ISSF June 2, 2011 Response</p> <p>Monitoring and compliance: The MSC FAM criteria for a score of 80 are <i>"A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules."</i></p> <p>In the PNA assessment, the scoring justification for this PI was: <i>"The combination of MCS and compliance mechanisms at WCPFC, PNA and national levels creates a system that has been demonstrated to be comprehensive and effective in the purse seine fishery in PNA waters. Penalties are appropriate and applied, and are an effective deterrent. The 100% observer scheme is proven to have worked effectively, with a number of safeguards in place to ensure that non compliance and inaccurate reporting are identified. There are generally good levels of compliance by fishers. There are some capacity differences between PNA Parties, but weaknesses are addressed through Joint Initiatives, and support from FFA Regional coordination. Identified weaknesses are continually being addressed."</i></p> <p>While a compliance system is in place it is not the compliance system that will have to be implemented after certification. The existing compliance system has not "demonstrated" that it is capable of monitoring unassociated sets separate from log sets and that the observer program is now operationally responsive to assure that timely decisions can be made. For example evidence has not shown that the 100% observer scheme has worked effectively, or more importantly that it will work effectively under a more rigorous MSC certification. This PI requires a score of 60 with a Condition that specifies a compliance implementation plan.</p>
<p>3.2.4. Fishery-specific Management System, Research Plan</p>	
	<p>ISSF Aug 10 2010 comments and scoring ~ 80.</p> <p>The WCPFC has a Strategic Research Plan 2007-2011 in place which identifies the four research and data</p>

	<p>collection priorities needed for any fishery management system: collection and validation of data from the fishery; monitoring and assessment of stocks; monitoring and assessment of the ecosystem; and evaluation of management options. The Plan is largely directed at the biological status of the stocks and ecosystem. Although a number of research projects on management and governance have been funded, further research is needed on the management system itself, its deficiencies and actions to ameliorate those deficiencies and integrated into the Research Plan. It is unclear to ISSF whether the PNA Fishery is fully integrated into this Plan and whether there is a WCPFC and PNA commitment to the Plan (funding). WCPFC research reports are publically available on their website in a timely fashion.</p>
	<p>Moody response given in Public Comment Report (score: 90). The WCPFC Strategic Plan addresses four overall research and data collection priorities - collection and validation of data from the fishery, monitoring and assessment of stocks, monitoring and assessment of the ecosystem, and evaluation of management options. The WCPFC Strategic Research Plan is supplemented by the SPC, FFA and national Strategic Plans to provide a comprehensive research plan for the fisheries under assessment across P1, P2 and P3. The Plan was adopted by consensus of WCPFC Members, including PNA Members. The WCPFC and SPC Plans and results are widely and publicly available, but the FFA and national research results are not all fully accessible.</p>
	<p>ISSF June 2, 2011 Response The ISSF is concerned about the lack of transparency in PNA member national research plans and maintains its view that this PI should receive a score of 80.</p>
<p>3.2.5. Fishery-specific Management System, Monitoring and Management Performance Evaluation</p>	
	<p>ISSF Aug 10 2010 comments and scoring ~ 60 Neither the PNA management system nor the WCPFC management performance been reviewed. The WCPFC considered such a review, but deferred it due to costs. Stock assessments are peer reviewed by other members of the Scientific Committee and are subject to public scientific scrutiny. Formal external reviews are just now (2010) being implemented in WCPFC. However, assessments are not full evaluations of the management system. Components of the WCPFC management system are evaluated through annual compliance reports and through evaluation of the effectiveness of specific management measures. While management performance evaluations have been recommended for all RFMOs, the WCPFC has not done one; nor has it implemented a system of performance review.</p>
	<p>Moody response given in Public Comment Report (score: 80). WCPFC has a commitment to implement an external review procedure according to the Kobe course of Action. Condition 5: The PNA must establish a system of external and regular internal reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery.</p>
	<p>ISSF June 2, 2011 Response Scoring criteria for this PI require that WCPFC management system has been subject to “occasional external reviews.” To our knowledge this important key to the management system has not happened. Therefore this element should be scored 70 and a Condition imposed that this occur and that the PNA aggressively support this WCPFC action.</p>

III. Conclusions

The ISSF continues to be concerned with the artificial definition of the fishery as one targeting a limited set of retained species that are encountered using a set configuration that will not be uniformly implemented on a vessel-trip. This configuration of "the fishery" has yet to be implemented. Therefore, the evaluation in the report is not outcome based, but rather an evaluation of potential, a potential has not been demonstrated.

Additionally, the ISSF is very concerned that Principle 1 requirements are not now being met and that the Conditions imposed are not adequately addressing the regional nature of the stock and the function of the WCPFC management system. The PNA must aggressively work through the WCPFC to successfully implement these requirements.

An MSC certifiable fishery must have demonstrated a track record of MSC-compliant management. That has not been done in this instance. Instead, a mix of actions has been suggested that "might" work in the future. MSC evaluation must be used to certify existing fisheries that operate sustainably and not to "create" a new fishery that has yet to operate under MSC standards. The weight of the evidence clearly leads to the conclusion that MSC standards for Principles 1-3 have not been met.

Thank you for considering our position on this issue.

Sincerely,



Susan S. Jackson

President

Cc: C. Ninnes
B. Ack
V. Restrepo
B.

Fox

Appendix 1

Compilation of various weaknesses identified by the Assessment Team

This table quotes various texts in the document "*MSC Assessment Report for PNA Western and Central Pacific Skipjack Tuna (*Katsuwonus pelamis*) unassociated and log set purse seine Fishery (Version: 3 Public Consultation Draft)*" (the highlighting of specific sentences is done by ISSF).

SECTION	QUOTE
5.3 Reference Points	<p>Notwithstanding the current healthy condition of the skipjack stock relative to MSY-related reference points, and some evidence available (from the bigeye example) that management actions would be undertaken to reduce the exploitation rate if F was to exceed FMSY, limit reference points have not been adopted for skipjack by PNA or the WCPFC to guard against impairment of the reproductive capacity of the stock, and this is a <u>substantial weakness in the arrangements for skipjack management</u>.</p>
5.4.1 Harvest Strategy	<p>(4) The purse seine management measures of CMM 2008-01 do however not apply in archipelagic waters. There are four major archipelagic states (PNG, Solomon Islands, Philippines and Indonesia) with significant purse seine fishing in their archipelagic waters. These states have a <u>range of management actions of varying effectiveness applying to their archipelagic waters</u>.</p>
5.4.1 Harvest Strategy	<p>With skipjack exploitation apparently entering into a new phase where greater caution is required, <u>there is a need for a more coherent harvest strategy for skipjack</u> with more explicit objectives, more integrated management actions applying throughout the range of the stock, and harvest control rules based on target and limit reference points.</p>
5.4.2 Harvest Control Rules and Tools	<p>There has been <u>no formal development of harvest control rules</u> for skipjack in PNA waters or the WCPO that ensure that the exploitation rate is reduced as limit reference points are approached because there has been a general view that they are not necessary given the positive state of the stock</p>
5.4.2 Harvest Control Rules and Tools	<p>PNA and the Commission have demonstrated a capability of applying measures to reduce the exploitation rate for bigeye tuna on the basis of scientific advice that fishing mortality exceeded FMSY, although the <u>response has fallen short of that estimated to be necessary</u> to maintain the bigeye tuna stock at a level consistent with MSY in future.</p>
5.4.2 Harvest Control Rules and Tools	<p>The absence of formally adopted harvest control rules setting out pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points (FAM Glossary) represents a <u>potential risk to the effectiveness of management of the skipjack stock</u> in future. In this situation, PNA would need to agree to the adoption of appropriate harvest control rules as a condition of certification.</p>

SECTION

QUOTE

6.2 Retained Non-Target -- 6.2.1 Stock Status -- Bigeye	<p>It is not possible to directly partition these components in the impact, but, using catch as a proxy for impact, with 20% of the associated catch on log sets and size composition similar amongst set types, 8-10% is regarded as a good estimate of the impact of bigeye log sets on spawning potential. This is significant, and the assessors consider that <u>this level of impact from log sets would hinder recovery and rebuilding of the bigeye stock</u> if the stock was not within biologically based limits. In addition, while the current measures aim at reducing associated sets overall through the FAD closures, they do not restrict a transfer of effort from drifting FAD to log sets which could be triggered were log sets exempted or to be promoted in any form. As noted, the assessments are subject to quite rigorous internal review within the SC, but have <i>not yet been subject to external review</i>, even though the assessments are internationally regarded as being of high quality (Allen, 2010 (pp.24)).</p>
6.2 Retained Non-Target -- 6.2.1 Stock Status -- Bigeye	<p>There was also some evidence of a <u>higher than normal percentage of bigeye in unassociated sets during the FAD closure</u>, perhaps as a result of the use of lights, drifting overnight with FADs and subsequent early morning sets. Some note of caution needs to be applied to this information as it bases the findings on limited data</p>
6.2 Retained Non-Target -- 6.2.3 Effectiveness of measures	<p>, there is a <u>significant probability that the bigeye stock will not be within biologically based limits within 10 years</u> (using 0.5SBMSY as SBLIM) and <u>in fact it is likely that the bigeye stock may fall below this limit</u> if the observer spill sample-corrected estimates of purse seine catch are used. This is a critical conclusion for the assessment because it means that, acknowledging the uncertainty in these estimates, the <u>log fishery must fail the assessment</u> because it has been determined to have a significant effect on the bigeye stock and therefore to be likely to hinder its recovery.</p>
6.2 Retained Non-Target -- 6.2.4 Information	<p>There are two key areas where <i>available data are incomplete and represent sources of uncertainty</i> in current assessments and analyses, especially with respect to yellowfin and bigeye. "The breakdown of catch estimates by gear type and the lack of operational logsheet data for the Philippines (and Indonesia) domestic fisheries are amongst the <u>most significant gaps</u> in the provision of data to the WCPFC" (Williams, 2010).</p>
7.1.1 Governance -- WCPFC	<p>These measures [WCPFC measures relevant to the fisheries under assessment] represent a comprehensive response by the Commission in its early stages to areas where conservation and management measures are needed, but the <i>measures are based on short term ad hoc approaches, <u>lacking the longer term framework</u> of TACs and TAEs, reference points and harvest control rules that will be needed.</i></p>
7.1.1 Governance -- WCPFC	<p>However, other CMMs, including the CMMs for sharks and sea turtles are <u>not sufficiently well-defined to be measurable</u>.</p>
7.1.1 Governance -- WCPFC	<p>The WCPFC has not undertaken an external review yet</p>

SECTION	QUOTE
7.1.2 Governance -- PNA	There does however, appear to be a <u>lack of clarity and openness in PNA decision-making</u> with respect to the establishment and operation of the VDS Total Allowable Effort, particularly with respect to links to the requirements of WCPFC CMM 2008-01 and the scientific advice.
7.1.2 Governance -- PNA	Notwithstanding these consultation processes, the PNA has also been criticized for <u>failing to provide adequate information on the operation and application of the VDS</u> (W. Gibbons-Fly, 2010).
7.1.2 Governance -- PNA	While PNA positions and decisions are often explained in media releases and statements to WCPFC meetings, <u>the assessors could not find evidence of information from PNA</u> clearly indicating the basis for key decisions, especially on the VDS.
7.1.2 Governance -- PNA	There is <i>no formal process in place for review</i> of the performance of the PNA Office.
7.1.3 Governance -- VDS, BOX 4: "Party statement of intent on the application of VDS"	<ul style="list-style-type: none"> •Papua New Guinea: Committed to formal exchange system and trading days between parties. A <i>formal mechanism must be established</i> rapidly... •Kiribati: <i>Process of endorsing change is subject to discussion within</i> Cabinet... •FSM: ...The next step is to implement VDS as a mechanism to control effort as a management tool. Presently <u>still resolving final allocation issues</u> between the parties and reducing PAEs to accommodate this (PNA agreement), ... •Solomon Is: there is <u>room for improvement</u>. Currently <u>weakness</u> in VDS is USMLT not following the process. •Nauru: ...<i>capacity penalties need to be improved.</i>
7.1.3 Governance -- VDS, BOX 4: "Party statement of intent on the application of VDS"	<u>Shortfalls in the implementation of the VDS</u> have been addressed by other stakeholders, including the lack of clarity and transparency (Gibbons-Fly, 2010) and the <u>failure of the VDS to effectively limit fishing capacity</u> (Hamby, 2010).

SECTION

QUOTE

7.1.3 Governance -- VDS

Weaknesses apparent in the VDS, including those apparent from the analyses of the operation of the VDS above (and additional details in Appendix F), include

- the lack of a clear link between the PAE and scientific advice on stock status
- PAE allocation has been unsettled, and difficulties have been addressed in part through increasing the TAE and individual PAEs through ad hoc adjustments
- Trading has been slow to develop
- The ad hoc adjustments, lack of trading and high provisions for transfers between years resulted in high adjusted PAEs for 2010 and increased effort in 2010, including allowing the transfer, instead of removal, of effort from the closed high seas areas
- Some Parties have overrun their PAEs, and it is not clear that the sanctions in the Scheme for over-runs are being applied
- Limits have only been partially applied at national level
- There are **inconsistencies** in the treatment of non-fishing days, with apparently high provisions for non-fishing days for one Party, while no provisions are made for other Parties
- The Scheme does not apply to archipelagic waters and effort has increased substantially in archipelagic waters of the Parties since 2004
- The FSMA effort is capped at 3,907 days but this looks likely to have been exceeded in 2010
- The need to bring US effort under the VDS.

7.1.3 Governance -- VDS

The effectiveness of the VDS is a key issue in this report because of the importance of the VDS as a tool for managing the WCPO tropical tuna fisheries, including the fisheries for skipjack. The information noted above indicates the Scheme has not been fully implemented, and **there have been difficulties and inadequacies in the early stages of implementation.** However, the responses to the shortfalls in the performance in the comments noted above both from the PNA Members and other stakeholders appear to reflect a **sense of frustration that the VDS has not been effectively implemented,** rather than a concern that it is an inappropriate or ineffective tool. In the longer term, there may be other options for effective management such as catch limits as alternatives or complements to the VDS, but in the short to medium term, effective implementation of the VDS is necessary for the sustainability of the fisheries for skipjack. **PNA needs to demonstrate that it has the capacity to ensure that the VDS is effectively implemented.**

7.1.3 Governance -- VDS

effort is likely to have grown substantially in PNA EEZs in 2010, (and moderately in aggregate in the WCPO), as a result of increases in US effort outside the VDS and the transfer of effort from closed high seas areas, indicating that **PNA needs to improve the effectiveness of the VDS.**

SECTION

QUOTE

7.2 Monitoring, control, and surveillance	<p>MRAG (2009) undertook an assessment of risks throughout the WCPO fleet. Specific compliance risks identified with the region were as follows:</p> <ul style="list-style-type: none"> • Under-reporting of catches in vessel logs or weekly reports. Historically 31% of purse seiners would under report, even when observers were on onboard. • Under-reporting of bycatches • CCMs not reporting details on catch and effort to WCFCPC • Failure to inspect vessels on landing • Landings into foreign ports • Failure to implement pre fishing inspections to check licence and other details (e.g. ships master) • High observer turnover • Observer reports of violations not acted upon • Weaknesses in implementation of fisheries violations in some countries • Weak system of information exchange and data base management
7.2 Monitoring, control, and surveillance; BOX 9: Observations concerning the operation of the observer scheme by the principal management and support organisations.	<p>Negative issues:</p> <ul style="list-style-type: none"> • Not enough funds available for the scheme • Continued commitment to training and extending the observer pool • Standards in training and course content need to be high. Some parties weaker than others • Minimal levels of intimidation occur. One recent alleged murder of an observer while carrying out duties at sea. • Logistical issues moving observers around the region. Require visas to go through US – Embassies only in Fiji, Papua and Fiji, and observers have to travel through these places. Entry visas into Australia also problematic. • Observer tasks are very onerous, with many things to report. MSC and Commission Management Measure requirements might require 2 observers per boat. Already sufficiently onerous as is. • Some minor evidence of corruption. These things can be spotted in de-briefing, or when an alternate observer goes on board. • There were some grey areas, including interpretation of different FAD sets. These have been rectified with clear definitions and instruction.
7.2 Monitoring, control, and surveillance; BOX 9: Observations concerning the operation of the observer scheme by the principal management and support organisations.	<p>There are acknowledged weaknesses in systems of information exchange and database management. There is an urgent need to improve the coverage and quality of information to underpin future implementation across the region.</p>
7.3 Incentives for sustainable fishing	<p>However, the lack of clarity in the links between the VDS decisions and the scientific advice and the inherent tendency towards effort creep in effort limits creates a risk of perverse incentives potentially affecting sustainability in future.</p>
13 Limit of identification of landings from the fishery	<p>This fishery presents particular issues in relation to traceability, as a single vessel may be engaged in fishing on free-schools, log-sets and FAD-sets on a single trip. A number of problems therefore arise:</p>

SECTION	QUOTE
13.1 Traceability	The main possible risk is the mixing of product from certified and non-certified Functional Units (set types). Discussions with the client and individual vessel owners suggest that this is potentially a risk.
13.2 At-sea separation and processing	The main risks, associated with this at-sea processing stage, are the possible mixing of product from certified and non-certified Functional Units
13.3 Points of Landing (Domestic)	On the carriers, it is normal practice to separate fish from different vessels, and separation continues in the holding bins in the processors cold stores. However, this separation may not necessarily ensure 100% of fish from vessels are not mixed between each other.
15.2 Scoring Table	COMMENTS
1.2.1 Harvest Strategy	While the WCPFC management arrangements cover around 70% of the catch, it is <u>not clear that coherent management actions are applied</u> throughout the range of the stock, particularly in Indonesia and the Philippines, hence the score for this element is only 80... With the skipjack stock assessed until 2010 as remaining in a healthy state relative to all indicators, <u>the strategy has not been fully tested.</u>
1.2.2 Harvest Control rules and tools	...there are <u>no well defined rules in place</u> for the skipjack stock that ensure that the exploitation rate is reduced as limit reference points are approached... ...there are <u>shortfalls</u> in the design and implementation of these tools, including the VDS, and improvements are necessary to ensure that the tools can control skipjack exploitation in accordance with specific harvest control rules.
1.2.4 Assessment of stock assessment	Whilst the assessment of stock status is subject to rigorous internal peer review, it has not yet been subjected to external peer review (80).
2.1.2 Management Strategy	LOG SETS FAIL <u>Bigeye tuna</u> : there are measures and a partial strategy in place to constrain effort. And reduce juvenile bigeye mortality from FAD use The SG60 level is not met because stock projections provide an objective basis for confidence that the partial strategy will not be successful at maintaining the bigeye tuna stock within biologically based limits, and may not work adequately to be able to ensure that this fishery does not hinder the recovery and rebuilding of the bigeye tuna stock (FAIL).

SECTION	QUOTE
2.2.2 Management Strategy	<p>SILKY SHARKS</p> <p><u>Unassociated sets</u>: However, even though there is inadequate and conflicting information on whether the partial strategy will work, there is some basis for confidence that the partial strategy is working with the implementation of 100% observer coverage, but the <i>objective evidence is not yet available</i> (60) An overall score of 70 is made for this species.</p> <p><u>Log sets</u>: However, even though there is inadequate and conflicting information on whether the partial strategy will work, there is some basis for confidence that the partial strategy is working with the implementation of 100% observer coverage, but the <i>objective evidence is not yet available</i> (70)</p>
3.1.2 Consultation, roles and responsibilities	<p>A particular <i>shortfall</i> is demonstrating how information is used or not used....Opportunities are provided for involvement, but the <i>process falls short</i> of facilitating engagement by all affected parties, and the lack of a formal observer status in the PNA system</p>
3.1.3 Long term objectives	<p>...the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention.</p>
3.1.4 Incentives for sustainable fishing	<p>is a particularly significant shortfall addressed by the recommendation (80).</p>

Organización de Productores Asociados de Grandes Atuneros Congeladores (OPAGAC)

Asociación de Grandes Atuneros Congeladores (AGAC)

OPAGAC/AGAC ship owners represent a total 37 purse seine vessels that operate in all the three major Oceans: Atlantic, Indian and Pacific. As it has been well recognized by all the signatories of the 1995 New York Agreement⁶⁵, the adequate management framework to adequately control the harvest of tunas, as major species group of highly migratory fish, relies of the Regional Fisheries Management Organizations (RFMOs). Our fleets operate under the legal framework set by ICCAT⁶⁶, IOTC⁶⁷, IATTC⁶⁸ and WCPFC⁶⁹ in the corresponding area of competence, as applied by the EU legislation and enforced by the Spanish Government.

Since 1999, our fleet has been operating in the Central Pacific, as an extension of the activity of our fleet in the Eastern Pacific Ocean, mainly based in Latin American countries since 1975. Currently we operate 4 purse seine vessels under Spanish flag in the WCPO belonging to OPAGAC and 7 purse seiners under Ecuador, 2 from El Salvador and 1 from Kiribati flag belonging to AGAC as part of the investment compromises of our companies in these coastal countries of the Pacific. We therefore are interested stakeholders that will be affected by the certification of the fishery evaluated by Moody Marine Ltd.

Fishery Proposed

The first concern that we have in relation to this certification is the artificial nature of the geographical area as well as the artificial method of capture defined in the evaluation.

The geographical area defined excludes three major regions where the fishery described, naturally takes regularly place by the same vessels that obtain skipjack tuna with purse seiners in WCPO. Excluding such big regions, namely the Archipelagic Waters of the PNA countries, Archipelagic Waters of Indonesia and Philippines and the High Seas of the Western and Central Pacific Ocean (WCPO), does not help in achieving none of the 3 MSC Principles, because skipjack tuna is widely distributed along the whole WCPO, and is substantially caught in those waters. Therefore in case that the PNA management system would be of relevant efficiency in controlling the fishery that exploits the WCPO skipjack as the management population unit, something that the same evaluation put into question and we will consider later, it would only be able to affect to only 20% of the total catch of the species. Therefore any certification given to only 20% of the WCPO skipjack catch will never be able to assure the objectives of none of the 3 MSC principles.

Further more, the method of capture defined is also very artificial because the purse seine vessels that operate in the WCPO are fishing **simultaneously** to a variety of school types identified as different “methods of capture” by the report, i.e.: free schools, natural logs, drifting artificial logs and anchored artificial logs (also known as *payaos*). In a given trip, a vessel can fish different school types, what creates a great source of uncertainty at the time of trying to separate skipjack coming from different school type. On board purse seine vessels, it is well known that all the catch is mixed on the wells were tunas are frozen, in many cases in brine. Moreover, the school type definition is basically based on logbooks, and therefore not validated until the inclusion of

⁶⁵ Agreement on the application of provisions of the United Nations Convention on Sea Law of December 10, 1982, on the conservation and ordering of transzonal fish stocks and high migratory fish populations.

⁶⁶ International Commission for the Conservation of Atlantic Tunas.

⁶⁷ Indian Ocea Tuna Commission.

⁶⁸ Inter American Tropical Tuna Commission.

⁶⁹ Western and Central Pacific Fisheries Commission.

observers in 2010, that still is subject to uncertainty. Table 5 of the report provides a description of the very divergent ways of operation **reported** by the different fleets by nationality, except for those fleets that carry on board 100% observer coverage from IATTC since 1994, and that could explain the high proportion of FAD fishing reported by those fleets. That source of controversy can be validated in the sudden change of species composition recently reported once the FAD closure was established by CMM 2008-01. Before the closure the average skipjack catch proportion on a free school was 20%. After the closure, the “reported” skipjack catch associated to free school rose threefold to 60% (Hampton, 2009), something that is very remarkable and rather unusual in any free school fishing of the World.

Management System

The current management system to legally control the WCPO skipjack population is WCPFC. In the report is clearly mentioned that the current Parties of the Nauru Agreement (PNA) management system is of key importance and provides the management framework to adequately address the requirements of Principle 3. In the Moody Marine report is clearly stated the problems that the Vessel Day Scheme (VDS) applied by the PNA is currently facing and the lack of transparency that such system has. It is also clearly stated that the objectives of PNA do not contemplate whatsoever none of the MSC principles as objective of that group of countries. In fact, it is clear from the PNA objectives, that the Nauru Agreement has a legitimate and understandable objective of maximizing the economic return from the licensing process and the management measures applied.

A clear example of that is the application by PNA countries of the High Seas Pocket Closure, incorporated lately by PNA pressure in CMM 2008-01. This is a clear example of the kind of unilateral management measure that PNA applies. If the intention of that closure was to contribute to the reduction of fishing mortality (F) of bigeye tuna, a reduction that should be of at least 30% as recommended by the WCPFC Scientific Committee in 2007, it had the contrary effect. The assumption was that the effort exercised in those pockets would disappear, something that nobody believed ever, specially PNA countries that have been the beneficiaries of that measure, because that effort has been transferred to the PNA EEZs. It is eventual beneficial effect on bigeye F reduction it is still to be demonstrated because that effort has been transferred to the PNA coastal waters, specially archipelagic waters (see the increase in effort days from 2006, 3,891 days up to 6,120 days in 2009, Tables 2 of the report) where the biggest catches of juvenile bigeye are obtained.

Further to that, the PNA Koror Declaration is now committed to close the rest of the High Seas as a license condition to the vessels that want to fish in PNA waters. PNA tried to promote this prohibition at the last WCPFC Commission meeting based on a poor scientific justification of this measure, of dubious effect on the recommended bigeye F reduction, because it will have the same effect obtained from the High Seas Pocket Closure, i.e. transfer of additional effort on the PNA EEZs. It is very clear that this economically justifiable measure for PNA interests, is controversial with the free access principles established in UNCLOS and is unilaterally decided by PNA countries against the international management regime, as was not approved at WCPFC. Moreover, the application of this measure is not transparent among the PNA countries, and from our experience, few PNA members really apply it to purse seine fleets licensed in PNA EEZs.

In relation with the VDS, the report is full of references to the lack of transparency of the system, the lack of clear link of the Parties Allocated Effort (PAE) and the scientific advice on stock status, the lack of clear definitions of fishing day that lead to individual interpretations by PNA members, the obvious lack of compliance by the same PNA countries reflected in their recent declaration, after three years of application, of “hard” limits, what give an idea of the level of internal compliance of this system. VDS is not covering the archipelagic waters of PNA

countries, where the biggest effort increase has been reported, what provide a clear source of uncertainty at the time of assuring the sustainable exploitation of the three major species caught by the vessels susceptible of certification. In 2010 and 2011, there seems to be clear problems of compliance with the effort allocated by PNA countries, because is the third year of application of the VDS that allowed to burrow days for the two precedent years, and now there are clear cases of effort limits exceeded: FSMA in 2010, Nauru in 2010 (who closed the fishery in October) and currently Solomon Islands that in may 2011 has exceeded the effort allocated under VDS. And finally, the report states that the VDS has not been effectively implemented after three years.

An additional source of concern is the big increase of the number of vessel once the PNA countries decided to move away from the limited number of vessels to license to VDS. As shown in table 1 of the report, in the last years there has been a big increase on the number of vessels: 46 purse seiners more. This increase is clearly on the legitimate economic benefit of PNA countries because they are collecting more funds from license fees, but is a source of global concern because the bigeye population is currently suffering overfishing, and the WCPFC Scientific Committee recommends a reduction of the F of 30%. In fact, that is also a source of concern to PNA countries, as stated in the report because it seems that are considering the possibility of limiting the number of vessels license in PNA to 200, which will create a considerable problem that could have spillover effects in other tuna fisheries of the World.

Currently the management measure in place by WCPFC does not ensure the recovery of bigeye tuna as is clearly stated by the reports of the Scientific Committee (**Hampton & Harley, 2009**), with subsequent analyses since that time (**SPC, 2009**;

Hampton & Harley, 2010), showing clearly that the current management system does not comply with principles 1 and 3.

Traceability

With advanced in the first section, that the storage system used on board purse seine vessels is a source of uncertainty at the time of identifying fish coming from different school types. There is an additional source of concern in relation to the transportation of the fish in the cargo vessels where is usually mixed, because most of the WCPO catch is transshipped. That question seems to be addressed by the presence on board of observers, compulsory to all purse seiners after the implementation of CMM-2008-01, a management measures implemented by WCPFC, not PNA.

The current observer system is based on National programs of the PNA countries, and there is not a central regional coordination for the activity of those observers. In fact during the 7th WCPFC Commission meeting held in Honolulu, it was clearly stated by the WCPFC Observer coordinator that no reporting was provided from the National programs to WCPFC. We, as users of the observer programs in both sides of the Pacific Ocean on board of our vessels, have serious concerns about the capacity of the WCPFC observers in:

- Being able to adequately identify the school type, especially during the FAD closure. A proof of that has been the need for further clarification of the FAD set definitions adopted in CMM 2009-02.
- Being able to guarantee the separation on board the vessels of skipjack coming from different set types.
- Being able to guarantee the separated transshipment of skipjack coming from different set types and avoiding mix on the cargo vessel.

A recent case of alleged murder of an observer in PNG waters, provides considerable source of concern about the level of intimidation and eventual corruption to which observers may be pressured.

ANALYSIS OF THE MSC PRINCIPLES

Principle 1

Principle 1 Stock Status.

The WCPFC scientific committee is using BMSY and FMSY as limit reference points for their assessments until such time as formal reference points are adopted by the commission. The stock status is good and there is no overfishing occurring relative to commonly used limit reference points. There is a high degree of certainty that the stock is above the point where recruitment would be impaired.

1.1.2. Principle 1 Reference Points.

Formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points, but the Commission itself has yet to formally adopt rules. The fact that formal reference points and rules have not been adopted creates management risk for the future of the fishery. PNA management system does not have any Management Reference Points defined.

1.1.3. Principle 1 Stock Rebuilding:

Not relevant. The skipjack stock is not overfished.

1.2.1. Principle 1 Harvest Strategy.

The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has specified generic capacity limits (driven by concerns for bigeye and yellowfin tuna. The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, these limits have not been formally specified or formally linked to actions at the national level.

Additionally, the management effort controls exerted by the PNA are through the Vessel Day Scheme in which fishing days in their waters (excluding Archipelagic waters) are to be maintained below that of 2004, and a large closed area of about 4 million square miles of the high seas.

The above actions are not formal harvest strategies. However, collectively they appear to be achieving common stock status limit reference points ($B > B_{msy}$; $F < F_{msy}$) for skipjack, but not for bigeye suffering currently overfishing.

No formal harvest rules have been adopted neither at WCPFC nor PNA level.

1.2.2. Principle 1 Harvest Control Rules (HCR).

Currently there are no formal control rules in place either domestically within the PNA or within the WCPFC. While overall caps on effort and vessel day limitations have served to maintain catches at adequate levels, the whole point of formal harvest control rules is to develop objectives and contingencies for timely actions should conditions in the fishery change. The lack of these contingencies results in risk to the fishery. This PI is deemed inadequate and we do not share the rationale presented in Condition 1, because we do not share the understanding that there are “generally understood” HCR and that VDS is effective in controlling exploitation.

1.2.3. Principle 1 Harvest Strategy: Information and Monitoring.

Under our consideration there are several sources of concern related to the data collection system related to port sampling and species composition and logbook reporting validation, especially in relation to the characterization of the school type reported.

Monitoring of the stock is based on catch and effort data, length-frequency data and tagging data. The efficiency of the information relative to management objectives are not known until such time as harvest control rules are established.

1.2.4. Principle 1 Harvest Strategy, Assessment of stock Status.

Stock assessments were conducted most recently using the MULTIFAN-CL model. As with most assessments, MULTIFAN-CL models the population dynamics of the fish and the characteristics of the fisheries based upon a set of unknown parameters that are estimated from observed data. The model makes “predictions” of the data and these are statistically compared to the observations by searching for the set of parameters where the likelihood of the observations and predictions is maximized. The estimated parameters are used to determine stock productivity and status. The basic approach of MULTIFAN is to model multiple “fishing fleets” which exhibit relatively homogeneous behavior in regards to their selectivity by size, areas fished and the efficiency of their gear. In the WCPO skipjack application the fisheries were categorized into 24 fleets encompassing the six areas, gears (pole-and-line, purse-seine and others) and the nations to which the fleets belong.

The observed data included catch and effort data, length frequency data and tagging data. The catch and effort data were categorized by fisheries, by area and by quarter of the year. Catch per effort was standardized using General Linear Models for the fisheries for which there were longer time series of data in which factors such as year, quarter, region, bait effects, effects of radar/sonar and satellite data and the targeting of other species. Length frequencies were available by 2 cm size class by quarter, year and fishery. However, sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of ~250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model.

While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments have not been fully integrated. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points.

Principle 2

2.1.1. Principle 2 Outcome Status, Retained Species

2.1.2. Principle 2 Management Strategy, Retained Species

2.1.3. Principle 2 Information/Monitoring, Retained Species

The retained species in the Certification Unit have been defined as yellowfin and bigeye.

Of these bigeye is “in a slightly overfished state, or will be in the near future with high levels of overfishing occurring” (WCPFC 2009 Scientific Committee) and it has been advised that current management measures for bigeye will not reach the needed fishing mortality rate reduction goals for this.

The 2010 bigeye assessment (see documents available before the start of the 2010 WCPFC Scientific Committee Meeting) notes that: recruitment in all analyses is estimated to have been high during 1995–2005. This result was similar to that of previous assessments, and appears to be partly driven by conflicts between some of the CPUE, catch, and size data inputs. The attribution of depletion to various fisheries or groups of fisheries indicates that the purse seine and other surface fisheries have an equal or greater impact than longline fisheries on the current BET biomass. These results led to the conclusions that 1) that current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the

last decade; 2) overfishing is occurring in the bigeye tuna stock, but possibly at a lower level than previously estimated; 3) bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and 4) MSY levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.

These results require that formal recovery plans and harvest rules be established in both management units, WCPFC and PNA. They have not. Under Principle 1 the operating fishery would HAVE FAILED if it was not for the artificial definition of the “free school skipjack fishery” defined for the evaluation, that is not exercised as such by any fleet in the WCPO.

2.2.1. Principle 2 Outcome Status, Bycatch Species

2.2.2. Principle 2 Management Strategy, Bycatch Species

2.2.3. Principle 2 Information/monitoring, Bycatch Species

Analysis of what is a retained species must be presented. For example, log sets catch a suite of species including shark species which can be retained, have vulnerable life histories and are not presently assessed. Also, current scientific advice stresses that marlin exploitation should not expand. Therefore, there are a number of uncertainties about non-targeted species in the PNA Fishery, regardless of whether they are considered retained or bycatch, moreover when a full retention requirement is in place. Management measures related to non-targeted species (bycatch and retained) have been limited both domestically and within the WCPFC. Requirements for 100% observer programs are relatively new and it is unclear whether their functions include bycatch estimates and full retention compliance reports. Note that an observer program includes not only placing an observer and collecting the data, but the timely processing/transfer of that data such that it can be used for monitoring and control decisions. The ability of the PNA Fishery to respond to these concerns has not been demonstrated as was stated above. It is not verified if the recent change on free school species composition (skipjack catch from 20% to 60%) is correlated with a similar increase on the bycatch species caught.

Non-binding resolutions of the WCPFC encourage fishers to avoid non-target species catches, but it has not been demonstrated that these measures have been effective. And it is unclear if similar measures have been implemented domestically within the PNA Fishery. A comprehensive bycatch management plan has not been implemented at both domestic and international levels.

It is a bit confusing for us that the Condition 2 provides the following:

“If required, these (the elements of the RPOA for sharks) should become binding to the unit of certification by the third annual surveillance audit.” That does not seem to be a very strict condition. Shark fining should be applied and promoted immediately as it has been done in other tuna RFMOs.

2.3.1. Principle 2 Outcome Status, ETP Species

2.3.2. Principle 2 Management Strategy, ETP Species

2.3.3. Principle 2 Information/monitoring, ETP Species

The WCPFC has adopted management measures for sea turtles and sharks to limit the take of these species. In particular the sea turtle measures require release of sea turtles, procedures to enact the release and the recording of interactions. The shark measure simply encourages live release of those sharks not used for food or other purposes without specific requirements to release protected species of sharks. There are limitations to observers in terms of species identification during release.

Additionally, as noted above the turnaround of observer data for management purposes has not been demonstrated. Also, market data suggest that observer catch estimates may be

underreported. These and other issues must be addressed by evaluations of the existing management measures must be done and insufficiencies ameliorated. Then comparable measures must be part of the PNA Fishery's licensing agreements.

2.4.1. Principle 2 Outcome Status, Habitats

2.4.2. Principle 2 Management Strategy, Habitats

2.4.3. Principle 2 Information/monitoring, Habitats

There is widespread agreement that purse seine gear has minimal impacts on benthic habitats, operates only in the surface layer of the ocean habitat.

2.5.1 Principle 2 Outcome Status, Ecosystems

2.5.2. Principle 2 Management Strategy, Ecosystems

2.5.3. Principle 2 Information/monitoring, Ecosystems

The removal of large magnitudes of skipjack over many decades without demonstrable impact on other ecosystem components appears to demonstrate that ecosystem function has not been impaired. However, the fishery has altered the ecosystem. For example, skipjack abundance has increased over recent decades presumably due to reduction of predators due to fishing. The impact of fisheries reduction in the abundance of juvenile bigeye and yellowfin tuna (by FADs for example) and ecosystem structure and function are not well understood.

Management of habitat and ecosystem impacts are managed indirectly by VDS and FAD closures. VDS and observer coverage will provide sufficient information to monitor habitat impacts, if any.

While recently there has been considerable scientific effort on ecosystem effects within the WCPFC, there does not appear to be integrated domestic and international strategies to manage the ecosystem components of this fishery.

Principle 3

3.1.1. Principle 3 Governance and Policy, Legal and/or Customary Framework.

The Nauru Agreement (1982) and the additional Implementing Arrangements (1983, 1990 and 2008) and regional agreements (FSM Arrangement, 1994 and Palau Arrangement, 1995) provide the cooperating framework for the members countries to uniform licensing system and cooperate to maximize economic return. But none of those instruments make any specific reference to the precautionary approach. Recent (2009) actions of the PNA have provided for the development of a PNA office, strategic fisheries management initiatives, and planning initiatives to maximize long term legitimate **economic benefits** from the fishery (including MSC certification application). The PNA has demonstrated its ability to implement management measures but no reports on the compliance and transparency are available for the international community. However, procedures for dispute resolution within the PNAs have not been established.

All of the PNA are members of the WCPFC. The convention under which the WCPFC is formed reflects current international laws and standards relevant to management of migratory species and the ecosystem common to other RFMOs, including specific reference to the precautionary approach, the input of legal experts, dispute resolution mechanisms based on Part VII of the United Nations Fish Stock Agreement, the rights of artisanal and subsistence fishers, the dependence of coastal States and States fishing on the high seas on the stocks concerned and the role of the WCPFC in development of criteria for the allocation of catch or effort. However,

to date, the Commission has not allocated fishing rights nor have they invoked dispute resolution mechanisms.

However, there are concerns by some parties for the cost of implementing WCPFC obligations including financial commitments administrative and stewardship obligations and the administrative and legal challenges needed to make the changes. Little is known about the individual national legal framework of PNA parties that is directly related to the compliance of every party with the subregional management framework created under PNA. These concerns, suggest limitations in fully implementing a MSC certified fishery.

There is also a growing concern on the interpretation that the PNA countries have about the area of competence of WCPFC. Under the current interpretation, PNA countries consider that the Archipelagic Waters are not under the jurisdiction of the WCPFC, something that is contested by many WCPFC members that interpret that following the New York Agreement, the area of competence of an RFMO that manage a certain highly migratory species, is the full area of distribution of the species. That is a non clarified subject under the WCPFC Convention, and is source of concern because that might limit the effect of management measures adopted in WCPFC on the tuna species under its jurisdiction, due to the different or even divergent management regime that could be applied in the species distribution area. An example of that is the current increase of fishing effort in the archipelagic waters that is also outside the PNA-VDS management framework. There are growing interests in other SIDS to reclaim their own archipelagic waters, aside for those already considered as such. That is also a source of future concern.

3.1.2. Principle 3 Governance and Policy, Consultation and Responsibilities.

The organization of the PNA is clearly identified and their functions defined in the original Agreement. Recent (2009) measures have further defined the organization, roles and responsibilities. While the Agreement allows for other members of the FFA to be observers at PNA meetings, there is no provision for other interested parties to attend meetings or to provide input. Thus, the PNA process lacks transparency and must be addressed. Little is known about the individual national governance processes. If fact, through Moody Marine report, there are the first detailed information on the practical functioning of the PNA-VDS, something that some parties of WCPFC have requested but that PNA has never presented in such detail.

The organization of WCPFC has comprehensive participation by Members and Cooperating Non-Members with formal definitions of the roles of each. Participation occurs at meetings of the Commission, Scientific Committee, Technical and Compliance Committee and Finance and Administration Committee. Input of Members and Cooperating Non-Members are considered when developing management measures and procedures. WCPFC provides with financial assistance to Small Island Developing States (SIDS) to participate in all the meetings of the Commission and related bodies. WCPFC rules allow and facilitate observer participation, including interventions at the Commission meeting and at meetings of committees and subcommittees. Written documents prepared by observers can be distributed at meetings as information documents, as provided by the rules.

In the opinion of OPAGAC the primary deficiency of this PI (relative to a score of 80) is the lack of transparency at PNA, sub-regional and national mechanisms.

3.1.3. Principle 3 Governance and Policy, Long term Objectives.

PNA fishery objectives developed in the 1982 Agreement and in subsequent amendments are to coordinate and harmonize the management of fisheries with regard to common stocks within their fisheries zones for the benefit of the peoples of the Parties, securing greater economic benefits and control of the parties tuna resources through cooperation in the management and development of their shared fisheries resources; to effectively conserve and restore highly

migratory stocks while maximizing economic returns; to promote the greater commercial utilization of the tuna resources for the benefit of the Parties; and to enhance commercial and economic opportunities for the Parties through optimum utilization of the tuna fishery. The objectives do not include explicit acknowledgement of the precautionary approach, nor is it clear that these overall objectives are linked to national regulations and to policies implementing precautionary policies. Also, the most recent modification to the PNA objectives occurred in February 2010, so that the implementation into national policy and operations has not yet been demonstrated.

The WCPFC convention formally defines its objective as: “to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and Agreement [UNCLOS and UNFSA respectively]”. Additionally, the Convention specifically requires that the WCPFC apply the precautionary approach (Article 5) and mechanisms to do it (Article 6).

The PNA Fishery must formally establish precautionary policies both within the PNA and within the individual Parties. These must acknowledge the link of objectives between the WCPFC, the PNA and the individual Parties.

3.1.4. Principle 3 Governance and Policy, Incentives for Sustainable Fishing.

The PNA has incentives to maintain sustainability, particularly if the PNA Fishery were to be MSC certified. However, it is the responsibility of the PNA to create operational incentives for the vessels and gears through its licensing agreements. The VDS may be considered an attempt to do this, particularly through its calculation of vessel-size-related fishing days. However, this is limited. Additionally, to OPAGAC/AGAC’s knowledge an examination of the VDS and other options relative to vessel operator incentives has not been done and needs to be done. Also, aid to the nations of the PNA and the Pacific Islands in support of fisheries infrastructure has been significant on both the small scale (e.g. fuel costs) or on a larger scale (support by national governments to the industry), or indirect subsidies through exemptions of some sectors from management measures within the WCPFC. The PNA must respond to the need for appropriate incentives that are created operationally through the licensing agreements. Analyses are needed to justify actions. The burden must be on the PNA since the vessel/operators are not the entities pursuing certification.

3.2.1. Principle 3 Fishery-specific Management System, Fishery-specific Objectives.

The long term objectives of both the PNA Group and the WCPFC have been specified (see 3.1.3). However, short-term operational objectives are lacking. It may be argued that PNA and WCPFC management measures are statement of tactical objectives, but in the opinion of ISSF operational objectives must be developed and linked to harvest control rules (1.2.1 and 1.2.2) at both the PNA and WCPFC levels. Specification of fishery specific objectives must be led by the development and implementation of harvest control rules.

3.2.2. Principle 3 Fishery-specific Management System, Decision-making processes.

The PNAs decision-making processes are not clearly defined, nor are they transparent.

The record and continuity of PNA decisions has demonstrated the ability and will to make timely decisions, but it is unclear how they are achieved (consensus, voting, or other methods).

The WCPFC generally makes decisions through consensus, but procedures are available and documented for voting, appealing decisions, conciliation and review should consensus not be reached. The application of the precautionary approach and the use of the best available scientific advice are required by the WCPFC Convention. While these requirements may seem to be unnecessary given the current status of the stocks of skipjack tuna, prior decisions have not always been precautionary. With dynamic fisheries transparent procedures must be in place to

assure that the management system can respond in a timely and appropriate manner. These procedures must be developed and made available for scrutiny.

It is very difficult to understand that the certification body could allow 2 years after the certification, to PNA to incorporate transparency, best scientific advice, monitoring and reporting in the decision making process as well as in the operation of the management scheme.

3.2.3. Principle 3 Fishery-specific Management System, Compliance and Enforcement.

Closures, licensing and vessel day limits are actions taken by the PNA to manage fishing effort and eliminate IUUs (illegal, unreported and unregulated fishing). Additionally, requiring a 100% observer programs is a mechanism for monitoring and control. However, it has not been demonstrated that these measures have been fully enforced, particularly at the national level. Logistical problems of maintaining a cadre of trained observers, the timely turn-around of observer data for use in compliance have been suggested to be lacking. The PNA Fishery must demonstrate their ability to monitor and enforce.

WCPFC has recently adopted measures to assist regional enforcement such as a vessel list; centralized VMS; IUU Vessel listing procedures; high seas boarding and inspection procedures; prohibition or transshipment at sea by purse seine vessels (with specified exemptions); a regional observer program and FAD Management Plans. The WCPFC's Technical and Compliance Committee is also continuing consideration of port State measures, chartering arrangements, catch/statistical documentation, the control of nationals, and compliance monitoring and reporting, but these have not yet been implemented.

Overall, each PNA member must be required to demonstrate their ability to meet the MSC enforcement obligations to implement the management measures of the PNA and the WCPFC.

There are no clear mechanisms defined, neither in PNA nor in WCPFC to apply a clear scheme of actions against non compliance that will be able to revert an overfishing situation resulted of non compliance with management measures applied by both bodies. Clear compliance and enforcement rules should be defined not only to fight IUU, but also to work against non compliance by Commission member parties.

3.2.4. Principle 3 Fishery-specific Management System, Research Plan.

The WCPFC has a Strategic Research Plan 2007-2011 in place which identifies the four research and data collection priorities needed for any fishery management system: collection and validation of data from the fishery; monitoring and assessment of stocks; monitoring and assessment of the ecosystem; and evaluation of management options. The Plan is largely directed at the biological status of the stocks and ecosystem. Although a number of research projects on management and governance have been funded, further research is needed on the management system itself, its deficiencies and actions to ameliorate those deficiencies and integrated into the Research Plan. It is unclear to OPAGAC/AGAC whether the PNA Fishery is fully integrated into this Plan and whether there is a WCPFC and PNA commitment to the Plan (funding). WCPFC research reports are publically available on their website in a timely fashion.

3.2.5. Principle 3 Fishery-specific Management System, Monitoring and Management Performance Evaluation.

Neither the PNA management system nor the WCPFC management performance been reviewed. The WCPFC considered such a review, but deferred it due to costs.

Stock assessments are peer reviewed by other members of the Scientific Committee and are subject to public scientific scrutiny. Formal external reviews are just now (2010) being implemented in WCPFC. However, assessments are not full evaluations of the management system.

Components of the WCPFC management system are evaluated through annual compliance reports and through evaluation of the effectiveness of specific management measures.

While management performance evaluations have been recommended for all RFMOs, the WCPFC has not done one; nor has it implemented a system of performance review.

Conclusion

For the above reasons OPAGAC/AGAC opposes certification of the PNA Fishery as defined. An MSC certifiable fishery must have demonstrated a track record of MSC-compliant management. That has not been done. Instead, a mix of actions has been suggested that “might” work in the future.

MSC evaluation must be used to certify existing fisheries that operate sustainably and not to “create” artificial fisheries that have yet to operate under MSC standards. The weight of the evidence clearly leads to the conclusion that MSC standards for Principles 1-3 have not been met.

Under the current management system there are no verifiable warranties for the proper management of the tuna resources, as is currently happening. Currently the WCPFC and PNA management initiatives are not able to revert the overfishing regime under which bigeye tuna ($F_{\text{current}}/F_{\text{MSY}} = 1.41$)⁷⁰ is subject for more than 5 years. This is a clear example of the effectiveness of the current management system that governs what is pretended to be, as some PNA members declare loudly “The best managed and last virgin fishery in the World”.

References

Hampton, J., and Harley, S. J. (2009a). Assessment of the potential implications of CMM-2008-01 for bigeye and yellowfin tuna. WCPFC-SC5-2009/GN-WP-17. Port Vila, Vanuatu, 10-21 August 2009.

SPC-OFP (2010) Review of The Implementation and Effectiveness of CMM 2008-01. WCPFC7 - 2010/15.re

⁷⁰ Summary Report of the 6th Scientific Committee of WCPFC. Tonga 10-19 August 2010.

ALBACORA S.A

ALBACORA S.A. represents a total 16 purse seine vessels that operate in all the three major Oceans: Atlantic, Indian and Pacific. As it has been well recognized by all the signatories of the 1995 New York Agreement⁷¹, the adequate management framework to adequately control the harvest of tunas, as major species group of highly migratory fish, relies of the Regional Fisheries Management Organizations (RFMOs). Our fleets operate under the legal framework set by ICCAT⁷², IOTC⁷³, IATTC⁷⁴ and WCPFC⁷⁵ in the corresponding area of competence, as applied by the EU legislation and enforced by the Spanish Government.

Since 1999, our fleet has been operating in the Central Pacific, as an extension of the activity of our fleet in the Eastern Pacific Ocean. Currently we operate 2 purse seine vessels under Spanish flag in the WCPO belonging to ALBACORA S.A. and 3 purse seiners under Ecuador, and 1 from Kiribati flag belonging to our Group as part of the investment compromises of our company in these coastal countries of the Pacific. We therefore are interested stakeholders that will be affected by the certification of the fishery evaluated by Moody Marine Ltd.

Fishery Proposed

The first concern that we have in relation to this certification is the artificial nature of the geographical area as well as the artificial method of capture defined in the evaluation.

The geographical area defined excludes three major regions where the fishery described, naturally takes regularly place by the same vessels that obtain skipjack tuna with purse seiners in WCPO. Excluding such big regions, namely the Archipelagic Waters of the PNA countries, Archipelagic Waters of Indonesia and Philippines and the High Seas of the Western and Central Pacific Ocean (WCPO), does not help in achieving none of the 3 MSC Principles, because skipjack tuna is widely distributed along the whole WCPO, and is substantially caught in those waters. Therefore in case that the PNA management system would be of relevant efficiency in controlling the fishery that exploits the WCPO skipjack as the management population unit, something that the same evaluation put into question and we will consider later, it would only be able to affect to only 20% of the total catch of the species. Therefore any certification given to only 20% of the WCPO skipjack catch will never be able to assure the objectives of none of the 3 MSC principles.

Further more, the method of capture defined is also very artificial because the purse seine vessels that operate in the WCPO are fishing **simultaneously** to a variety of school types identified as different “methods of capture” by the report, i.e.: free schools, natural logs, drifting artificial logs and anchored artificial logs (also known as *payaos*). In a given trip, a vessel can fish different school types, what creates a great source of uncertainty at the time of trying to separate skipjack coming from different school type. On board purse seine vessels, it is well known that all the catch is mixed on the wells were tunas are frozen, in many cases in brine. Moreover, the school type definition is basically based on logbooks, and therefore not validated until the inclusion of observers in 2010, that still is

⁷¹ Agreement on the application of provisions of the United Nations Convention on Sea Law of December 10, 1982, on the conservation and ordering of transzonal fish stocks and high migratory fish populations.

⁷² International Commission for the Conservation of Atlantic Tunas.

⁷³ Indian Ocena Tuna Commission.

⁷⁴ Inter American Tropical Tuna Commission.

⁷⁵ Western and Central Pacific Fisheries Commission.

subject to uncertainty. Table 5 of the report provides a description of the very divergent ways of operation **reported** by the different fleets by nationality, except for those fleets that carry on board 100% observer coverage from IATTC since 1994, and that could explain the high proportion of FAD fishing reported by those fleets. That source of controversy can be validated in the sudden change of species composition recently reported once the FAD closure was established by CMM 2008-01. Before the closure the average skipjack catch proportion on a free school was 20%. After the closure, the “reported” skipjack catch associated to free school rose threefold to 60% (Hampton, 2010), something that is very remarkable and rather unusual in any free school fishing of the World (Figure 1).

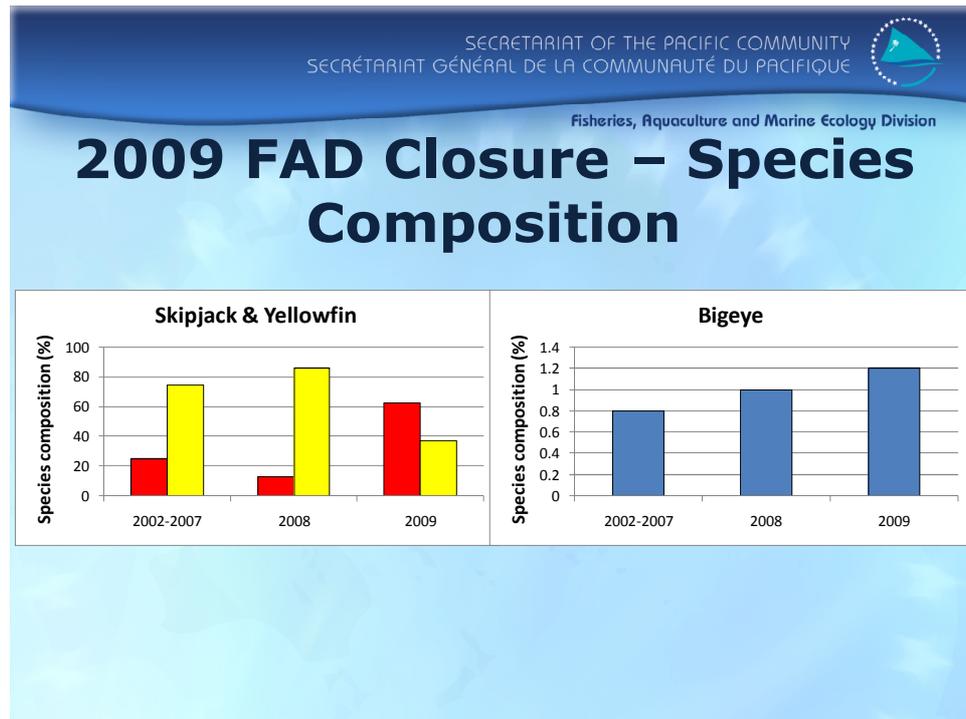


Figure 1.- Slide presented by Hampton (2010) at the 7th Session of WCPFC.

Management System

The current management system to legally control the WCPO skipjack population is WCPFC. In the report is clearly mentioned that the current Parties of the Nauru Agreement (PNA) management system is of key importance and provides the management framework to adequately address the requirements of Principle 3. In the Moody Marine report is clearly stated the problems that the Vessel Day Scheme (VDS) applied by the PNA is currently facing and the lack of transparency that such system has. It is also clearly stated that the objectives of PNA do not contemplate whatsoever none of the MSC principles as objective of that group of countries. In fact, it is clear from the PNA objectives, that the Nauru Agreement has a legitimate and understandable objective of maximizing the economic return from the licensing process and the management measures applied.

A clear example of that is the application by PNA countries of the High Seas Pocket Closure, incorporated lately by PNA pressure in CMM 2008-01. This is a clear example of the kind of unilateral management measure that PNA applies. If the intention of that closure was to contribute to the reduction of fishing mortality (F) of bigeye tuna, a reduction that should be of at least 30% as recommended by the WCPFC Scientific Committee in 2007, it had the contrary effect. The assumption was that the effort exercised in those pockets would disappear, something that nobody believed ever,

specially PNA countries that have been the beneficiaries of that measure, because that effort has been transferred to the PNA EEZs. It is eventual beneficial effect on bigeye F reduction it is still to be demonstrated because that effort has been transferred to the PNA coastal waters, specially archipelagic waters (see the increase in effort days from 2006, 3,891 days up to 6,120 days in 2009, Tables 2 of the report) where the biggest catches of juvenile bigeye are obtained.

Further to that, the PNA Koror Declaration is now committed to close the rest of the High Seas as a license condition to the vessels that want to fish in PNA waters. PNA tried to promote this prohibition at the last WCPFC Commission meeting based on a poor scientific justification of this measure, of dubious effect on the recommended bigeye F reduction, because it will have the same effect obtained from the High Seas Pocket Closure, i.e. transfer of additional effort on the PNA EEZs. It is very clear that this economically justifiable measure for PNA interests, is controversial with the free access principles established in UNCLOS and is unilaterally decided by PNA countries against the international management regime, as was not approved at WCPFC. Moreover, the application of this measure is not transparent among the PNA countries, and from our experience, few PNA members really apply it to purse seine fleets licensed in PNA EEZs.

In relation with the VDS, the report is full of references to the lack of transparency of the system, the lack of clear link of the Parties Allocated Effort (PAE) and the scientific advice on stock status, the lack of clear definitions of fishing day that lead to individual interpretations by PNA members, the obvious lack of compliance by the same PNA countries reflected in their recent declaration, after three years of application, of “hard” limits, what give an idea of the level of internal compliance of this system. VDS is not covering the archipelagic waters of PNA countries, where the biggest effort increase has been reported, what provide a clear source of uncertainty at the time of assuring the sustainable exploitation of the three major species caught by the vessels susceptible of certification. In 2010 and 2011, there seems to be clear problems of compliance with the effort allocated by PNA countries, because is the third year of application of the VDS that allowed to burrow days for the two precedent years, and now there are clear cases of effort limits exceeded: FSMA in 2010, Nauru in 2010 (who closed the fishery in October) and currently Solomon Islands that in may 2011 has exceeded the effort allocated under VDS. And finally, the report states that the VDS has not been effectively implemented after three years.

An additional source of concern is the big increase of the number of vessel once the PNA countries decided to move away from the limited number of vessels to license to VDS. As shown in table 1 of the report, in the last years there has been a big increase on the number of vessels: 46 purse seiners more. This increase is clearly on the legitimate economic benefit of PNA countries because they are collecting more funds from license fees, but is a source of global concern because the bigeye population is currently suffering overfishing, and the WCPFC Scientific Committee recommends a reduction of the F of 30%. In fact, that is also a source of concern to PNA countries, as stated in the report because it seems that are considering the possibility of limiting the number of vessels license in PNA to 200, which will create a considerable problem that could have spillover effects in other tuna fisheries of the World.

Currently the management measure in place by WCPFC does not ensure the recovery of bigeye tuna as is clearly stated by the reports of the Scientific Committee (**Hampton & Harley, 2009**), with subsequent analyses since that time (**SPC, 2009**;

Hampton & Harley, 2010), showing clearly that the current management system does not comply with principles 1 and 3.

The WCPFC decision making process, based on consensus decisions, but with a provision of a third quarters majority voting system in case that non consensus is achieved, is in fact ruled by the FFA 16 member countries majority, against the other members, and provides an unbalanced situation that was witnessed during the adoption of CMM 2008-01, where most of the initiatives adopted were proposed by FFA. WCPFC 7th Session in Honolulu in December 2010, was another example of that: neither the proposal presented by Japan on a capacity limitation, nor the EU proposal on a three month total fleet stop, were considered by the FFA group as management alternatives that could effectively revert the overfishing occurring in the bigeye tuna population. One more year of application of CMM 2008-01 will not improve the bigeye tuna population.

Traceability

With advanced in the first section, that the storage system used on board purse seine vessels is a source of uncertainty at the time of identifying fish coming from different school types. There is an additional source of concern in relation to the transportation of the fish in the cargo vessels where is usually mixed, because most of the WCPO catch is transshipped. That question seems to be addressed by the presence on board of observers, compulsory to all purse seiners after the implementation of CMM-2008-01, a management measures implemented by WCPFC, not PNA.

The current observer system is based on National programs of the PNA countries, and there is not a central regional coordination for the activity of those observers. In fact during the 7th WCPFC Commission meeting held in Honolulu, it was clearly stated by the WCPFC Observer coordinator that no reporting was provided from the National programs to WCPFC. We, as users of the observer programs in both sides of the Pacific Ocean on board of our vessels, have serious concerns about the capacity of the WCPFC observers in:

- Being able to adequately identify the school type, especially during the FAD closure. A proof of that has been the need for further clarification of the FAD set definitions adopted in CMM 2009-02.
- Being able to guarantee the separation on board the vessels of skipjack coming from different set types.
- Being able to guarantee the separated transshipment of skipjack coming from different set types and avoiding mix on the cargo vessel.

A recent case of alleged murder of an observer in PNG waters, provides considerable source of concern about the level of intimidation and eventual corruption to which observers may be pressured in certain fleets.

ANALYSIS OF THE MSC PRINCIPLES

Principle 1

Principle 1 Stock Status.

The WCPFC scientific committee is using BMSY and FMSY as limit reference points for their assessments until such time as formal reference points are adopted by the commission. The stock status is good and there is no overfishing occurring relative to commonly used limit reference points. There is a high degree of certainty that the stock is above the point where recruitment would be impaired.

1.1.2. Principle 1 Reference Points.

Formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points, but the Commission itself has yet to formally adopt rules. The fact that formal reference points

and rules have not been adopted creates management risk for the future of the fishery. PNA management system does not have any Management Reference Points defined.

1.1.3. Principle 1 Stock Rebuilding:

Not relevant. The skipjack stock is not overfished.

1.2.1. Principle 1 Harvest Strategy.

The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has specified generic capacity limits (driven by concerns for bigeye and yellowfin tuna. The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, these limits have not been formally specified or formally linked to actions at the national level.

Additionally, the management effort controls exerted by the PNA are through the Vessel Day Scheme in which fishing days in their waters (excluding Archipelagic waters) are to be maintained below that of 2004, and a large closed area of about 4 million square miles of the high seas.

The above actions are not formal harvest strategies. However, collectively they appear to be achieving common stock status limit reference points ($B > B_{msy}$; $F < F_{msy}$) for skipjack, but not for bigeye suffering currently overfishing.

No formal harvest rules have been adopted neither at WCPFC nor PNA level.

1.2.2. Principle 1 Harvest Control Rules (HCR).

Currently there are no formal control rules in place either domestically within the PNA or within the WCPFC. While overall caps on effort and vessel day limitations have served to maintain catches at adequate levels, the whole point of formal harvest control rules is to develop objectives and contingencies for timely actions should conditions in the fishery change. The lack of these contingencies results in risk to the fishery. This PI is deemed inadequate and we do not share the rationale presented in Condition 1, because we do not share the understanding that there are “generally understood” HCR and that VDS is effective in controlling exploitation.

1.2.3. Principle 1 Harvest Strategy: Information and Monitoring.

Under our consideration there are several sources of concern related to the data collection system related to port sampling and species composition and logbook reporting validation, especially in relation to the characterization of the school type reported.

Monitoring of the stock is based on catch and effort data, length-frequency data and tagging data. The efficiency of the information relative to management objectives are not known until such time as harvest control rules are established.

1.2.4. Principle 1 Harvest Strategy, Assessment of stock Status.

Stock assessments were conducted most recently using the MULTIFAN-CL model. As with most assessments, MULTIFAN-CL models the population dynamics of the fish and the characteristics of the fisheries based upon a set of unknown parameters that are estimated from observed data. The model makes “predictions” of the data and these are statistically compared to the observations by searching for the set of parameters where the likelihood of the observations and predictions is maximized. The estimated parameters are used to determine stock productivity and status. The basic approach of MULTIFAN is to model multiple “fishing fleets” which exhibit relatively homogeneous behavior in regards to their selectivity by size, areas fished and the efficiency of their gear. In the WCPO skipjack application the fisheries were categorized into 24 fleets encompassing the

six areas, gears (pole-and-line, purse-seine and others) and the nations to which the fleets belong.

The observed data included catch and effort data, length frequency data and tagging data. The catch and effort data were categorized by fisheries, by area and by quarter of the year. Catch per effort was standardized using General Linear Models for the fisheries for which there were longer time series of data in which factors such as year, quarter, region, bait effects, effects of radar/sonar and satellite data and the targeting of other species. Length frequencies were available by 2 cm size class by quarter, year and fishery. However, sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of ~250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model.

While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments have not been fully integrated. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points.

Principle 2

2.1.1. Principle 2 Outcome Status, Retained Species

2.1.2. Principle 2 Management Strategy, Retained Species

2.1.3. Principle 2 Information/Monitoring, Retained Species

The retained species in the Certification Unit have been defined as yellowfin and bigeye.

Of these bigeye is “in a slightly overfished state, or will be in the near future with high levels of overfishing occurring” (WCPFC 2009 Scientific Committee) and it has been advised that current management measures for bigeye will not reach the needed fishing mortality rate reduction goals for this.

The 2010 bigeye assessment (see documents available before the start of the 2010 WCPFC Scientific Committee Meeting) notes that: recruitment in all analyses is estimated to have been high during 1995–2005. This result was similar to that of previous assessments, and appears to be partly driven by conflicts between some of the CPUE, catch, and size data inputs. The attribution of depletion to various fisheries or groups of fisheries indicates that the purse seine and other surface fisheries have an equal or greater impact than longline fisheries on the current BET biomass. These results led to the conclusions that 1) that current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the last decade; 2) overfishing is occurring in the bigeye tuna stock, but possibly at a lower level than previously estimated; 3) bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and 4) MSY levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.

These results require that formal recovery plans and harvest rules be established in both management units, WCPFC and PNA. They have not. Under Principle 1 the operating fishery would HAVE FAILED if it was not for the artificial definition of the “free school skipjack fishery” defined for the evaluation, that is not exercised as such by any fleet in the WCPO.

2.2.1. Principle 2 Outcome Status, Bycatch Species

2.2.2. Principle 2 Management Strategy, Bycatch Species

2.2.3. Principle 2 Information/monitoring, Bycatch Species

Analysis of what is a retained species must be presented. For example, log sets catch a suite of species including shark species which can be retained, have vulnerable life histories and are not presently assessed. Also, current scientific advice stresses that marlin exploitation should not expand. Therefore, there are a number of uncertainties about non-targeted species in the PNA Fishery, regardless of whether they are considered retained or bycatch, moreover when a full retention requirement is in place. Management measures related to non-targeted species (bycatch and retained) have been limited both domestically and within the WCPFC. Requirements for 100% observer programs are relatively new and it is unclear whether their functions include bycatch estimates and full retention compliance reports. Note that an observer program includes not only placing an observer and collecting the data, but the timely processing/transfer of that data such that it can be used for monitoring and control decisions. The ability of the PNA Fishery to respond to these concerns has not been demonstrated as was stated above. It is not verified if the recent change on free school species composition (skipjack catch from 20% to 60%) is correlated with a similar increase on the bycatch species caught.

Non-binding resolutions of the WCPFC encourage fishers to avoid non-target species catches, but it has not been demonstrated that these measures have been effective. And it is unclear if similar measures have been implemented domestically within the PNA Fishery. A comprehensive bycatch management plan has not been implemented at both domestic and international levels.

It is a bit confusing for us that the Condition 2 provides the following:

*“If required, these (the elements of the RPOA for sharks) should become binding to the unit of certification by **the third annual surveillance audit.**”* That does not seem to be a very strict condition. Shark fining should be applied and promoted immediately as it has been done in other tuna RFMOs.

2.3.1. Principle 2 Outcome Status, ETP Species

2.3.2. Principle 2 Management Strategy, ETP Species

2.3.3. Principle 2 Information/monitoring, ETP Species

The WCPFC has adopted management measures for sea turtles and sharks to limit the take of these species. In particular the sea turtle measures require release of sea turtles, procedures to enact the release and the recording of interactions. The shark measure simply encourages live release of those sharks not used for food or other purposes without specific requirements to release protected species of sharks. There are limitations to observers in terms of species identification during release.

Additionally, as noted above the turnaround of observer data for management purposes has not been demonstrated. Also, market data suggest that observer catch estimates may be underreported. These and other issues must be addressed by evaluations of the existing management measures must be done and insufficiencies ameliorated. Then comparable measures must be part of the PNA Fishery’s licensing agreements.

2.4.1. Principle 2 Outcome Status, Habitats

2.4.2. Principle 2 Management Strategy, Habitats

2.4.3. Principle 2 Information/monitoring, Habitats

There is widespread agreement that purse seine gear has minimal impacts on benthic habitats, operates only in the surface layer of the ocean habitat.

2.5.1 Principle 2 Outcome Status, Ecosystems

2.5.2. Principle 2 Management Strategy, Ecosystems

2.5.3. Principle 2 Information/monitoring, Ecosystems

The removal of large magnitudes of skipjack over many decades without demonstrable impact on other ecosystem components appears to demonstrate that ecosystem function has not been impaired. However, the fishery has altered the ecosystem. For example, skipjack abundance has increased over recent decades presumably due to reduction of predators due to fishing. The impact of fisheries reduction in the abundance of juvenile bigeye and yellowfin tuna (by FADs for example) and ecosystem structure and function are not well understood.

Management of habitat and ecosystem impacts are managed indirectly by VDS and FAD closures. VDS and observer coverage will provide sufficient information to monitor habitat impacts, if any.

While recently there has been considerable scientific effort on ecosystem effects within the WCPFC, there does not appear to be integrated domestic and international strategies to manage the ecosystem components of this fishery.

Principle 3

3.1.1. Principle 3 Governance and Policy, Legal and/or Customary Framework.

The Nauru Agreement (1982) and the additional Implementing Arrangements (1983, 1990 and 2008) and regional agreements (FSM Arrangement, 1994 and Palau Arrangement, 1995) provide the cooperating framework for the members countries to uniform licensing system and cooperate to maximize economic return. But none of those instruments make any specific reference to the precautionary approach. Recent (2009) actions of the PNA have provided for the development of a PNA office, strategic fisheries management initiatives, and planning initiatives to maximize long term legitimate **economic benefits** from the fishery (including MSC certification application). The PNA has demonstrated its ability to implement management measures but no reports on the compliance and transparency are available for the international community. However, procedures for dispute resolution within the PNAs have not been established.

All of the PNA are members of the WCPFC. The convention under which the WCPFC is formed reflects current international laws and standards relevant to management of migratory species and the ecosystem common to other RFMOs, including specific reference to the precautionary approach, the input of legal experts, dispute resolution mechanisms based on Part VII of the United Nations Fish Stock Agreement, the rights of artisanal and subsistence fishers, the dependence of coastal States and States fishing on the high seas on the stocks concerned and the role of the WCPFC in development of criteria for the allocation of catch or effort. However, to date, the Commission has not allocated fishing rights nor have they invoked dispute resolution mechanisms.

However, there are concerns by some parties for the cost of implementing WCPFC obligations including financial commitments administrative and stewardship obligations and the administrative and legal challenges needed to make the changes. Little is known about the individual national legal framework of PNA parties that is directly related to the compliance of every party with the subregional management framework created under PNA. These concerns, suggest limitations in fully implementing a MSC certified fishery.

There is also a growing concern on the interpretation that the PNA countries have about the area of competence of WCPFC. Under the current interpretation, PNA countries

consider that the Archipelagic Waters are not under the jurisdiction of the WCPFC, something that is contested by many WCPFC members that interpret that following the New York Agreement, the area of competence of an RFMO that manage a certain highly migratory species, is the full area of distribution of the species. That is a non clarified subject under the WCPFC Convention, and is source of concern because that might limit the effect of management measures adopted in WCPFC on the tuna species under its jurisdiction, due to the different or even divergent management regime that could be applied in the species distribution area. An example of that is the current increase of fishing effort in the archipelagic waters that is also outside the PNA-VDS management framework. There are growing interests in other SIDs to reclaim their own archipelagic waters, aside for those already considered as such. That is also a source of future concern.

3.1.2. Principle 3 Governance and Policy, Consultation and Responsibilities.

The organization of the PNA is clearly identified and their functions defined in the original Agreement. Recent (2009) measures have further defined the organization, roles and responsibilities. While the Agreement allows for other members of the FFA to be observers at PNA meetings, there is no provision for other interested parties to attend meetings or to provide input. Thus, the PNA process lacks transparency and must be addressed. Little is known about the individual national governance processes. In fact, through Moody Marine report, there are the first detailed information on the practical functioning of the PNA-VDS, something that some parties of WCPFC have requested but that PNA has never presented in such detail.

The organization of WCPFC has comprehensive participation by Members and Cooperating Non-Members with formal definitions of the roles of each. Participation occurs at meetings of the Commission, Scientific Committee, Technical and Compliance Committee and Finance and Administration Committee. Input of Members and Cooperating Non-Members are considered when developing management measures and procedures. WCPFC provides with financial assistance to Small Island Developing States (SIDS) to participate in all the meetings of the Commission and related bodies. WCPFC rules allow and facilitate observer participation, including interventions at the Commission meeting and at meetings of committees and subcommittees. Written documents prepared by observers can be distributed at meetings as information documents, as provided by the rules.

In the opinion of ALBACORA S.A. the primary deficiency of this PI (relative to a score of 80) is the lack of transparency at PNA, sub-regional and national mechanisms.

3.1.3. Principle 3 Governance and Policy, Long term Objectives.

PNA fishery objectives developed in the 1982 Agreement and in subsequent amendments are to coordinate and harmonize the management of fisheries with regard to common stocks within their fisheries zones for the benefit of the peoples of the Parties, securing greater economic benefits and control of the parties tuna resources through cooperation in the management and development of their shared fisheries resources; to effectively conserve and restore highly migratory stocks while maximizing economic returns; to promote the greater commercial utilization of the tuna resources for the benefit of the Parties; and to enhance commercial and economic opportunities for the Parties through optimum utilization of the tuna fishery. The objectives do not include explicit acknowledgement of the precautionary approach, nor is it clear that these overall objectives are linked to national regulations and to policies implementing precautionary policies. Also, the most recent modification to the PNA objectives occurred in February 2010, so that the implementation into national policy and operations has not yet been demonstrated.

The WCPFC convention formally defines its objective as: “to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and Agreement [UNCLOS and UNFSA respectively]”. Additionally, the Convention specifically requires that the WCPFC apply the precautionary approach (Article 5) and mechanisms to do it (Article 6).

The PNA Fishery must formally establish precautionary policies both within the PNA and within the individual Parties. These must acknowledge the link of objectives between the WCPFC, the PNA and the individual Parties.

3.1.4. Principle 3 Governance and Policy, Incentives for Sustainable Fishing.

The PNA has incentives to maintain sustainability, particularly if the PNA Fishery were to be MSC certified. However, it is the responsibility of the PNA to create operational incentives for the vessels and gears through its licensing agreements. The VDS may be considered an attempt to do this, particularly through its calculation of vessel-size-related fishing days. However, this is limited. Additionally, to ALBACORA S.A.’s knowledge an examination of the VDS and other options relative to vessel operator incentives has not been done and needs to be done. Also, aid to the nations of the PNA and the Pacific Islands in support of fisheries infrastructure has been significant on both the small scale (e.g. fuel costs) or on a larger scale (support by national governments to the industry), or indirect subsidies through exemptions of some sectors from management measures within the WCPFC. The PNA must respond to the need for appropriate incentives that are created operationally through the licensing agreements. Analyses are needed to justify actions. The burden must be on the PNA since the vessel/operators are not the entities pursuing certification.

3.2.1. Principle 3 Fishery-specific Management System, Fishery-specific Objectives.

The long term objectives of both the PNA Group and the WCPFC have been specified (see 3.1.3). However, short-term operational objectives are lacking. It may be argued that PNA and WCPFC management measures are statement of tactical objectives, but in the opinion of ALBACORA S.A. operational objectives must be developed and linked to harvest control rules (1.2.1 and 1.2.2) at both the PNA and WCPFC levels. Specification of fishery specific objectives must be led by the development and implementation of harvest control rules.

3.2.2. Principle 3 Fishery-specific Management System, Decision-making processes.

The PNAs decision-making processes are not clearly defined, nor are they transparent.

The record and continuity of PNA decisions has demonstrated the ability and will to make timely decisions, but it is unclear how they are achieved (consensus, voting, or other methods).

The WCPFC generally makes decisions through consensus, but procedures are available and documented for voting, appealing decisions, conciliation and review should consensus not be reached. The application of the precautionary approach and the use of the best available scientific advice are required by the WCPFC Convention. While these requirements may seem to be unnecessary given the current status of the stocks of skipjack tuna, prior decisions have not always been precautionary. With dynamic fisheries transparent procedures must be in place to assure that the management system can respond in a timely and appropriate manner. These procedures must be developed and made available for scrutiny.

It is very difficult to understand that the certification body could allow 2 years after the certification, to PNA to incorporate transparency, best scientific advice, monitoring and reporting in the decision making process as well as in the operation of the management scheme.

3.2.3. Principle 3 Fishery-specific Management System, Compliance and Enforcement.

Closures, licensing and vessel day limits are actions taken by the PNA to manage fishing effort and eliminate IUUs (illegal, unreported and unregulated fishing). Additionally, requiring a 100% observer programs is a mechanism for monitoring and control. However, it has not been demonstrated that these measures have been fully enforced, particularly at the national level. Logistical problems of maintaining a cadre of trained observers, the timely turn-around of observer data for use in compliance have been suggested to be lacking. The PNA Fishery must demonstrate their ability to monitor and enforce.

WCPFC has recently adopted measures to assist regional enforcement such as a vessel list; centralized VMS; IUU Vessel listing procedures; high seas boarding and inspection procedures; prohibition or transshipment at sea by purse seine vessels (with specified exemptions); a regional observer program and FAD Management Plans. The WCPFC's Technical and Compliance Committee is also continuing consideration of port State measures, chartering arrangements, catch/statistical documentation, the control of nationals, and compliance monitoring and reporting, but these have not yet been implemented.

Overall, each PNA member must be required to demonstrate their ability to meet the MSC enforcement obligations to implement the management measures of the PNA and the WCPFC.

There are no clear mechanisms defined, neither in PNA nor in WCPFC to apply a clear scheme of actions against non compliance that will be able to revert an overfishing situation resulted of non compliance with management measures applied by both bodies. Clear compliance and enforcement rules should be defined not only to fight IUU, but also to work against non compliance by Commission member parties.

3.2.4. Principle 3 Fishery-specific Management System, Research Plan.

The WCPFC has a Strategic Research Plan 2007-2011 in place which identifies the four research and data collection priorities needed for any fishery management system: collection and validation of data from the fishery; monitoring and assessment of stocks; monitoring and assessment of the ecosystem; and evaluation of management options. The Plan is largely directed at the biological status of the stocks and ecosystem. Although a number of research projects on management and governance have been funded, further research is needed on the management system itself, its deficiencies and actions to ameliorate those deficiencies and integrated into the Research Plan. It is unclear to ALBACORA S.A. whether the PNA Fishery is fully integrated into this Plan and whether there is a WCPFC and PNA commitment to the Plan (funding). WCPFC research reports are publically available on their website in a timely fashion.

3.2.5. Principle 3 Fishery-specific Management System, Monitoring and Management Performance Evaluation.

Neither the PNA management system nor the WCPFC management performance been reviewed. The WCPFC considered such a review, but deferred it due to costs.

Stock assessments are peer reviewed by other members of the Scientific Committee and are subject to public scientific scrutiny. Formal external reviews are just now (2010) being

implemented in WCPFC. However, assessments are not full evaluations of the management system.

Components of the WCPFC management system are evaluated through annual compliance reports and through evaluation of the effectiveness of specific management measures.

While management performance evaluations have been recommended for all RFMOs, the WCPFC has not done one; nor has it implemented a system of performance review.

Comments on the non-binding Recommended Actions

Follow the list of non-binding recommended actions presented by the certification agency we can understand that is evident that there are many things still missing in the fishery evaluated:

There are no Limit and Target Reference points defined neither in PNA nor in WCPFC.

There is no Management Strategy Plan defined neither for PNA nor for WCPFC.

There is a very complex problem on the data collection and management system in the Indonesian (still not member of WCPFC) and Philippines, that fish a very substantive portion of the skipjack WCPO skipjack population (17%).

The bigeye and yellowfin catch can not be considered adequately managed by the current management strategy and the effects of the defined skipjack fishery on these two species are not well evaluated.

The presence of observers at the PNA process should be a binding condition, and should promote the dialogue among fleet representatives and PNA countries.

The Nauru Agreement does not include the appropriate principles that can sustain the application of the MSC principles.

There are no clear evidences that could demonstrate that all fishers comply with the management system under consideration.

There is no transparent evaluation and monitoring of the PNA VDS at regional and national level. If PNA management scheme should be the differential regime that could overcome the WCPFC limitations, it is quite clear that there are still many pending issues for PNA to assure the application of the MSC principles.

Conclusion

For the above reasons ALBACORA S.A. opposes certification of the PNA Fishery as defined. An MSC certifiable fishery must have demonstrated a track record of MSC-compliant management. That has not been done. Instead, a mix of actions has been suggested that “might” work in the future.

MSC evaluation must be used to certify existing fisheries that operate sustainably and not to “create” artificial fisheries that have yet to operate under MSC standards. The weight of the evidence clearly leads to the conclusion that MSC standards for Principles 1-3 have not been met.

Under the current management system there are no verifiable warranties for the proper management of the tuna resources, as is currently happening. Currently the WCPFC and PNA management initiatives are not able to revert the overfishing regime under which bigeye tuna ($F_{\text{current}}/F_{\text{MSY}} = 1.41$)⁷⁶ is subject for more than 5 years. This is a clear example

⁷⁶ Summary Report of the 6th Scientific Committee of WCPFC. Tonga 10-19 August 2010.

of the effectiveness of the current management system that governs what is pretended to be, as some PNA members declare loudly “The best managed and last virgin fishery in the World” (Total WCPO production 2,5 million tones).

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Comité Européen Interprofessionnel du Thon Tropical

EUROTHON/11/020

Brussels, 30 May 2011

1. Introduction

EUROTHON is the European Tropical Tuna Fishing, processing and trade committee. EUROTHON members are national associations of tuna boat owners and tuna canners from Spain, Italy, France and Portugal. In the UK EUROTHON has two associate company members.

a. Tuna Boat owners (Tropical Tuna Producers Organizations)

- ANABAC : Asociación Nacional de Armadores de Buques Atuneros Congeladores (Spain)
- OPAGAC : Organización de Productores Asociados de Grandes Atuneros Congeladores (Spain)
- ORTHONGEL : Organisation des Producteurs de Thon Congelé (France)

b. Canned Tuna producers

- ANCIT : Associazione Nazionale Conservieri Ittici e delle Tonnare (Italy)
- ANFACO : Asociación Nacional de Fabricantes de Conservas de Pescados y Mariscos (Spain)
- ANICP : Associação Nacional dos Industriais de Conservas de Peixe (Portugal)
- FIAC : Fédération française des Industries d'Aliments Conservés (France)
- UK Tuna Canners (UK) – associate member companies

The EU tuna fleet is one of the most important in the world with an annual catch of around 400 000 tonnes. It is composed of by about 30 Spanish and 20 French purse seiners, catching 250 000 and 150 000 tonnes of tropical tuna respectively.

The processing of tuna on the Community territory today is an activity of primary importance producing around 320 000 tonnes of canned tuna. There are more than hundred establishments that process tuna in the EU and additionally many EU companies have invested in processing plants in African (ACP) countries and Latin-American (GSP+) countries where they have built sufficient capacity to satisfy the demand for canned tuna of the EU market. The EU tuna processing industry currently supplies about half of the European canned tuna market demand. It is based mainly in four countries, which are by order of importance: Spain, Italy, France and Portugal

The European tropical tuna fleet constitutes a real economic driver in a number of developing countries, coherent also with the responsible fisheries policy, which treats oceanic resources properly without competing with local coastal fisheries; and coherent also with the economic and social policy related to aid for development in the African ACP and Latin American countries.

2. MSC Assessment Report

Fishery Proposed

First of all EUROTHON would like to express its concerns about the artificial nature of the geographical area and the artificial method of captures as defined in the evaluation.

In the evaluation three major geographical areas are excluded where the fishery described naturally takes regularly place by the same vessels that obtain skipjack tuna with purse seiners in WCPO. Excluding such big regions, namely the Archipelagic Waters of the PNA countries, Archipelagic Waters of Indonesia and Philippines and the High Seas of the Western and Central Pacific Ocean (WCPO), does not help in achieving any of the 3 MSC Principles, because skipjack tuna is widely distributed along the whole WCPO, and is substantially caught in those waters. Therefore in case the PNA management system would be of relevant efficiency in controlling the fishery that exploits the WCPO skipjack as the management population unit, something that the same evaluation put into question and which we will consider later, it would only be able to affect 20% of the total catch of the species. Therefore any certification given to only 20% of the WCPO skipjack catch will never be able to assure the objectives of any of the 3 MSC principles.

Furthermore, the method of capture defined is also very artificial because the purse seine vessels that operate in the WCPO are fishing **simultaneously** to a variety of school types identified as different “methods of capture” by the report, i.e.: free schools, natural logs, drifting artificial logs and anchored artificial logs (also known as *payaos*). In a given trip, a vessel can fish different school types, which creates a great source of uncertainty at the time of trying to separate skipjack coming from different school types. On board purse seine vessels, it is well known that all the catch is mixed on the wells were tunas are frozen, in many cases in brine. Moreover, the school type definition is basically based on logbooks, and therefore not validated until the inclusion of observers in 2010, still is subject to uncertainty. Table 5 of the report provides a description of the very divergent ways of operation **reported** by the different fleets by nationality, except for those fleets that carry on board 100% observer coverage from IATTC since 1994, and that could explain the high proportion of FAD fishing reported by those fleets. That source of controversy can be validated in the sudden change of species composition recently reported once the FAD closure was established by CMM 2008-01. Before the closure the average skipjack catch proportion on a free school was 20%. After the closure, the “reported” skipjack catch associated to free school rose threefold to 60% (Hampton, 2009), something that is very remarkable and rather unusual in any free school fishing of the World.

Management System

The current management system to legally control the WCPO skipjack population is WCPFC. In the report it is clearly mentioned that the current Parties of the Nauru Agreement (PNA) management system are of key importance and provide the management framework to adequately address the requirements of Principle 3. The Moody Marine report clearly

stated the problems that the Vessel Day Scheme (VDS) applied by the PNA is currently facing and the lack of transparency that such system has. It is also clearly stated that the objectives of PNA do not contemplate whatsoever any of the MSC principles as objective of that group of countries. In fact, it is clear from the PNA objectives, that the Nauru Agreement has a legitimate and understandable objective of maximizing the economic return from the licensing process and the management measures applied.

A clear example of that is the application of the High Seas Pocket Closure by PNA countries, incorporated lately by PNA pressure in CMM 2008-01. This is a clear example of the kind of unilateral management measure that PNA applies. If the intention of that closure was to contribute to the reduction of fishing mortality (F) of bigeye tuna, a reduction which should be of at least 30% as recommended by the WCPFC Scientific Committee in 2007, it had the contrary effect. The assumption was that the effort exercised in those pockets would disappear, something that nobody ever believed, especially PNA countries that have been the beneficiaries of that measure, because that effort has been transferred to the PNA EEZs. Its eventual beneficial effect on bigeye F reduction is still to be demonstrated because that effort has been transferred to the PNA coastal waters, especially archipelagic waters (see the increase in effort days from 2006, 3,891 days up to 6,120 days in 2009, Tables 2 of the report)

where the biggest catches of juvenile bigeye are obtained.

Further to that, the PNA Koror Declaration is now committed to close the rest of the High Seas as a license condition to the vessels that want to fish in PNA waters. PNA tried to promote this prohibition at the last WCPFC Commission meeting based on a poor scientific justification of this measure, of dubious effect on the recommended bigeye F reduction, because it will have the same effect obtained from the High Seas Pocket Closure, i.e. transfer of additional effort on the PNA EEZs. It is very clear that this economically justifiable measure for PNA interests, is controversial with the free access principles established in UNCLOS and is unilaterally decided by PNA countries against the international management regime, as it was not approved at WCPFC. Moreover, the application of this measure is not transparent among the PNA countries, and from our members' experience, few PNA members really apply it to purse seine fleets licensed in PNA EEZs.

In relation to the VDS, the report is full of references to the lack of transparency of the system, the lack of a clear link of the Parties Allocated Effort (PAE) and the scientific advice on stock status, the lack of clear definitions of fishing day that lead to individual interpretations by PNA members, the obvious lack of compliance by the same PNA countries reflected in their recent declaration after three years of application, of "hard" limits, which gives an idea of the level of internal compliance of this system. VDS is not covering the archipelagic waters of PNA countries, where the biggest effort increase has been reported, what provides a clear source of uncertainty at the time of assuring the sustainable exploitation of the three major species caught by the vessels susceptible of certification. In 2010 and 2011, there seems to be clear problems of compliance with the effort allocated by PNA countries, because it is the third year of application of the VDS that allowed to borrow days for the two precedent years, and now there are clear cases of effort limits exceeded: FSMA in 2010, Nauru in 2010 (who closed the fishery in October) and currently Solomon Islands that in may 2011 has exceeded the effort allocated under VDS. And finally, the report states that the VDS has not been effectively implemented after three years.

An additional source of concern is the big increase of the number of vessel once the PNA countries decided to move away from the limited number of vessels to license to VDS. As shown in table 1 of the report, in the last years there has been a big increase on the number of vessels: 46 purse seiners more. This increase is clearly on the legitimate economic benefit of

PNA countries because they are collecting more funds from license fees, but it is a source of global concern because the bigeye population is currently suffering overfishing, and the WCPFC Scientific Committee recommends a reduction of the F of 30%. In fact, that is also a source of concern to PNA countries, as stated in the report because it seems that they are considering the possibility of limiting the number of vessels license in PNA to 200, which will create a considerable problem that could have spillover effects in other tuna fisheries of the World.

Currently the management measure in place by WCPFC does not ensure the recovery of bigeye tuna as is clearly stated by the reports of the Scientific Committee (**Hampton & Harley, 2009**), with subsequent analyses since that time (**SPC, 2009; Hampton & Harley, 2010**), showing clearly that the current management system does not comply with principles 1 and 3.

Traceability

As mentioned in the first section, the storage system used on board purse seine vessels is a source of uncertainty at the time of identifying fish coming from different school types. There is an additional source of concern in relation to the transportation of the fish in the cargo vessels where it is usually mixed, because most of the WCPO catch is transshipped. That question seems to be addressed by the presence of on board observers, compulsory to all purse seiners after the implementation of CMM-2008-01, a management measure implemented by WCPFC, not PNA.

The current observer system is based on National programs of the PNA countries, and there is no central regional coordination for the activity of those observers. In fact during the 7th WCPFC Commission meeting held in Honolulu, it was clearly stated by the WCPFC Observer

coordinator that no reporting was provided from the National programs to WCPFC. Our members, as users of the observer programs in both sides of the Pacific Ocean on board of our vessels, have serious concerns about the capacity of the WCPFC observers in:

- Being able to adequately identify the school type, especially during the FAD closure. A proof of that has been the need for further clarification of the FAD set definitions adopted in CMM 2009-02.
- Being able to guarantee the separation on board the vessels of skipjack coming from different set types.
- Being able to guarantee the separated transshipment of skipjack coming from different set types and avoiding mix on the cargo vessel.

A recent case of alleged murder of an observer in PNG waters, provides considerable source of concern about the level of intimidation and eventual corruption to which observers may be pressured.

ANALYSIS OF THE MSC PRINCIPLES

Principle 1

Principle 1 Stock Status

The WCPFC scientific committee is using BMSY and FMSY as limit reference points for their assessments until such time as formal reference points are adopted by the commission. The stock status is good and there is no overfishing occurring relative to commonly used limit reference points. There is a high degree of certainty that the stock is above the point where recruitment would be impaired.

1.1.2. Principle 1 Reference Points

Formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points, but the Commission itself has yet to formally adopt rules. The fact that formal reference points and rules have not been adopted creates management risk for the future of the fishery. PNA management system does not have any Management Reference Points defined.

1.1.3. Principle 1 Stock Rebuilding

Not relevant. The skipjack stock is not overfished.

1.2.1. Principle 1 Harvest Strategy

The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has specified generic capacity limits (driven by concerns for bigeye and yellowfin tuna. The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, these limits have not been formally specified or formally linked to actions at the national level.

Additionally, the management effort controls exerted by the PNA are through the Vessel Day Scheme in which fishing days in their waters (excluding Archipelagic waters) are to be maintained below that of 2004, and a large closed area of about 4 million square miles of the high seas.

The above actions are not formal harvest strategies. However, collectively they appear to be achieving common stock status limit reference points ($B > B_{msy}$; $F < F_{msy}$) for skipjack, but not for bigeye currently suffering from overfishing.

No formal harvest rules have been adopted neither at WCPFC nor PNA level.

1.2.2. Principle 1 Harvest Control Rules (HCR)

Currently there are no formal control rules in place either domestically within the PNA or within

the WCPFC. While overall caps on effort and vessel day limitations have served to maintain catches at adequate levels, the whole point of formal harvest control rules is to develop objectives and contingencies for timely actions should conditions in the fishery change. The lack of these contingencies results in risk to the fishery. This PI is deemed inadequate and we do not share the rationale presented in Condition 1, because we do not share the understanding that there are “generally understood” HCR and that VDS is effective in controlling exploitation.

1.2.3. Principle 1 Harvest Strategy: Information and Monitoring

Under our consideration there are several sources of concern related to the data collection system related to port sampling and species composition and logbook reporting validation, especially in relation to the characterization of the school type reported.

Monitoring of the stock is based on catch and effort data, length-frequency data and tagging data. The efficiency of the information relative to management objectives is not known until such time as harvest control rules are established.

1.2.4. Principle 1 Harvest Strategy, Assessment of stock Status

Stock assessments were conducted most recently using the MULTIFAN-CL model. As with most assessments, MULTIFAN-CL models the population dynamics of the fish and the characteristics of the fisheries based upon a set of unknown parameters that are estimated from observed data. The model makes “predictions” of the data and these are statistically compared to the observations by searching for the set of parameters where the likelihood of the observations and predictions is maximized. The estimated parameters are used to determine stock productivity and status. The basic approach of MULTIFAN is to model multiple “fishing fleets” which exhibit relatively homogeneous behavior with regard to their selectivity by size, areas fished and the efficiency of their gear. In the WCPO skipjack application the fisheries were categorized into 24 fleets encompassing the six areas, gears (pole-and-line, purse-seine and others) and the nations to which the fleets belong.

The observed data included catch and effort data, length frequency data and tagging data. The catch and effort data were categorized by fisheries, by area and by quarter of the year. Catch per effort was standardized using General Linear Models for the fisheries for which there were longer time series of data in which factors such as year, quarter, region, bait effects, effects of radar/sonar and satellite data and the targeting of other species. Length frequencies were available by 2 cm size class by quarter, year and fishery. However, sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of ~250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model.

While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments has not been fully integrated. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points.

Principle 2

2.1.1: Principle 2 Outcome Status, Retained Species

2.1.2: Principle 2 Management Strategy, Retained Species

2.1.3: Principle 2 Information/Monitoring, Retained Species

The retained species in the Certification Unit have been defined as yellowfin and bigeye. Of these bigeye is “in a slightly overfished state, or will be in the near future with high levels of overfishing occurring” (WCPFC 2009 Scientific Committee) and it has been advised that current management measures for bigeye will not reach the needed fishing mortality rate reduction goals for this.

The 2010 bigeye assessment (see documents available before the start of the 2010 WCPFC Scientific Committee Meeting) notes that: recruitment in all analyses is estimated to have been high during 1995–2005. This result was similar to that of previous assessments, and appears to be partly driven by conflicts between some of the CPUE, catch, and size data inputs. The attribution of depletion to various fisheries or groups of fisheries indicates that the purse seine and other surface fisheries have an equal or greater impact than longline fisheries on the current BET biomass. These results led to the conclusions that 1) that current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the last decade; 2) overfishing is occurring in the bigeye tuna stock, but possibly at a lower level than previously estimated; 3) bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and 4) MSY levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.

These results require that formal recovery plans and harvest rules be established in both management units, WCPFC and PNA. They have not. Under Principle 1 the operating fishery would HAVE FAILED if it was not for the artificial definition of the “free school skipjack fishery” defined for the evaluation, that is not exercised as such by any fleet in the WCPO.

2.2.1: Principle 2 Outcome Status, Bycatch Species

2.2.2: Principle 2 Management Strategy, Bycatch Species

2.2.3: Principle 2 Information/monitoring, Bycatch Species

Analysis of what is a retained species must be presented. For example, log sets catch a suite of species including shark species which can be retained, have vulnerable life histories and are not presently assessed. Also, current scientific advice stresses that marlin exploitation should not expand. Therefore, there are a number of uncertainties about non-targeted species in the PNA Fishery, regardless of whether they are considered retained or bycatch, moreover when a full retention requirement is in place. Management measures related to non-targeted species (bycatch and retained) have been limited both domestically and within the WCPFC. Requirements for 100% observer programs are relatively new and it is unclear whether their functions include bycatch estimates and full retention compliance reports. Note that an observer program includes not only placing an observer and collecting the data, but the timely processing/transfer of that data such that it can be used for monitoring and control decisions. The ability of the PNA Fishery to respond to these concerns has not been demonstrated as was stated above. It is not verified if the recent change on free school species composition (skipjack catch from 20% to 60%) is correlated with a similar increase on the bycatch species caught.

Non-binding resolutions of the WCPFC encourage fishers to avoid non-target species catches, but it has not been demonstrated that these measures have been effective. And it is unclear if similar measures have been implemented domestically within the PNA Fishery. A comprehensive bycatch management plan has not been implemented at both domestic and international levels.

It is a bit confusing for us that the Condition 2 provides the following:

*“If required, these (the elements of the RPOA for sharks) should become binding to the unit of certification by **the third annual** surveillance audit.”* That does not seem to be a very strict condition. Shark fining should be applied and promoted immediately as it has been done in other tuna RFMOs.

2.3.1 Principle 2 Outcome Status, ETP Species

2.3.2 Principle 2 Management Strategy, ETP Species

2.3.2 Principle 2 Information/monitoring, ETP Species

The WCPFC has adopted management measures for sea turtles and sharks to limit the take of these species. In particular the sea turtle measures require release of sea turtles, procedures to enact the release and the recording of interactions. The shark measure simply encourages live release of those sharks not used for food or other purposes without specific requirements

to release protected species of sharks. There are limitations to observers in terms of species identification during release.

Additionally, as noted above the turnaround of observer data for management purposes has not been demonstrated. Also, market data suggests that observer catch estimates may be underreported. These and other issues must be addressed by evaluations of the existing management measures and insufficiencies ameliorated. Then comparable measures must be part of the PNA Fishery's licensing agreements.

2.4.1 Principle 2 Outcome Status, Habitats

2.4.2 Principle 2 Management Strategy, Habitats

2.4.3 Principle 2 Information/monitoring, Habitats

There is widespread agreement that purse seine gear has minimal impacts on benthic habitats, operates only in the surface layer of the ocean habitat.

2.5.1 Principle 2 Outcome Status, Ecosystems

2.5.2 Principle 2 Management Strategy, Ecosystems

2.5.3 Principle 2 Information/monitoring, Ecosystems

The removal of large magnitudes of skipjack over many decades without demonstrable impact on other ecosystem components appears to demonstrate that ecosystem functioning has not been impaired. However, the fishery has altered the ecosystem. For example, skipjack abundance has increased over recent decades presumably due to reduction of predators due to fishing. The impact of fisheries reduction in the abundance of juvenile bigeye and yellowfin tuna (by FADs for example) and ecosystem structure and function are not well understood. Management of habitat and ecosystem impacts are managed indirectly by VDS and FAD closures. VDS and observer coverage will provide sufficient information to monitor habitat impacts, if any.

While recently there has been considerable scientific effort on ecosystem effects within the WCPFC, there does not appear to be integrated domestic and international strategies to manage the ecosystem components of this fishery.

Principle 3

3.1.1. Principle 3 Governance and Policy, Legal and/or Customary Framework.

The Nauru Agreement (1982) and the additional Implementing Arrangements (1983, 1990 and 2008) and regional agreements (FSM Arrangement, 1994 and Palau Arrangement, 1995) provide the cooperating framework for the members countries to uniform licensing system and cooperate to maximize economic return. But none of those instruments make any specific reference to the precautionary approach. Recent (2009) actions of the PNA have provided for the development of a PNA office, strategic fisheries management initiatives, and planning initiatives to maximize long term legitimate **economic benefits** from the fishery (including MSC certification application). The PNA has demonstrated its ability to implement management measures but no reports on the compliance and transparency are available for the international community. However, procedures for dispute resolution within the PNAs have not been established.

All of the PNA are members of the WCPFC. The convention under which the WCPFC is formed reflects current international laws and standards relevant to management of migratory species and the ecosystem common to other RFMOs, including specific reference to the precautionary approach, the input of legal experts, dispute resolution mechanisms based on Part VII of the United Nations Fish Stock Agreement, the rights of artisanal and subsistence fishers, the dependence of coastal States and States fishing on the high seas on the stocks concerned and the role of the WCPFC in development of criteria for the allocation of catch or

effort. However, to date, the Commission has not allocated fishing rights nor have they invoked dispute resolution mechanisms.

However, there are concerns by some parties for the cost of implementing WCPFC obligations including financial commitments administrative and stewardship obligations and the administrative and legal challenges needed to make the changes. Little is known about the individual national legal framework of PNA parties that is directly related to the compliance of every party with the subregional management framework created under PNA. These concerns, suggest limitations in fully implementing a MSC certified fishery.

There is also a growing concern on the interpretation that the PNA countries have about the area of competence of WCPFC. Under the current interpretation, PNA countries consider that the Archipelagic Waters are not under the jurisdiction of the WCPFC, something that is contested by many WCPFC members that interpret that following the New York Agreement, the area of competence of an RFMO that manages a certain highly migratory species, is the full area of distribution of the species. That is a non clarified subject under the WCPFC Convention, and is source of concern because it might limit the effect of management measures adopted in WCPFC on the tuna species under its jurisdiction, due to the different or even divergent management regime that could be applied in the species distribution area. An example of that is the current increase of fishing effort in the archipelagic waters that is also outside the PNA-VDS management framework. There are growing interests in other SIDs to reclaim their own archipelagic waters, aside for those already considered as such. That is also a source of future concern.

3.1.2. Principle 3 Governance and Policy, Consultation and Responsibilities.

The organization of the PNA is clearly identified and their functions defined in the original Agreement. Recent (2009) measures have further defined the organization, roles and responsibilities. While the Agreement allows for other members of the FFA to be observers at PNA meetings, there is no provision for other interested parties to attend meetings or to provide input. Thus, the PNA process lacks transparency and must be addressed. Little is known about the individual national governance processes. In fact, through Moody Marine report, there are the first detailed information on the practical functioning of the PNA-VDS, something that some parties of WCPFC have requested but that PNA has never presented in such detail.

The organization of WCPFC has comprehensive participation by Members and Cooperating Non-Members with formal definitions of the roles of each. Participation occurs at meetings of the Commission, Scientific Committee, Technical and Compliance Committee and Finance and Administration Committee. Input of Members and Cooperating Non-Members are considered when developing management measures and procedures. WCPFC provides financial assistance to Small Island Developing States (SIDS) to participate in all the meetings of the Commission and related bodies. WCPFC rules allow and facilitate observer participation, including interventions at the Commission meeting and at meetings of committees and subcommittees. Written documents prepared by observers can be distributed at meetings as information documents, as provided by the rules.

In the opinion of EUROTHON members the primary deficiency of this PI (relative to a score of 80) is the lack of transparency at PNA, sub-regional and national mechanisms.

3.1.3. Principle 3 Governance and Policy, Long term Objectives.

PNA fishery objectives developed in the 1982 Agreement and in subsequent amendments are to coordinate and harmonize the management of fisheries with regard to common stocks within their fisheries zones for the benefit of the peoples of the Parties, securing greater economic benefits and control of the parties tuna resources through cooperation in the management and development of their shared fisheries resources; to effectively conserve and restore highly migratory stocks while maximizing economic returns; to promote the greater commercial utilization of the tuna resources for the benefit of the Parties; and to enhance commercial and economic opportunities for the Parties through optimum utilization of the tuna fishery. The objectives do not include explicit acknowledgement of the precautionary approach, nor is it clear that these overall objectives are linked to national regulations and to

policies implementing precautionary policies. Also, the most recent modification to the PNA objectives occurred in February 2010, so that the implementation into national policy and operations has not yet been demonstrated.

The WCPFC convention formally defines its objective as: “to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and Agreement [UNCLOS and UNFSA respectively]”. Additionally, the Convention specifically requires that the WCPFC applies the precautionary approach (Article 5) and mechanisms to do it (Article 6).

The PNA Fishery must formally establish precautionary policies both within the PNA and within the individual Parties. These must acknowledge the link of objectives between the WCPFC, the PNA and the individual Parties.

3.1.4. Principle 3 Governance and Policy, Incentives for Sustainable Fishing.

The PNA has incentives to maintain sustainability, particularly if the PNA Fishery were to be MSC certified. However, it is the responsibility of the PNA to create operational incentives for the vessels and gears through its licensing agreements. The VDS may be considered an attempt to do this, particularly through its calculation of vessel-size-related fishing days. However, this is limited. Additionally, to EUROTHON members’ knowledge an examination of the VDS and other options relative to vessel operator incentives has not been done and needs to be done. Also, aid to the nations of the PNA and the Pacific Islands in support of fisheries infrastructure has been significant on both the small scale (e.g. fuel costs) or on a larger scale (support by national governments to the industry), or indirect subsidies through exemptions of some sectors from management measures within the WCPFC. The PNA must respond to the need for appropriate incentives that are created operationally through the licensing agreements. Analyses are needed to justify actions. The burden must be on the PNA since the vessel/operators are not the entities pursuing certification.

3.2.1 Principle 3 Fishery-specific Management System, Fishery-specific Objectives.

The long term objectives of both the PNA Group and the WCPFC have been specified (see 3.1.3). However, short-term operational objectives are lacking. It may be argued that PNA and WCPFC management measures are statement of tactical objectives, but in the opinion of ISSF operational objectives must be developed and linked to harvest control rules (1.2.1 and 1.2.2) at both the PNA and WCPFC levels. Specification of fishery specific objectives must be led by the development and implementation of harvest control rules.

3.2.2 Principle 3 Fishery-specific Management System, Decision-making processes.

The PNAs decision-making processes are not clearly defined, nor are they transparent. The record and continuity of PNA decisions has demonstrated the ability and will to make timely decisions, but it is unclear how they are achieved (consensus, voting, or other methods).

The WCPFC generally makes decisions through consensus, but procedures are available and documented for voting, appealing decisions, conciliation and review should consensus not be reached. The application of the precautionary approach and the use of the best available scientific advice are required by the WCPFC Convention. While these requirements may seem to be unnecessary given the current status of the stocks of skipjack tuna, prior decisions have not always been precautionary. With dynamic fisheries transparent procedures must be in place to assure that the management system can respond in a timely and appropriate manner. These procedures must be developed and made available for scrutiny.

It is very difficult to understand that the certification body could allow 2 years after the certification, to PNA to incorporate transparency, best scientific advice, monitoring and reporting in the decision making process as well as in the operation of the management scheme.

3.2.3. Principle 3 Fishery-specific Management System, Compliance and Enforcement.

Closures, licensing and vessel day limits are actions taken by the PNA to manage fishing effort and eliminate IUUs (illegal, unreported and unregulated fishing). Additionally, requiring a 100% observer program is a mechanism for monitoring and control. However, it has not been demonstrated that these measures have been fully enforced, particularly at the national level. Logistical problems of maintaining a cadre of trained observers, the timely turn-around of observer data for use in compliance have been suggested to be lacking. The PNA Fishery must demonstrate their ability to monitor and enforce.

WCPFC has recently adopted measures to assist regional enforcement of such a vessel list; centralized VMS; IUU Vessel listing procedures; high seas boarding and inspection procedures; prohibition or transshipment at sea by purse seine vessels (with specified exemptions); a regional observer program and FAD Management Plans. The WCPFC's Technical and Compliance Committee is also continuing consideration of port State measures, chartering arrangements, catch/statistical documentation, the control of nationals, and compliance monitoring and reporting, but these have not yet been implemented.

Overall, each PNA member must be required to demonstrate their ability to meet the MSC enforcement obligations to implement the management measures of the PNA and the WCPFC.

There are no clear mechanisms defined, neither in PNA nor in WCPFC to apply a clear scheme of actions against non compliance that will be able to revert an overfishing situation resulted of non compliance with management measures applied by both bodies. Clear compliance and enforcement rules should be defined not only to fight IUU, but also to work against non compliance by Commission member parties.

3.2.4. Principle 3 Fishery-specific Management System, Research Plan.

The WCPFC has a Strategic Research Plan 2007-2011 in place which identifies the four research and data collection priorities needed for any fishery management system: collection and validation of data from the fishery; monitoring and assessment of stocks; monitoring and assessment of the ecosystem; and evaluation of management options. The Plan is largely directed at the biological status of the stocks and ecosystem. Although a number of research projects on management and governance have been funded, further research is needed on the management system itself, its deficiencies and actions to ameliorate those deficiencies and integrated into the Research Plan. It is unclear to EUROTHON whether the PNA Fishery is fully integrated into this Plan and whether there is a WCPFC and PNA commitment to the Plan (funding). WCPFC research reports are publically available on their website in a timely fashion.

3.2.5. Principle 3 Fishery-specific Management System, Monitoring and Management Performance Evaluation.

Neither the PNA management system nor the WCPFC management performance been reviewed. The WCPFC considered such a review, but deferred it due to costs.

Stock assessments are peer reviewed by other members of the Scientific Committee and are subject to public scientific scrutiny. Formal external reviews are just now (2010) being implemented in WCPFC. However, assessments are not full evaluations of the management system.

Components of the WCPFC management system are evaluated through annual compliance reports and through evaluation of the effectiveness of specific management measures.

While management performance evaluations have been recommended for all RFMOs, the WCPFC has not done one; nor has it implemented a system of performance review.

3. Conclusion

Based on the above, EUROTHON opposes certification of the PNA Fishery as defined. An MSC certifiable fishery must have demonstrated a track record of MSC-compliant management. That has not been done. Instead, a mix of actions has been suggested that “might” work in the future.

MSC evaluation must be used to certify existing fisheries that operate sustainably and not to “create” artificial fisheries that have yet to operate under MSC standards. The weight of the evidence clearly leads to the conclusion that MSC standards for Principles 1-3 have not been met.

Under the current management system there are no verifiable warranties for the proper management of the tuna resources, as is currently happening. Currently the WCPFC and PNA management initiatives are not able to revert the overfishing regime to which bigeye tuna ($F_{\text{current}}/F_{\text{MSY}} = 1.41$)¹ is subject for more than 5 years. This is a clear example of the effectiveness of the current management system that governs what is pretended to be, as some PNA members declare loudly “The best managed and last virgin fishery in the World” (Total WCPO production 2,5 million tones).

References

Hampton, J., and Harley, S. J. (2009a). Assessment of the potential implications of CMM-2008-01 for bigeye and yellowfin tuna. WCPFC-SC5-2009/GN-WP-17. Port Vila, Vanuatu, 10-21 August 2009.

SPC-OFP (2010) Review of The Implementation and Effectiveness of CMM 2008-01. WCPFC7 - 2010/15.rev 1.

15.8.2 Emails relating to points of clarification

Email from SPC (Hampton J, Williams P, and Clarke S), 20 June, 2011

Hi Richard

Responses are given below in red. Let me, Peter or Shelley know if any further clarification is required.

Cheers

John

-----Original Message-----

From: richard@consult-poseidon.com [<mailto:richard@consult-poseidon.com>]

Sent: Sunday, 19 June 2011 3:25 PM

To: John Hampton; Peter Williams; Shelley Clarke; DiedreB@spc.int; DonB@spc.int

Cc: les@rayfishresearch.com; Tony Lewis; Pngtagging@SkyFile.com; tim@consult-poseidon.com; maurice@pnatuna.com; richard@consult-poseidon.com

Subject: PNA MSC Assessment

Dear SPC

I am hoping that you would be a position to respond fairly rapidly to the following questions to assist our deliberations in responding to the Public Consultation Document in connection with the MSC assessment.

These are as follows:

1. Can you give us an idea of the change in proportion of total skipjack catches to from purse seiners within the PNA country EEZs (excluding Archipelagic waters) for 2010 as a percentage of the overall catch. Provisional 2010 estimates would be acceptable (Peter Williams);

Purse seine catches of skipjack for PNA EEZs compared to the WCPFC Area are provided below:

Year	SKIPJACK Catch		
	PNA (excl. AWs)		WCPFC Convention Area
	MT	% of WCPFC Area	
2005	679,410	55%	1,237,951
2006	798,353	60%	1,333,030
2007	792,104	55%	1,448,543
2008	717,538	51%	1,396,606
2009	868,805	54%	1,604,997
2010	1,015,477	70%	1,460,016 <i>provisional</i>

2. Can you provide us with an update of the progress being made in data collection from Indonesia, Philippines and Vietnam, and whether these now include effort data, size composition, and catch by gear type (Peter Williams);

There has been notable progress made in all of these countries over the past year, but there is still much work to do. The following provides a summary of recent progress:

Indonesia

Since 2010, Indonesia has initiated a nation-wide logbook data collection programme, which is backed by national legislation. The data collected on the logbooks satisfy the data collection requirements of the Tuna RFMOs (i.e. IOTC and WCPFC). Preliminary reviews of the data by WCPFC/SPC shows that there are the inevitable problems in the data provided by fishers who have not previously provided this information, so future work will be required to educate fishers in how to correctly fill in the logbook. The other aspect with respect to logbook will be to ensure the coverage is adequate and at this stage, the coverage of logbook data provision is low. The logbook will eventually cater for the provision of EFFORT data once the quality of data is adequate.

Size data are now being collected and provided to the WCPFC by Indonesia and a preliminary audit of the data by WCPFC/SPC shows that there are generally no problems. The challenges in the future will be (i) to ensure this is a permanent activity and (ii) size data collection can be expanded to other important ports in Indonesia (WCPFC Area).

Annual catch estimates by gear type are now provided to the WCPFC as a result of the annual catch estimates workshops. There is still some work to do in this area to verify the catch estimates from some gears, but at least a process to review estimates has been established.

One problem with the provision of data officially to WCPFC is that Indonesia (through their Dept of Foreign Affairs) is interpreting their obligation to provide only data for the EEZ, and not for archipelagic waters. However, SPC is working with the Dept of Capture Fisheries to ensure that AW data is provided to SPC for use in the assessments.

Philippines

Catch and effort data collected through logbooks in the purse seine fishery have been provided to the WCPFC. Logbook data collection is not implemented in the other (artisanal) fisheries. The recently-established observer programme (in the purse seine fishery) collects catch/effort and size data, but since these are not ROP data, they are not obliged to provide these to the WCPFC (although the data are provided to the SPC for scientific purposes only).

Size data continue to be collected and provided to the WCPFC (since 1997). These data are reviewed by WCPFC/SPC on an annual basis and are used in the assessments.

Annual catch estimates by gear type are now provided to the WCPFC as a result of the Philippines annual catch estimates workshops. There is still some work to do in this area to verify the catch estimates from some gears (i.e. the artisanal hook-and-line gear), but at least a process to review estimates has been established.

Vietnam

Vietnam has implemented a logbook system recently (2010), backed with national legislation. However, as in Indonesia, there are the inevitable problems with the data provided with a new system and future work should concentrate educating the fishers on how to correctly fill in the forms. The logbook will eventually cater for the provision of EFFORT data once the quality of data is adequate.

Size data are now being collected in the longline fishery in Vietnam (since 2010) and a preliminary audit of the data by SPC shows that the data appear to be generally acceptable; the data have yet to be provided to WCPFC.

Unofficial annual catch estimates by gear type have been produced and are likely to be provided to the WCPFC (for the first time) in the coming month. It is acknowledged that these estimates

are very approximate but that future estimates will be more reliable with the recent establishment of logbook and landings data collection.

3. Can you also tell us how these data are incorporated into stock assessments for SKJ, BET and YFT (John Hampton);

The catch and size data by gear for Indonesia and Philippines are routinely incorporated into WCPO assessments of skipjack, yellowfin and bigeye tuna conducted by SPC. To date, the definition of fisheries has been restricted to 'miscellaneous small fish' fisheries in both countries and a 'large fish handline' fishery in Philippines. Recent improvements in the estimation of catch by gear including the construction of historical data will allow a more detailed fishery breakdown, including purse seine fisheries in both countries. This more detailed structure will be included in the 2011 assessments currently being conducted.

Vietnamese fisheries data have not yet been included in any assessments conducted by SPC. This will be done when the data are judged to be of sufficient quality and historical estimates can be derived.

4. Is any account taken of the uncertainties associated with climate change in the stock assessment modelling? (John Hampton);

Climate change is normally interpreted as occurring over long time scales, so we are not explicitly including the potential impacts of climate change in the context of the routine stock assessments. To the extent that environmental variability more generally may impact recruitment and catchability, that would be included as recruitment by sub-region and catchability by fishery are estimated as time series in the assessments. When stock projections to assess a particular management strategy are conducted, we generally make simplifying assumptions about future recruitment and catchability and they are assumed to be deterministic with no treatment of uncertainty. However, we are developing 'stochastic projections' in which future recruitment is sampled from the historical recruitment and future catchability is sampled from estimated parametric distributions. So, to the extent that historical recruitment and catchability reflect the range of environmental variability experienced in the fisheries to date, it will be possible to account for this process uncertainty in future evaluations.

We employ a separate modelling approach (called SEAPODYM) to explicitly estimate the effects of environmental variability, including climate change. We currently have a project that is exploring a range of climate change scenarios to attempt to 'envelope' the uncertainty in terms of the impacts on stock productivity and distribution. The results of this work will be factored into future scientific advice to FFA/PNA, WCPFC and SPC member countries.

5. The SPC discard database indicated that 80.3% and 93.4% of silky sharks are discarded. WWF have questioned whether this includes carcasses that have been finned (we presume that it does) - could you check with SPC (Diedre Brogan);

These estimates are based on the regional observer database managed by SPC. We can confirm that the DISCARDS category DOES INCLUDE the discarded carcasses that have been finned (i.e., the DFR category – trunk discarded, fins retained).

6. Confirm with SPC that the only difference between CMM 2009-04 and CMM 2010-07 is the addition of porbeagle and hammerhead sharks. Which of these provisions are now binding? (Shelley Clarke)

Yes, the addition of porbeagle and hammerhead sharks is the only difference. For all versions of the shark CMMs (including the latest), the items under "Resolved" (1-5 in the latest version) are voluntary and the items under "Adopts" (6 and onward) are binding. You might be interested to know that the latest version of "Scientific Data to be Provided to the Commission"

<http://www.wcpfc.int/doc/data-01/scientific-data-be-provided-commission-revised-wcpfc4->

[wcpfc6](#)) issued in February 2011 specifies new requirements for the provision of data on the key shark species.

7. Have there been any new scientific papers (on a Ecosystem and Bycatch Mitigation Theme) released by SPC since the 6th SC session in August 2010? If so, a list would be useful and an indication as to where they are archived on the web (I cannot find any papers since Aug 2010) (Don Bromhead).

Our research and publication cycle is annual and culminates in the production of papers for the WCPFC Scientific Committee meeting in August. The deadline for these papers is 22 July and you should be able to find them on the WCPFC SC7 website on or after that date. Unusually, one paper on sharks was produced for the Annual Commission meeting in December 2010 and can be found at <http://www.wcpfc.int/doc/wcpfc7-2010-16/spc-progress-toward-shark-assessments> Also, SPC's Bycatch Mitigation Information System is now hosted on the WCPFC website and updated continuously: <http://www.wcpfc.int/news/2011/update-bycatch-mitigation-information-system-bmis-larissa-fitzsimmons>

8. The trade in whale sharks are banned by CITES in PNG, Solomons & Palau. Does SPC know of any monitoring of compliance levels in these countries? (Shelley Clarke).

The whale shark is listed on CITES Appendix II. Listing on Appendix II does not ban trade, per se, and even if so it would not necessarily result in any new fishing regulations (as the treaty governs international trade only). Perhaps you mean that these three countries have unilaterally banned trade in whale shark products in response to its listing on CITES? If so, the monitoring and enforcement of such a trade ban would be the responsibility of the trade authorities in each country and perhaps the CITES authorities (if there is a CITES connection). Assuming these countries are signatories to CITES and have not entered a reservation on the whale shark Appendix II listing, there should be information on implementation of the Appendix II listing available from each countries' CITES authority. Since SPC does not receive or collect trade data, we do not have any further in-house information on this topic.

9. Can PNA (or SPC through the observer scheme) provide any evidence that there has been reduced targeting of whale shark associated sets since Jan 2011 as a result of the PNA ban on these? (Peter Williams or Don Bromhead).

We do not currently have sufficient processed observer data for 2011 to determine whether or not there has been a change in the frequency of targeted whale shark associated sets.

Please note that your response will be incorporated into the Final Report. It would therefore assist us if you could provide us with one consolidated response from all.

Many thanks

Richard Banks

**Email from FFA (Dr. Lara Manarangi-Trott, Coordinator and Policy Adviser - WCPFC),
19 June, 2011**

Hi Les,

As of today the WCPFC website is telling me there are a two PNA members with outstanding part 2 reports in 2009 and 2010:

In 2009: Kiribati and RMI

In 2010: RMI and Palau

I would need to check further if you wanted specific comparisons with other FFA members and other CCMs level of submission

let me know if you would like this extra detail, and I should be able to get this to you tomorrow

cheers

Lara

On 19 June 2011 20:00, <les@rayfishresearch.com> wrote:

> Hi Lara

>

> The issue of non-submission of Pt II reports has come up again in the
> PNA MSC assessment. Do you have an update on the outstanding Pt II
> reports, particularly whether there are outstanding reports from PNA.--

Dr. Lara Manarangi-Trott

Coordinator and Policy Adviser - WCPFC

Pacific Islands Forum Fisheries Agency

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email: lara.manarangi-trott@ffa.int

Email from SPC (Hampton J), 28 June, 2011

Richard

I believe that the comments refer to the 2010 skipjack assessment. Some responses in red in the text below.

Cheers

John

From: Richard Banks [<mailto:Richard@consult-poseidon.com>]
Sent: Tuesday, 28 June 2011 8:49 AM
To: John Hampton
Cc: les@rayfishresearch.com; Tony Lewis
Subject: Sampling

John

We have the following comment from ISSF (and others). Tony is away tagging and unable to advise.

Can you comment.

Sampling in each of these strata was not consistent over time. I am not sure what standard of “consistency” they are holding the skipjack data to. The size sampling in fact is pretty comprehensive, as shown in Fig. 9 of WCPFC-SC6-2010-SA-WP-11. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. The first 2 of these make up approximately 85% of the skipjack catch 1972-2010, so consistently sampling these fisheries is a big step towards having a very good coverage of all catch in this fishery. Tagging data consisted of ~250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model. No other tuna assessment that I know of uses a more comprehensive tagging data set than this. It allows for example estimation of natural mortality at age internally in the assessment, which is probably unique to this assessment in the tuna world.

While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments have not been fully integrated. This is not a comment on the assessment itself, but the process for peer review by the SC (I think). In addition, the technical specifications of the assessments are discussed and broadly agreed among key scientists at the annual Pre-Assessment Workshop, held just prior to the assessments being conducted by SPC. Note also that a key part of the assessment, the estimation of standardized CPUE for the Japanese pole-and-line fishery (used as a key abundance index in the assessment) was conducted as a collaborative study by SPC and Japan. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points. I suppose this is true, but stock status was in fact evaluated in relation to the default reference points in use by WCPFC – Fmsy and Bmsy. I think the point about formally adopted reference points is made elsewhere in the comments.

Richard Banks

Email from SPC (Hampton J, Williams P, and Clarke S), 20 June, 2011

From: Johann Bell [<mailto:johannb@spc.int>]

Sent: Friday, July 01, 2011 8:48 AM

To: DeYoung, Cassandra (FIPI); T.Daw@uea.ac.uk; Adi Kellermann; Almudena Gómez; Andrew Hudson; Antonio Rota; Carl-Christian.SCHMIDT@oecd.org; Despina Symons; E.Allison@cgiar.org; Fezzardi; Flavio Corsin; gabinocanto; Gonzalez; Grimsditch; hashali@benquelacc.org; Jacqueline.Alder@unep.org; Jaime Webbe; James Muir; Jim Anderson; KKelleher@worldbank.org; Lee; lengyelp@haki.hu; Lindsay Chapman; M.Badjeck@cgiar.org; m.barange@pml.ac.uk; Magorec; Mascolo; Matthews; Meryl Williams; peony@turbonett.com; Renn; sena.desilva@enaca.org; sg@seafdec.org; Sloans; stinkham@nfi.org; Valdes, Jorge Luis; Velasco; Bahri, Tarub (FIRF); Bodiguel, Clotilde (FIPI); Brown, David (FIDF); Brugere, Cecile (FIRA); Camilleri, Matthew (FIPI); Chopin, Francis (FIRO); Cochrane, Kevern (FIRX); Emerson, William (FIPM); Farmer, Tina (FIPS); FIP-Director; Franz, Nicole (FIPI); Izumi, Masanami (FAOSAP); Jorgensen, John (FIRF); Karunasagar, Iddya (FIPM); Mattson, Niklas (FIDF); Muir, James (FIDF); Oh, KwangSuk (FIPI); Piccolo, Tony (FIPM); Poulain, Florence (FIDF); Rudi Hermes; Siar, Susana (FIRO); Soto, Doris (FIRA); Toppe, Jogeir (FIPM); Tsuji, Sachiko (FIPS); Watanabe, Hiromoto (FIPI); Willmann, Rolf (FIPI)

Cc: TewksburyVolpe, Gianthomas (FIPI); Graham Pilling

Subject: RE: examples of adaptation in Fi&AQ

Hello Gianthomas

The best example I know of is the vessel day scheme (VDS) for the purse-seine fishery for tuna in the EEZs of the eight members of the Parties to the Nauru Agreement in the tropical Pacific. The eight members are Palau, Federated States of Micronesia, Marshall Islands, Nauru, Papua New Guinea, Solomon Islands, Kiribati and Tuvalu. Approximately 25% of the world's canning tuna is caught within the EEZs of these eight countries.

The VDS allocates fishing effort among the EEZs of the eight PNA countries based on agreed criteria (Aqorau 2009, PNA 2010), and provides an important means of accommodating the effects of El Niño-Southern Oscillation (ENSO) events on redistribution of tuna, both now and in the future. The VDS holds total fishing effort for PNA members constant, but allows them to trade fishing days when the fish are concentrated either in the west or east due to ENSO events. The VDS is designed to operate in a similar way to the 'cap and trade' systems proposed to limit emissions of carbon dioxide and ensures that all PNA members continue to receive some level of benefits, regardless of where tuna are concentrated. These transferability arrangements have recently come into effect but the VDS has yet to reach its full potential because **PNA members still have to develop all the necessary capacity and governance to ensure that fishing effort conforms to the specified levels (Aqorau 2009, Havice 2010, Hanich et al. 2010)**. Allocation of effort among members will also need to be adjusted periodically, as provided for under the VDS, as tuna stocks move progressively east under the projected effects of climate change (Bell et al. 2011). Periodic adjustment will still allow the transfer of effort during ENSO events well into the future, but avoid the need for PNA members further to the east to continually purchase vessel days from those in the west, based on present-day catches.

If you would like more details about the VDS as an adaptation to climate events, you may care to contact Graham Pilling at the Secretariat of the Pacific Community (grahamp@spc.int).

Best regards

Johann

Johann Bell

Principal Fisheries Scientist - Climate Change

Strategic Engagement, Policy and Planning Facility

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From: DeYoung, Cassandra (FIPI) [mailto:Cassandra.DeYoung@fao.org]

Sent: Monday, 27 June 2011 6:25 PM

To: T.Daw@uea.ac.uk; 'Adi Kellermann'; 'Almudena Gómez'; andrew.hudson@undp.org; Antonio Rota; Johann Bell; Carl-Christian.SCHMIDT@oecd.org; 'Despina Symons'; E.Allison@cgiar.org; Fezzardi; Flavio Corsin; gabinocanto; Gonzalez; Grimsditch; hashali@benquelacc.org; Jacqueline.Alder@unep.org; Jaime Webbe; James Muir; Jim Anderson; KKelleher@worldbank.org; Lee; lengyelp@haki.hu; Lindsay Chapman; M.Badjeck@cgiar.org; m.barange@pml.ac.uk; Magorec; Mascolo; Matthews; Meryl Williams; peony@turbonett.com; Renn; sena.desilva@enaca.org; sg@seafdec.org; Sloans; stinkham@nfi.org; 'Valdes, Jorge Luis'; Velasco; Bahri, Tarub (FIRF); Bodiguel, Clotilde (FIPI); Brown, David (FIDF); Brugere, Cecile (FIRA); Camilleri, Matthew (FIPI); Chopin, Francis (FIRO); Cochrane, Kevern (FIRX); DeYoung, Cassandra (FIPI); Emerson, William (FIPM); Farmer, Tina (FIPS); FIP-Director; Franz, Nicole (FIPI); Izumi, Masanami (FAOSAP); Jorgensen, John (FIRF); Karunasagar, Iddya (FIPM); Mattson, Niklas (FIDF); Muir, James (FIDF); Oh, KwangSuk (FIPI); Piccolo, Tony (FIPM); Poulain, Florence (FIDF); Rudi Hermes; Siar, Susana (FIRO); Soto, Doris (FIRA); Toppe, Jogeir (FIPM); Tsuji, Sachiko (FIPS); Watanabe, Hiromoto (FIPI); Willmann, Rolf (FIPI)

Cc: TewksburyVolpe, Gianthomas (FIPI)

Subject: examples of adaptation in Fi&AQ

Hello everyone.

Gianthomas Tewksbury Volpe is helping us pull together a database of examples of reducing climate change vulnerability in fisheries and aquaculture. The hope is to find applied examples following the IPCC vulnerability model: reducing impacts and sensitivity to change and improving adaptive capacity. Most of what he is finding are recommended or planned actions, rather than implemented actions.

If you could send Gianthomas any examples/contacts you are aware of, this would be very helpful. Gianthomas.tewksburyvolpe@fao.org

Kind thanks!

15.9 APPENDIX I: ASSESSMENT TEAM RESPONSES TO COMMENTS ON THE PUBLIC COMMENT DRAFT REPORT

The assessors' response to the comments on the PCDR addresses the full range of contributions received. In some cases where the same issue has been dealt with by multiple stakeholders, we have grouped these together and where appropriate provided a common response.

Public Review Comment	Moody Marine response
General Issues	
Definitions	
MSC 1: Explanation of the FAM methodology on main retained/bycatch species is incorrect here, so amendments to wording are suggested. FAMv2 7.2.2 (retained) and 7.3.2 (bycatch) explain that vulnerability of the species should be considered in identifying main retained and bycatch species	Text modified.
Unit of Certification and Definition of the Fishery	
WWF 1: WWF has some fundamental concerns with the definition of a 'fishery'. In this case what is defined is a type of product that is sustainable or not based on each haul. We believe this undermines the incentive for change in this fishery and also MSC mission of improving fisheries.	The assessment team believes that the definition of the fishery used here is entirely consistent with the MSC definition. The standard setting body (MSC) has reviewed and accepted this (See MSC comments attached to this report).
ISSF 1: ISSF strongly believes that definition of the Unit of Certification, which classifies yellowfin and bigeye tunas as retained species in P2 rather than as a target species in P1, is wrong and has been done in order to obtain higher assessment scores under P1 (this artificial definition serves to isolate the positive aspects of a fishing trip without eliminating the negative). Under the current MSC policies, this may or may not be technically acceptable (MSC needs to address this important issue and provide more guidance and a rationale).	The first point of definition of the unit of certification is the target species, which in this case is skipjack tuna (TAB 003). Yellowfin and bigeye tuna are retained species in this assessment. The assessors are bound by the definitions and approach as stipulated in the FAM. Reference is made to FAM Section 7.1 (a) and FAM 7.2.
WWF 2: The fishery is defined by Moody Marine as 'setting of purse seine gear targeting free schools'. Such a definition has a high risks to the supply chain of mixing/substituting, creates potentially misleading claims that products originate from an MSC certified fishery as well as creating public confusion between fish and fish products that have not been certified.	Extensive Chain of Custody controls will be put in place by the client, with CoC beginning on the vessel to ensure that MSC product is not mixed with other product (refer to traceability section and App J).
OPAGAC / ALBACORA / EUROTHON 1: The method of capture defined is also very artificial because the purse seine vessels that operate in the WCPO are fishing simultaneously to a variety of	The assessment has defined the fishery in the way that it operates, which is consistent with MSC requirements (TAB 003). See above

<p>school types identified as different “methods of capture” by the report, i.e.: free schools, natural logs, drifting artificial logs and anchored artificial logs (also known as <i>payaos</i>). In a given trip, a vessel can fish different school types, what creates a great source of uncertainty at the time of trying to separate skipjack coming from different school type. On board purse seine vessels, it is well known that all the catch is mixed on the wells where tunas are frozen, in many cases in brine. Moreover, the school type definition is basically based on logbooks, and therefore not validated until the inclusion of observers in 2010, that still is subject to uncertainty. Table 5 of the report provides a description of the very divergent ways of operation reported by the different fleets by nationality, except for those fleets that carry on board 100% observer coverage from IATTC since 1994, and that could explain the high proportion of FAD fishing reported by those fleets. That source of controversy can be validated in the sudden change of species composition recently reported once the FAD closure was established by CMM 2008-01. Before the closure the average skipjack catch proportion on a free school was 20%. After the closure, the “reported” skipjack catch associated to free school rose threefold to 60% (Hampton, 2009), something that is very remarkable and rather unusual in any free school fishing of the World.</p>	<p>also in relation to CoC.</p>
<p>WWF P 1 General: The Standards Council agreed that Principle 1 applies to the whole of the fish stock(s) exploited by the fishery seeking certification (Technical Advisory Board Directive 003). So a fishery could only pass if the whole fish stock(s) meet this standard, and it would not pass if the standard was not met, irrespective of who (e.g. the fishery seeking certification or other fisheries) was responsible for the stock not meeting the standard (MSC,2010a).</p>	<p>PNA are in a position, given the quantity of catch within their jurisdiction (70%) to implement management measures which would ensure the entire stock is managed in a sustainable manner, thus meeting the standard as specified in TAB 003. The conditions 1 and 2 require that PNA management actions take account of the range of the skipjack stock.</p>
<p>WWF underlying issues: WWF remains highly concerned at the assessors’ approach to the sharing of responsibility for management of the Fishery between the PNA and the WCPFC.</p>	
<p>WWF underlying issues: WWF is concerned that the assessment make no reference to the need for the uncertainties associated with climate change to be factored into the setting of precautionary harvest strategies so as to be consistent with the principles of ecosystem-based management. There is no evidence to date that the Commission has taken the potential implications of climate change into account in its</p>	<p>There is sufficient monitoring and information on the stock to enable environmental changes to be taken into account. Nevertheless, SPC has a project that is exploring a range of climate change scenarios to attempt to ‘envelope’ the uncertainty in terms of the impacts on stock productivity and distribution.</p>

<p>setting of Conservation and Management Measures (CMMs) and the assessment must reflect this.</p>	<p>The results of this work will be factored into future scientific advice to FFA/PNA, WCPFC and SPC member countries. (See Hampton <i>et al</i>, email of 20 June, 2011)</p> <p>Bell cites the VDS as providing an important means of accommodating the effects of El Niño-Southern Oscillation (ENSO) events on redistribution of tuna (Email of 1 July 2011)</p>
<p>WWF underlying issues: Given the exclusion of log sets from the unit of certification, the issue is now whether catch from unassociated sets can be differentiated from all other forms of catch (logs and all FAD types). WWF understands that there is 100% observer coverage on purse seine vessels and interprets this to mean that there is 1 observer on each vessel. However, it is yet to see, in the assessment report any confirmation that this allows for observation of 100% of purse seine sets. <i>We believe that this issue should be addressed explicitly in the report to provide confidence that all catch can be observed and correctly recorded and stored as certified product.</i></p>	<p>We can confirm that observers are present for every set.</p>
<p>ISSF General: The fishery as defined process the certification process does not yet exist</p>	<p>The management system has been in place for some time, and we recognise that it has been continually evolving more so since the WCPFC was established in 2004. However, each PI has been scored based on the way the fishery currently operates, with evidence produced as to its effectiveness.</p>
<p>Governance</p>	
<p>ISSF P3: The assessment must recognize that the final implementation of regulations and measures fall to the individual nations.</p>	<p>The assessment shows that the individual nations are effectively implementing WCPFC CMMs and PNA IAs. These are supported in their implementation by regional bodies, flag states meeting their obligations to apply WCPFC measures and national laws to their vessels.</p>
<p>Traceability</p>	
<p>MSC T.1 (Section 13): The report shall clearly describe the point from which CoC certification is required</p>	<p>Section 13, is updated to read <i>‘As set out in Appendix J. Chain of custody must begin at the point of sighting, free school confirmation and capture on the fishing</i></p>

	<i>vessel concerned, i.e. each vessel will have Chain of custody certification begins at the point of landing on the vessel.</i>
MSC T.2: The report mentions an actual eligibility date. It should refer to target eligibility date.	Confirmed in Section 13.5.
WWF T.1: Request that the issue of CoC (confidence that all catch can be observed and correctly recorded and stored as certified product) be addressed explicitly in the report. Requests responses to the following: 1. What is the point at which fish and fish products may enter chains of custody ? 2. What vessels can sell the product? 3. Where can they sell the products? 4. Where does the fishery assessment ends? 5. Which entities are entitled to use the certificate?	See two points above.
Stock status	
ISSF 1.1.1 (a): While there is a “ <i>high degree of certainty</i> ” that the skipjack stock is above the point where recruitment would be impaired, it is less certain that the stock has been above its target reference point over recent years, since targets have not been formally defined. The ISSF believes that the lack of formally--adopted target reference points and the recent decline in biomass toward Bmsy (which Annex 2 of the UN Fish Stocks Agreement --UNFSA--considers to be a limit rather than a target) suggest that a perfect score of 100 is not warranted for this stock.	The assessment has shown that the stock has been managed with an implicit target reference point of BMSY or above and that the stock has been above BMSY over recent years as described below. The assessment report concludes that “there is zero probability that $B_{MSY}/B_{current}$ is anywhere close to 1.0”. $B_{current}$ is estimated at $0.75 B_0$, B_{MSY}/B_0 as 0.31, and $B_{current}$ as 0.63 of the average current total biomass in the absence of fishing (Section 5). The biomass level is also well above an appropriate LRP where recruitment might be impaired ($0.20B_0$). Total biomass estimates have fallen somewhat in recent years but are still well above sustainable levels. BMSY is defined in MSC FAM as an appropriate TRP. A Condition has been raised to formalise reference points appropriate for the stock.
ISSF 1.1.1 (c): Additionally, if targets had included	See ISSF

<p>yellowfin and bigeye the score would surely not be high and perhaps not passing. This highlights our previous general comment that the selection of skipjack as the only target species in this fishery is not transparent.</p>	
<p>Reference Points</p>	
<p>MSC 1.1.2: Information should be provided on the harmonization considerations taken by the assessment team where required for the Tosakatsuo Suisan pole and line skipjack tuna fishery assessment. Where differences exist in scoring and conditions, justification must be provided for these differences</p>	<p>Information is now provided in the text.</p>
<p>WWF 1.1.2 (a) in response to Peer Reviewer A's view that a condition, rather than a recommendation, be placed on indicator 1.1.2, the assessors indicate that the Client Action Plan covers both conditions and recommendations (peer review).</p>	<p>A Condition is now raised on PI 1.1.2.</p>
<p>WWF 1.1.2 (c) WWF notes that in other MSC assessments for tuna fisheries (e.g. the Tosakatsuo Skipjack Pole and Line Fishery, the north and south Pacific Albacore fisheries and the New Zealand Albacore troll fishery) which are subject to RFMO management, conditions on Principle 1 indicators have not relied on implementation by the client alone but have acknowledged the need for the client to work through the relevant RFMO that is responsible for managing the stock as a whole, to achieve progress on those indicators scoring less than 80.</p>	<p>The range of the stock that falls under the management of PNA parties is 70% The Condition states that when considering the HCRs, PNA parties <i>should include further assessment of the main uncertainties e.g. the fishing mortality in archipelagic waters and territorial waters in order to ensure that the exploitation rate is reduced as limit reference points are approached</i></p> <p>In the case of the New Zealand Fishery, the fishery catch as % of the total Albacore catch is limited to 10%; in the north and South Pacific Albacore fisheries, 17% and 5% respectively; and in the Tosakatsuo Pole and Line fishery, 0.25%.</p>
<p>WWF 1.1.2 (d) WWF believes that there are implicit target reference points that, in the absence of explicitly determined stock reference points, the default generic indicators to be applied by the WCPFC. As such the fishery meets SG60 for this indicator.</p> <p>However, in order to score 80 the fishery must::</p> <p>have limit reference point set and used by management (FAM 6.2.17 also PA12v2:2) and we take</p>	<p>The assessors have adjusted the score downward to reflect recent guidance from MSC FAM encapsulated (PA 12) of 19 January, 2011.</p> <p>A condition (1) is now in place.</p>

this to mean management by the WCPFC.

Have species-specific reference points set and used by management (FAM 6.2.17also PA12v2:2) that are both explicit and appropriate to the stock, rather than the generic, default reference points currently in place.

Based on a score of <80, a condition should then be placed on this indicator requiring that appropriate limit and target reference points are explicitly incorporated by the WCPFC. This condition could then be fulfilled by appropriate client action by the client, such as

1. the PNA establish and adopt explicit and appropriate target and limit reference points for the PNA fishery
2. the PNA vigorously pursue the adoption of equivalent reference points in the WCPFC;
3. that, by the time of the 4th surveillance audit equivalent target and limit reference points have been adopted for the whole of the WCPO skipjack stock. WWF notes that Peer Review Report A also supported a condition on this indicator. Further, in line with TAB D 33 this condition and client action plan must contain specific clear milestones that must be met over the term of certification by the PNA and audited by the Certification Body as it fulfils the requirements of this condition. The recently revised and agreed milestones in the conditions applied to the New Zealand Albacore Troll Fishery provide a suitable template and proposes the following:

Year 1 (by first surveillance audit) PNA establish and adopt explicit and appropriate target and limit reference points for the PNA fishery;

Initiate active promotion of the adoption of equivalent target and limit reference points within the WCPFC, including through seeking support of FFA members; Year 2 (by second surveillance audit) Evidence of efforts to promote the adoption of equivalent target and limit reference points within the WCPFC, including through seeking support of FFA members;

<p>Year 3 (by third surveillance audit) Evidence of progress within WCPFC toward the adoption of equivalent target and limit reference points</p> <p>Year 4 (by fourth surveillance audit) Adoption of equivalent limit and target reference points by the WCPFC.</p>	
<p>ISSF 1.1.2: Justification for a score of 80 was based on default language in UNFSA and the WCPFCs Convention language in which it is agreed that the UNFSA language be adhered to. This justification is weak. Scores less than 80 for other tuna stocks around the world have been made under similar circumstances.</p> <p>ISSF considers that this PI does not meet the passing standard of 80 and should be scored 75 or lower and, thus, a Condition should be imposed. The Condition must require that both limit and target reference points be explicitly established for the PNA fishery, and the whole of the stock. Additionally, the Condition needs to have measurable milestones for PNA Governments to work in support of the adoption of reference points by the WCPFC and assure that they are adopted before the completion of the 4th Surveillance audit. As an example, refer to the Conditions placed recently for the MSC Certification of the New Zealand Albacore Troll Fishery.</p>	<p>The PI has been rescored and a Condition raised.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 1.1.2: The fact that formal reference points and rules have not been adopted creates management risk for the future of the fishery. PNA management system does not have any Management Reference Points defined.</p>	<p>As above</p>
<p>1.2.1 Harvest strategy</p>	
<p>WWF 1.2.1: It is unclear how the harvest strategy for the WCPFC is responsive to the state of the stock. MSC defines a Harvest Strategy as combination of monitoring, stock assessment, management actions and harvest control rules. (FAM Section 9).</p> <p>Given that the Harvest Control Rule are rudimentary, more evidence is required to show how these elements work together to achieve the objectives reflected in the target and limit reference points. Either more evidence is required or the score should be modified. In addition any condition/recommendation should reflect the need for the management strategy to be adopted for the whole of the skipjack stock (i.e. by the WCPFC).</p>	<p>The harvest strategy is responsive to the state of the skipjack stock in that it has previously been largely aimed at optimizing the value of the purse seine fishery based on the assessment results indicating that the stock was only moderately exploited, and limiting the major skipjack fisheries to lower levels of skipjack fishing mortality than indicated by MSY-based skipjack stock reference points in order to meet objectives related to bigeye and yellowfin conservation. However, at WCPFC7, the WCPFC responded to the change in the results of the skipjack assessment and the</p>

<p>Accordingly, WWF recommends that the recommendation require that:</p> <ol style="list-style-type: none"> 1. the PNA develop a management strategy for PNA skipjack which integrates existing elements to apply specifically to the skipjack harvest and is linked to limit and target reference points established as per WWF's proposed Condition 1; and 2. the PNA vigorously pursue the adoption of an equivalent management strategy in the WCPFC. 	<p>more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011. Section 5.4.1 and the scoring comments have been amended to clarify how the harvest strategy for the WCPFC is responsive to the state of the stock.</p> <p>Additional evidence has also been provided in Section 5.4.1 of how the monitoring frameworks, assessments and management actions work together.</p> <p>The assessors strongly believe that the score should stay at 80. A Condition is not therefore required which harmonises with the Tosakatsuo Suisan assessment. Recommendations are non-binding, but a recommendation based on the WWF proposal has been included.</p>
<p>ISSF 1.2.1: The ISSF is not convinced that there is a comprehensive harvest strategy that is “responsive to the status of the stock with the elements of the harvest strategy working together towards achieving management objectives reflected in the target and limit reference points.” While the skipjack stock appears above limits, the target objectives are undefined and WCPFC management has been passive (and ineffective in the case of bigeye tuna), whereby no preparatory actions have been taken as skipjack biomass approaches BMSY. For these reasons the ISSF believes that this PI should be scored 75 and a Condition that a harvest strategy for skipjack is implemented by the WCPFC by the 4th Surveillance audit.</p>	<p>See above WWF 1.2.1</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 1.2.1:</p> <p>The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has specified generic capacity limits (driven by concerns for bigeye and yellowfin tuna. The application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, these limits have not been formally specified or formally linked to actions at the national level.</p>	<p>Condition PI 1.2.2</p>

<p>Additionally, the management effort controls exerted by the PNA are through the Vessel Day Scheme in which fishing days in their waters (excluding Archipelagic waters) are to be maintained below that of 2004, and a large closed area of about 4 million square miles of the high seas.</p> <p>The above actions are not formal harvest strategies. However, collectively they appear to be achieving common stock status limit reference points ($B > B_{msy}$; $F < F_{msy}$) for skipjack, but not for bigeye suffering currently overfishing.</p> <p>No formal harvest rules have been adopted neither at WCPFC nor PNA level.</p>	<p>Components parts of the harvest strategy are present as required for skipjack. The issue of retained species management, including bigeye tuna, is covered in PI 2.1.2.</p> <p>The issue of the adoption of HCRs for skipjack is covered under 1.2.2 below and Condition 2.</p>
<p>Harvest control rules and tools</p>	
<p>WWF 1.2.2 (a): To meet SG80 would require robust and precautionary harvest control rules were in place across the whole of the Skipjack stock in the western central pacific. The interpretation adopted by the assessors is that it requires only that the PNA takes into account the whole of the fish stock and all the uncertainties associated with it, in setting the harvest control rules for the fishery under certification.</p>	<p>The assessors accept that there are generally understood HCRs are not these are not well defined, hence the score is SG 60 (compared to the Tosakatsuo fishery, SG 75), and a Condition applied. See also comment regarding 70% control applied within PNA waters (WWF 1.1.2 (c)).</p>
<p>WWF 1.2.2 (b): In line with earlier comments, that the condition must, according to the MSC requirements, reflect the need for the harvest control rules to be adopted for the whole of the skipjack stock (TAB D:3), WWF proposes that the condition must require:</p> <p>The WCPFC to implement a well defined harvest control rule that ensures the exploitation rate is reduced as limit reference points are approached and evidence indicates that the tools are appropriate and effective.</p> <p>And suggests a client action plan that includes:</p> <ol style="list-style-type: none"> 1. PNA adopting defined harvest control rules for exploiting skipjack tuna in their waters that are consistent with the harvest strategy for the stock and act to reduce the exploitation rate in response to the 	<p>The Condition provides the option for PNA to ensure that the exploitation rate on the whole stock is as required based on high catch proportion within the range of the stock; or for WCPFC to implement stock wide measures.</p>

stock approaching limit reference points. This should include assessment of the main uncertainties, including the fishing mortality in archipelagic waters and territorial waters outside PNA in order to ensure that the exploitation rate is reduced as limit reference points are approached.

2. PNA vigorously pursue the adoption of equivalent harvest control rules in the WCPFC.

3. PNA must provide verifiable evidence that effort is effectively limited within overall PAE levels established in accordance with the VDS text, PNA Implementing Arrangements and appropriate WCPFC conservation and management measures and that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.

4. Harvest control rules, equivalent to those adopted by the PNA, must be adopted in respect of the whole WCPO skipjack stock by WCPFC by the fourth surveillance audit. WWF believes that the milestones proposed should be more detailed, and recommends that the approach adopted in the New Zealand Albacore Troll Fishery be employed in this far more significant fishery. WWF proposes the following milestones:

Year 1 (by first surveillance audit) PNA establish and adopt defined harvest control rules for the exploitation of skipjack in their waters;

Initiate active promotion of the adoption of equivalent harvest control rules within the WCPFC, including through seeking support of FFA members, active advocacy in the WCPFC Scientific Committee, Technical and Compliance Committee and Commission meetings;

Year 2 (by second surveillance audit) Evidence of advocacy for the adoption of equivalent harvest control rules within the WCPFC;;

Year 3 (by third surveillance audit) Evidence of

<p>progress within WCPFC toward the adoption of equivalent harvest control rules</p> <p>Year 4 (by fourth surveillance audit) Adoption of equivalent harvest control rules by the WCPFC.</p>	
<p>OPAGAC/ALBACORA SA/EUROTHON 1.2.2:</p> <p>No formal harvest rules have been adopted neither at WCPFC nor PNA level. This PI is deemed inadequate and we do not share the rationale presented in Condition 1, because we do not share the understanding that there are “generally understood” HCR and that VDS is effective in controlling exploitation.</p>	<p>The justification for the decision is identified in the Scoring text, and additional information provided in Section 5.4 of the report.</p>
<p>ISSF 1.2.2: a stronger Condition is needed than that introduced in the Public Comment Report. The must address the inadequacy of this PI (as given by a score of 60) leading to development of HCRs and the development of evidence that the VDS is, in fact, controlling effort. The latter is important because it appears that vessel days are allocated unrelated to fishing mortality targets defined in the assessments. A transparent process is important in creating value for vessel days. The report states, though that: <i>“But the VDS Is in the early stages of implementation, and therefore has not been fully tested, and does not address the transfer of effort to archipelagic waters, nor how to balance and assess the VDS TAEs against the increasing effort by the USMLT.”</i> This suggests that P3 criteria are not fully operational and that they will not likely become fully operational within the next two years. HCRs are required and there is no evidence that the PNA or its member countries have initiated the process to define their own HCRs independent of WCPFC. Nevertheless, a Condition has been imposed requiring that the PNA develop HCRs both at the PNA/national level and at WCPFC. The Condition gives the PNA two years to develop these when, in our opinion, it should have been a condition for candidacy for certification. Additionally, the Condition requires that the PNA “promote” HCRs at WCPFC. This is weak and not likely to succeed. The Condition must assure that the HCRs are implemented by the WCPFC by the 4th surveillance audit and that the PNA and member countries implement these, as well. As an example, refer to the Conditions placed for the MSC Certification of the New Zealand Albacore Troll Fishery.</p>	<p>The Condition requires an outcome equivalent to SG 80 requirements within the term of Certification. The assessment team has made suggestions as to how this should be achieved but the means of resolution is to be determined and implemented by the client. Note that the wording of this condition has now been modified.</p>

Information	
<p>WWF 1.2.3: Not enough evidence is provided as to how the final element of the SG 80 is met. It appears that there is not good information on all other fishery removals from the stock, especially in Indonesia, Philippines and Vietnam.</p>	<p>The data currently available to the WCPFC are probably the most comprehensive available to any tuna RFMO and underpin what are generally regarded as high quality stock assessments and associated analyses.</p> <p>Hampton <i>et al</i> states ‘<i>There has been notable progress made in all of these countries over the past year, but there is still much work to do. Data collected on the logbooks satisfy the data collection requirements of the Tuna RFMOs (i.e. IOTC and WCPFC).</i> The state of progress on data collection is summarised for each country, illustrating an emerging comprehensiveness on data availability. This information is now incorporated into the report.</p> <p>It is also noteworthy that Skipjack catches from these countries collectively account for 11% of the total. Nevertheless, Considerable progress has been made in recent years in addressing this gap, though the Indonesia Philippines Data Collection Project supported by WCPFC through extra-budgetary funding, and most recently by the successor GEF-funded West Pacific East Asia Oceanic Fisheries Management Project (WPEA OFM), involving Indonesia, Philippines and Vietnam.</p>

<p>ISSF 1.2.3: The lack of catch estimates by gear type in the Indonesian and Philippines domestic fisheries is one of the most significant data gaps (Williams, 2010, WCPFC---SC6--2010/ST WP---1). Also, there are no operational or aggregated catch and effort data, nor size composition data available in the Eastern Indonesian tuna fishery. Therefore, ISSF believes that this PI should be given a score of 80.</p>	<p>This area has been explored further by the assessors with further information provided by SPC (email 20/06/2011). The status of information available and incorporated into the model includes gear specific data as well as information on size frequencies. These data are routinely incorporated into WCPO assessments of skipjack, yellowfin and bigeye tuna conducted by SPC.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 1.2.3: Under our consideration there are several sources of concern related to the data collection system related to port sampling and species composition and logbook reporting validation, especially in relation to the characterization of the school type reported. Monitoring of the stock is based on catch and effort data, length-frequency data and tagging data. The efficiency of the information relative to management objectives are not known until such time as harvest control rules are established.</p>	<p>We refer to the above responses to WWF (1.2.3) and ISSF (1.2.3) which suggests considerable strengthening in data collection. The comments from OPAGAC <i>et al</i> do not provide us with their source on problem issues but reiterate the comment from John Hampton, SPC above ‘Data collected on the logbooks satisfy the data collection requirements of the Tuna RFMOs’.</p>
<p>ISSF/ OPAGAC/ALBACORA SA/EUROTHON 1.2.4: Sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of ~250,000 releases from several tagging programs primarily in the 1980s and 1990s resulting in more than 18,000 returns which were used in the assessment model.</p> <p>While the assessments results are reviewed by the WCPFC Scientific Committee, more formal review/participation in assessments have not been fully integrated. Additionally, formal robust testing of management strategy evaluations should be improved. In particular, evaluating stock status relative to reference points is incomplete without formally adopted reference points.</p>	<p>SPC email response (Hampton 28/06), refers to:</p> <ol style="list-style-type: none"> (1) Comprehensive size of sampling; (2) Consistently sampled fisheries are the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. The first 2 of these make up approximately 85% of the skipjack catch 1972-2010, so consistently sampling these fisheries is a big step towards having a very good coverage of all catch in this fishery (3) It allows for example estimation of natural mortality at age internally in the assessment, which is probably unique to this assessment in the tuna world. (4) The technical specifications of the assessments are discussed and broadly agreed among key scientists at the annual Pre-Assessment Workshop, held just prior to the assessments being

	<p>conducted by SPC. Note also that a key part of the assessment, the estimation of standardized CPUE for the Japanese pole-and-line fishery (used as a key abundance index in the assessment) was conducted as a collaborative study by SPC and Japan</p> <p>(5) Stock status was in fact evaluated in relation to the default reference points in use by WCPFC – Fmsy and Bmsy.</p>
<p>Target species: status</p>	
<p>MSC 2.1.1: The rationale does not support the score for this PI. For a scoring element to meet the SG100 level for scoring issues under this PI, not only main retained species but all retained species must be considered</p>	<p>The assessors have reviewed the scoring, and whilst other retained species (e.g. frigate mackerel and bullet tuna) account for a very small proportion of the catch (< 0.0%) (Table 41), there stock status is unknown. The score has been reduced to SG 80.</p>
<p>WWF 2.1.1: The explanation provided by the assessors in response to Peer Reviewer B’s question about “unidentified tunas” should be provided in the body of the report (peer review comment).</p>	<p>See Footnote 13 in the PCDR report.</p>
<p>ISSF / OPAGAC/ALBACORA SA/EUROTHON 2.1.1: The attribution of depletion to various fisheries or groups of fisheries indicates that the purse seine and other surface fisheries have an equal or greater impact than longline fisheries on the current BET biomass. These results led to the conclusions that 1) that current levels of catch are unlikely to be sustainable in the long term even at the recent [high] levels of recruitment estimated for the last decade; 2) overfishing is occurring in the bigeye tuna stock, but possibly at a lower level than previously estimated; 3) bigeye tuna is approaching an overfished state, if it is not already slightly overfished; and 4) MSY levels would rise if mortality of small fish were reduced which would allow greater overall yields to be sustainably obtained.</p>	<p>(1) Purse seine FAD fisheries have equal impact to long line (See Fig 8). The impact of unassociated sets is estimated as reducing spawning potential by around 1%, which is not significant and FAM ref 7.1.14);</p> <p>(2) Assuming an LRP (B_{lim}) of $0.2B_0$ is appropriate, the current biomass is therefore well above $B_{LIM} = 0.20B_0$ as an indicator for the point at which a bigeye tuna stock would be considered to be at risk of serious recruitment overfishing or of serious or irreversible harm, and it is therefore concluded that there is high degree of certainty⁷⁷ that bigeye tuna stocks in the WCPO are <u>currently</u> within biomass-based limits set in the FAM and</p>

⁷⁷ For the base case model, the likelihood profile for $SB_{current}/SB_{MSY}$ (Figure 51) shows that there is only a 5% probability that the ratio is below 1.0.

	<p>FAM ref 7.1.11</p> <p>(3) As above</p> <p>(4) This point is acknowledged on page 46; with acknowledged management mitigation measures to be explored around FADs (CMM 2008-01), and NOT unassociated sets.</p>
<p>ISSF 2.1.1: The ISSF asserts that all retained species are not likely to be within biological limits and should thus be scored 60 for 2.1.1 and that a Condition be placed to ensure that there will be demonstrably effective management measures in place such that the skipjack fishery does not hinder recovery and rebuilding of the bigeye stock.</p>	<p>It is acknowledged that all species are not included but main species are (Bigeye and yellowfin) (See (2) above), and so adjusted to 80 (and amended text) according to the MSC methodology.</p>
<p>Target species: Management</p>	
<p>WWF 2.1.2: WWF notes however the assessors' statement in the scoring table that "The projections provide some objective basis for confidence that this partial strategy and measures will work to continue to ensure that this fishery does not hinder the recovery and rebuilding of bigeye tuna within the effort limits set by the VDS." (There is a similar statement on p. 50 of the report). WWF considers these statements to be somewhat at odds with the assessment under 2.1.1 that bigeye tuna is not overfished, since rebuilding and recovery would seem to imply that the stock is overfished.</p>	<p>Amended the scoring panel to clarify that the stock is not overfished but is projected to become overfished. The analysis of fishery impacts shows that the impact of the unassociated fishery is small and would not hinder recovery and rebuilding of the stock if it became overfished.</p>
<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 2.1.2: These results require that formal recovery plans and harvest rules be established in both management units, WCPFC and PNA. They have not. Under Principle 1 the operating fishery would HAVE FAILED if it was not for the artificial definition of the "free school skipjack fishery" defined for the evaluation, that is not exercised as such by any fleet in the WCPO.</p>	<p>See above (WWF 2.1.2) regarding status of bigeye.</p> <p>The definition of a unit of certification for MSC assessment, requires that the assessors are bound by the definitions and approach as stipulated in the FAM. Reference is made to FAM Section 7.1 (a), FAM 7.2 and TAB D 003.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 2.1.2: Currently the WCPFC and PNA management initiatives are not able to revert the overfishing regime under which bigeye tuna ($F_{\text{current}}/F_{\text{MSY}} = 1.41$)⁷⁸ is subject for more than 5 years. This is a clear example of the effectiveness of the current management system that governs what is pretended to be, as some PNA members declare loudly "The best managed and</p>	<p>The unit of certification is for skipjack tuna and not bigeye tuna. Bigeye tuna is considered as a retained species (see above comments).</p>

⁷⁸ Summary Report of the 6th Scientific Committee of WCPFC. Tonga 10-19 August 2010.

<p>last virgin fishery in the World” (Total WCPO production 2,5 million tones).</p>	
<p>Bycatch: Status:</p>	
<p>WWF 2.2.1 (a): WWF is unclear therefore, whether the 80% discard figure cited by the assessors includes carcasses that have been finned. WWF seeks the assessment to clarify this since it believes that the correct interpretation is that of Kirby (2006) who recorded retention as including only retention of fins, presumably because retention of fins necessarily implies mortality.</p> <p>In addition it is unclear whether the scores are in line with the requirements outlined for scoring above 80 (FAM 4.4.7). WWF acknowledges that the assessors have dealt with silky shark as a bycatch species and that the quantities of silky shark taken in unassociated sets are minimal. However, as the PIs dealing with retained species are slightly different than those dealing with discards we believe that it is important to confirm the category into which this species most properly falls and score it correctly.</p>	<p>These estimates are based on the regional observer database managed by SPC. We can confirm that the DISCARDS category DOES INCLUDE the discarded carcasses that have been finned (i.e., the DFR category – trunk discarded, fins retained). See SPC email of 20/06/2011.</p> <p>As we understand, FAM 4.4.7 only refers to assessments using the PSA approach of the RBF. We strongly believe this is a discarded species and should therefore be considered under PI 2.2.</p>
<p>WWF 2.2.1 (b): WWF suggests that the recommendation should also refer to the WCPFC silky shark assessment which is also scheduled for 2011. The Client Action Plan in response to this recommendation refers only to blue marlin. The Client should ensure that the response also identifies steps to initiate actions to reduce impacts on silky shark if the stock assessment indicates the need to do so.</p>	<p>This reference has been added to the Recommendation 5.</p>
<p>WWF 2.2.1 (c): WWF suggests that the assessors revisit their statement on p. 59 of the report that sharks have received “considerable protection in the form of conservation and management measures”</p>	<p>Changed the sentence to read ‘<i>Due to the inherent vulnerability of sharks to over-fishing and their important role at the top of the marine ecosystem, the conservation and management of sharks has become an increasingly important priority to the Commission</i>’).</p>
<p>ISSF 2.2.1: It is unclear what fishery the quote is referring to. Unassociated sets? While catches are small, catches of low magnitude do not equate to the mortality rate and the impact on the status of the population. The PNA licensees may contribute to</p>	<p>The text has been changed to “Although the stock is likely to be fully exploited, it is likely to be within biological limits and these fisheries contribute a very small part of</p>

<p>only a portion of the overall fishing mortality rate, but this does not mean that they have little impact. Additionally, the quote accentuates the result that 40% of blue marlin are retained. Therefore, despite the low magnitude of the catch, blue marlin should be considered a retained species. Also, the quote vacillates between defining a stock to be fully exploited and yet within biological limits. If MSY is “fully exploited” and MSY is also a “biological limit,” then the outcomes are incompatible. The ISSF continues to assert that 2.2.1 be scored at 70 and that a Condition be imposed that (pending The 2012 assessment results) requires control rules and recovery plans (if needed) for blue marlin.</p>	<p>overall fishing mortality. An ISC stock assessment for blue marlin is scheduled in 2012”.</p> <p>Given the very low catch rates (0.03% of total catch volume for both fisheries) for unassociated and log set respectively or around 2% of the entire WCP catch of blue marlin, we stand by our statement that this fishery contributes a very small part of overall fishing mortality and the recommendation is sufficiently precautionary.</p> <p>Given the majority of blue marlin are discarded in the unassociated fishery, this species has been considered as a bycatch species under PI 2.2. As the FAM states (7.3.1), the Outcome PISGs requirements levels are similar to those for retained species” and thus is put under similar scrutiny.</p>
<p>Bycatch management</p>	
<p>MSC 2.2.2: The rationale does not justify the score for this PI. A score of 70 is indicated in the scoring rationale, but the score assigned to the PI is 75. Further clarity is required.</p>	<p>The overall score has been changed to 70 for unassociated sets to reflect the two scoring elements.</p>
<p>WWF 2.2.2: The assessors’ scoring comments do not address the third scoring element of SG80: “there is some evidence that the partial strategy is being implemented successfully”.</p> <p>The strategy under consideration, and to which the condition applies, is the strategy for managing silky shark taken as bycatch. Both elements of the condition must be more closely related to silky shark. The first element, for example, should refer to the “management strategy for silky shark” and, in the second element, the reference to banning setting on schools associated with whale sharks should be removed, since this is not related to managing silky shark. WWF believes that this is necessary since the response to this condition in the Client Action Plan does not seem to reflect the focus on silky shark.</p>	<p>The scoring comments have been amended.</p> <p>The condition (3) has been amended to make it more specific to silky sharks. All text has been updated with the replacement of CMM 2009-04 by CMM 2010-07.</p> <p>The specific reference to the whale shark element of the RPOA has been removed. As this condition applies to silky sharks in particular, conditions for whale shark release are considered inappropriate here.</p>

<p>The Client Action Plan should be amended to ensure that this focus is recognized.</p> <p>As currently drafted the reference in the Condition to the RPOA confuses intent. WWF recommends, therefore, that the condition be extended to include a requirement to develop best practice handling and release procedures for whale sharks that minimizes their mortality.</p>	<p>This has been suggested to the client.</p>
<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 2.2.2(a): Non-binding resolutions of the WCPFC encourage fishers to avoid non-target species catches, but it has not been demonstrated that these measures have been effective. And it is unclear if similar measures have been implemented domestically within the PNA Fishery. A comprehensive bycatch management plan has not been implemented at both domestic and international levels.</p>	<p>The fishery has been scored below SG 80 for this reason, and a condition has been put in place.</p>
<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 2.2.2(b) Shark fining should be applied and promoted immediately as it has been done in other tuna RFMOs.</p>	<p>We presume this to mean ‘Shark finning should be prevented’ Item 7 (CCMs shall require their vessels to have on board fins that total no more than 5% of the weight of sharks on board up to the first point of landing) of CMM 2010-07 is binding and is consistent with the measures adopted by other tuna RFMOs.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 2.2.2:</p> <p>It is a bit confusing for us that the Condition 2 provides the following:</p> <p><i>“If required, these (the elements of the RPOA for sharks) should become binding to the unit of certification by the third annual surveillance audit.”</i> That does not seem to be a very strict condition. Shark fining should be applied and promoted immediately as it has been done in other tuna RFMOs.</p>	<p>The wording of the Condition has been amended (See above). However, the conditionality of the last part is dependent on the outcomes of the first part and will be closely monitored in future surveillance audits.</p>
<p>ETP Management</p>	
<p>WWF 2.3.2 (a): No information is provided on how the impact of the management practices for encountering these species complies with national and international requirements, a key component of the SGs, more information should be provided on what these requirements are and how the units comply. WWF believes that the fishery should be scored at 80 rather than 95.</p>	<p>On the basis that the only applicable international requirement is the CITES protection for whale sharks (the only ETP species that is impacted by this fishery), we consider that the PNA measure on whale sharks exceeds international requirements for this species. Therefore, we consider that there is a comprehensive strategy on place for</p>

WWF 2.3.2 (b): WWF remains concerned that there is no evidence that the management strategy comprising CMMs 2008-03 and 2009-04 is being implemented successfully. Further, there is no information available regarding the extent to which the fishing access agreements negotiated by the PNA members impose obligations to minimize interactions with protected species and the immediate release, without further harm, of any protected species taken during purse seine fishing operations in the Fishery. WWF notes that in both the scoring table and in the text of the assessment report (Section 6.4.2), the assessment report states that the RPOA for sharks suggests that a prohibition on the use of purse seine sets on schools associated with whale sharks would provide a “high likelihood, in aggregate, of delivering improved conservation outcomes for sharks”. WWF notes that the quotation from the RPOA refers to a range of measures (hence the reference to “in aggregate”) rather than solely to a prohibition on purse seine sets on sharks, not only the prohibition on sets on whale sharks. WWF recommends that the text should be amended to reflect this.

ETP species and thus warrants a 100 score. These measures were agreed to in February 2010 and are applied through national laws and licence conditions and as of 1 January 2011. The PNA will continue to promote the adoption of whale shark conservation measures by WCPFC.

CMM 2008-03 relates to turtle interactions, whilst released alive when encountered, these species account for less than 0.001%.

The continuing low levels of interaction indicates that the strategy, including 2008-03 and 2009-04, is being implemented effectively.

However we accept that there is not as yet any quantitative analysis that supports high confidence that the strategy will work and thus the score for the second element has been reduced to 80 and the text amended. The aggregate score is therefore 85.

We accept that, given that the management strategy concerned (e.g. a ban on whale shark associated sets) has only recently (January 2011) commenced there is little evidence of its success to date. However this is addressed in Condition 3. Furthermore observer information clearly shows efforts to reduce whale shark mortality through their deliberate release. Thus it is considered that this achieves the SG 80 level.

The RPOA’s consideration of the high likelihood, in aggregate, of delivering improved conservation outcomes for sharks considers five measures. Of these, (1) the prohibition of wire traces is irrelevant

	to this fishery, (2) is incorporated in the PNA ban and (3), (4) and (5) are all included in CMM 2010-07. We have amended the text to reflect this.
<p>ISSF 2.3.2: A recent WCPFC report (Summary information on whale shark and cetacean interactions in the tropical WCPFC purse seine fishery. Prepared by SPC-OFP, WCPFC7-2010-IP/01 10 November 2010). Their conclusion was that <i>“It is clear that purse seine sets on whale sharks are a combination of both targeted sets and inadvertent capture. Interactions with toothed whales appear to be mainly incidental, rather than the result of sets specifically targeted at these animals. On the other hand, most sets on baleen whales do appear to be targeting a specific interaction, even if temporary, between the whales and tuna.”</i></p> <p><i>“Any mitigation measure prohibiting the setting in the vicinity of whale sharks and marine mammals will need to consider that the animal may not be detected until the setting operation is at an advanced stage, particularly for whale sharks. There may also be a need for the development and dissemination of best-practice guidelines for releasing encircled animals.”</i></p> <p>These results show the limitations by observers in differentiating whale shark sets from unassociated sets before the set. It also brings into question the observers ability to define set types needed for compliance. Therefore, ISSF considers that management measures are not currently in place which are highly likely to achieve national and international requirements for the protection of ETP species (2.3.2) and should be scored 70 and a Condition be placed to achieve SG80 standards by the 4th surveillance audit.</p>	<p>These comments are ill-informed (Hampton, July, 2011). Observers are trained to make a declaration of the set type at the time the set is commenced. This is consistent with how fishing operators record set type. It is simply a fact of life that not all whale shark associations are evident at this time. If the set is subsequently found to contain whale shark(s), the observers’ instructions are to <u>retain the original set type declaration</u>, but to record the presence of whale shark(s) in the appropriate data field of the observer report. These data may then be used to estimate the incidence of whale shark interactions, as was done in the cited SPC-OFP paper. The negative comments regarding observers abilities here are unwarranted.</p>
<p>ISSF 2.3.2: ISSF considers that management measures are not currently in place which are highly likely to achieve national and international requirements for the protection of ETP species (2.3.2) and should be scored 70 and a Condition be placed to achieve SG80 Standards by the 4th Surveillance audit.</p>	<p>See response to WWF comment above.</p>
<p>ETP Information</p>	
<p>OPAGAC/ALBACORA SA/EUROTHON 2.3.3: The WCPFC has adopted management measures for sea turtles and sharks to limit the take of these species. In particular the sea turtle measures require release of sea turtles, procedures to enact the release and the recording of interactions. The shark measure simply encourages live release of those sharks not used for food or other purposes without specific requirements to release protected species of sharks. Obviously a primary monitoring tool for ETP bycatch will be a 100% observer coverage program. However, there are limitations to observers in terms of species</p>	<p>WCFPC/SPC/FFA and WCPFC and PNA members have invested heavily in the observer scheme and gone to considerable lengths to ensure that it provides robust data and is a free form bias as possible. The system is under regular review by observer coordinators and WCFPC and SPC, and actions are taken, when appropriate to strengthen the scheme through training and amendments to the observer modules. The assessors’</p>

<p>identification during release.</p> <p>Additionally, as noted above the turnaround of observer data for management purposes has not been demonstrated. Also, market data suggest that observer catch estimates may be underreported. These and other issues must be addressed by evaluations of the existing management measures must be done and insufficiencies ameliorated. Then comparable measures must be part of the PNA Fishery's licensing agreements.</p>	<p>view is that this observer scheme is one of the most advanced in the World.</p> <p>We are confident that sufficient information is available over a sufficient time period to identify interactions with ETP species in this fishery.</p>
<p>Habitats Information</p>	
<p>MSC 2.4.3: The rationale does not justify the score. More detail is required on how each scoring issue is met to justify the score of 100 for the unassociated set component</p>	<p>Additional text has been added to the scoring comments to justify these scores.</p>
<p>Ecosystems</p>	
<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 2.5.2:</p> <p>The removal of large magnitudes of skipjack over many decades without demonstrable impact on other ecosystem components appears to demonstrate that ecosystem function has not been impaired. However, the fishery has altered the ecosystem. For example, skipjack abundance has increased over recent decades presumably due to reduction of predators due to fishing. The impact of fisheries reduction in the abundance of juvenile bigeye and yellowfin tuna (by FADs for example) and ecosystem structure and function are not well understood. Management of habitat and ecosystem impacts are managed indirectly by VDS and FAD closures. VDS and observer coverage will provide sufficient information to monitor habitat impacts, if any.</p> <p>While recently there has been considerable scientific effort on ecosystem effects within the WCPFC, there does not appear to be integrated domestic and international strategies to manage the ecosystem components of this fishery.</p>	<p>This was a comment raised during earlier consultation with ISSF and has been addressed in the report.</p> <p>We do not agree – efforts to reduce the main impacts on the trophic structure of the ecosystem e.g. curbing overall target species removal and reducing top predator (e.g. shark) bycatch have both been management priorities at international level. Furthermore, seven Parties have undertaken risk assessment-based EAFM analyses (FFA advise that this work for Solomon Islands is being undertaken in 2011, and this therefore demonstrates a high national commitment to the ecosystem approach to fisheries management.</p>
<p>Governance, Policy, Legal & customary framework</p>	
<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 3.1.1 (a) Procedures for dispute resolution within the PNAs have not been established.</p>	<p>The Palau Arrangement sets out a dispute settlement mechanism in Art 8 for issues related to the purse seine fishery and the VDS. The UNFSA dispute settlement mechanism applies to the Nauru, Agreement, the Palau Arrangement and the VDS.</p>

<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 3.1.1 (b): However, there are concerns by some parties for the cost of implementing WCPFC obligations including financial commitments administrative and stewardship obligations and the administrative and legal challenges needed to make the changes. Little is known about the individual national legal framework of PNA parties that is directly related to the compliance of every party with the subregional management framework created under PNA. These concerns, suggest limitations in fully implementing a MSC certified fishery.</p>	<p>No evidence has been found that any limitations in capacities would compromise the ability to implement an effective management framework.</p> <p>Capacities of small Island countries are strengthened through the support of the regional agencies and other organisations.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 3.1.1 (a): There is also a growing concern on the interpretation that the PNA countries have about the area of competence of WCPFC. Under the current interpretation, PNA countries consider that the Archipelagic Waters are not under the jurisdiction of the WCPFC, something that is contested by many WCPFC members that interpret that following the New York Agreement, the area of competence of an RFMO that manage a certain highly migratory species, is the full area of distribution of the species. That is a non clarified subject under the WCPFC Convention, and is source of concern because that might limit the effect of management measures adopted in WCPFC on the tuna species under its jurisdiction, due to the different or even divergent management regime that could be applied in the species distribution area. An example of that is the current increase of fishing effort in the archipelagic waters that is also outside the PNA-VDS management framework. There are growing interests in other SIDs to reclaim their own archipelagic waters, aside for those already considered as such. That is also a source of future concern.</p>	<p>Archipelagic waters are outside the unit of certification, but are considered in this assessment in terms of extractions of the stock. These extractions are taken into account in Condition 2 relating to HCRs.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 3.1.1 (b) The Commission has not allocated fishing rights, not have they invoked dispute resolution mechanisms.</p>	<p>There is a dispute mechanism in place. However, the fishery has been scored at SG 80 and not SG 100 for the relevant scoring issue because dispute settlement mechanism has not been tested.</p>
<p>ISSF 3.1.1: ISSF is not persuaded by citations of Convention documents. Our concern is the operational outcomes in which we find the Legal and/or Customary Framework to be lacking in demonstrating its capacity. One thing is to have something on paper that could theoretically work, and another thing is to implement it operationally. Therefore we maintain our original comments and a score of 70, with a Condition to ensure that the</p>	<p>This is not an issue related to PI 3.1.1, but operational issues are considered and addressed throughout the Principle 3 assessment components.</p>

WCPFC management system achieves sustainable fisheries in accordance with MSC Principles 1 and 2.	
Consultation and Responsibility	
WWF 3.1.2: WWF believes that the PNA should also be required to ensure that the arrangements for gaining observer status at PNA meetings are clearly available on its website.	PI 3.1.2 requires a consultation process but does not require observer status at meetings.
ISSF 3.1.2: ISSF Reiterates its concern that the PNA process is not transparent. Note, for example, that (as of May 31, 2011) the PNA website, www.pnatuna.com , blocks the Meetings section unless the user is registered. Furthermore, The Moody Marine draft assessment report provides what to us is the first detailed information on the practical functioning of the VDS. In addition, the Assessment Team itself in scoring PI 3.1.2 Recognizes that " <i>the process falls short</i> ". Therefore, it cannot be said that PNA meetings are transparent. The ISSF maintains that this PI should not be given a score higher than 75 .	The scoring commentary has been clarified in line with the guidelines specified in scoring guideposts including evidence that there is a formal observer status in the observer system. The earlier recommendation to formalise observer status at meetings is now redundant.
OPAGAC/ALBACORA SA/EUROTHON 3.1.2: In the opinion of the organizations that the primary deficiency of this PI (relative to a score of 80) is the lack of transparency at PNA, sub-regional and national mechanisms.	The evidence in the assessment demonstrates that there is a consultation process in place for affected parties, and effective engagement is facilitated.
Long Term objectives	
WWF 3.1.3 (a): As noted by the assessors, the Nauru Agreement is “the core PNA instrument”. WWF believes that the failure of this Agreement to contain explicit objectives consistent with the precautionary approach means, therefore, that the fishery cannot meet SG80 on this indicator. Further, WWF notes that, according to Table 20 in the assessment report two PNA parties (Kiribati and Tuvalu) have yet to include the Principles of the UNFSA in their primary national fisheries management legislation. WWF believes that it is critical that this legislative commitment to adoption of these principles, including the application of the precautionary approach, is demonstrated by all of the PNA Parties. As a result, WWF believes that these elements of a short/long term objectives are not explicit within management policy (FAM PI:3.1.3 SG80). We suggest the proposed recommendation should become a condition that includes the requirement for national legislation of each PNA party to reflect the principles of the UNFSA, and the precautionary	The assessors consider that the SG80 requirement that <i>Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy</i> required is met by the inclusion of such objectives in the UNFSA, WCPFC Convention, WCPFC CMMs, the Palau Arrangement and national laws and plans. The additional requirement for SG100 that these objectives are required by management policy is largely met by the binding application of these objectives to all UNFSA Parties and WCPFC Members. This includes the requirement under Art 7 for the application of the principles in the UNFSA including the precautionary approach by Parties in areas under national jurisdiction. These requirements are reinforced by the inclusion of the UNFSA key

<p>approach explicitly in domestic fisheries management legislation and regulation.</p> <p>In addition, WWF believes that rather than be directed to the PNA Office, the client action plan should be directed to the PNA parties since it is they that will ultimately decide on amendments to the Agreement. WWF notes that the Client Action Plan indicates that the PNA parties are open to a review of the Nauru Agreement.</p>	<p>principles in the national laws and management plans of PNA Members except for Kiribati. Table 20 has been amended to include references to the appropriate national law of Tuvalu. However, the SG100 requirement is not fully met because appropriate objectives for sustainable fisheries and the precautionary approach are not included in the Nauru Agreement or in the national law and policy structure of Kiribati.</p> <p>The Client Action Plan was endorsed at the PNA meeting in April 2011, in the presence of WWF observers.</p>
<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 3.1.3: The objectives do not include explicit acknowledgement of the precautionary approach, nor is it clear that these overall objectives are linked to national regulations and to policies implementing precautionary policies. Also, the most recent modification to the PNA objectives occurred in February 2010, so that the implementation into national policy and operations has not yet been demonstrated. The PNA Fishery must formally establish precautionary policies both within the PNA and within the individual Parties. These must acknowledge the link of objectives between the WCPFC, the PNA and the individual Parties.</p>	<p>There is explicit acknowledgement of the precautionary approach in the Convention and the FSA to which all PNA members are party, and in WCPFC CMMs including CMM 2008-01, and in 7 of the 8 national fishery acts.</p> <p>Having reviewed this, the score has been amended.</p>
<p>ISSF 3.1.3: It is unclear that short and long term objectives as expressed by the WCPFC are in fact consistent with MSCs P1 and P2 and, thus, a score of 80 is not justified. A lower score is appropriate, included with a strong Condition addressing WCPFCs performance. The ISSF believes that a score of 70 is appropriate for this PI. Thus, a Condition is required in which objectives are established through the WCPFC and linked to the objectives of the PNA and the individual members of the PNA. These should be established through a transparent process. As an example, refer to the Conditions placed for the MSC certification of the New Zealand Albacore Troll Fishery.</p>	<p>As above.</p>
<p>ISSF/OPAGAC/ALBACORA SA/EUROTHON 3.1.4: It Is unclear what incentives will be created because "the system" being addressed in the assessment does not yet fully exist (a VDS in early stages of implementation, etc). Moreover, perverse</p>	<p>There is evidence that the VDS creates a strong incentive for sustainability with the opportunity to develop enterprise rights that would increase the incentive for</p>

<p>incentives would be created through separation of the normal fishing operation into uncertified and certified units. Additionally, the function of the WCPFC in creating incentives for member non--PNA states is not well addressed. The Conclusion in the Report That “<i>the Weaknesses in VDS reviews and the clarity in the way that VDS decisions are linked to scientific advice falls short of ensuring that these incentive effects do not contribute to unsustainable fishing practices in future</i>” should be sufficient for a score of 70 and thus a Condition. The Condition should require the PNA to operationally create appropriate incentives through their licensing agreements.</p>	<p>sustainability. This is an issue on which there is strong temptation for the assessors and stakeholders in this assessment to be prescriptive because of the obvious scope for improved rights-based management arrangements to enhance the value and sustainability of WCPO fisheries. This is not the role of this assessment, and the fishery scores SG 80.</p>
<p>Fishery specific objectives</p>	
<p>WWF 3.2.1: No information is provided on a key aspect of the SG 80, that of explicitly included in management especially with regard Principle 1. Information must be provided on how the fishery specific objectives are explicitly included in management, especially those related to maintaining stocks at a Bmsy and reducing fishing effort as the stock levels nears the limit reference point.</p>	<p><u>The standard for SG80 is that <i>Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are explicit within the fishery’s management system,</i> where these objectives are fishery specific. Short term objectives for the WCPO purse seine are determined in CMM 2008-01 as <i>achieving over a 3-year period commencing from the date this measure comes into effect in 2009, a 30% reduction in fishing mortality on bigeye tuna in the purse seine fishery in that area and a reduction in the risk of overfishing yellowfin tuna</i>”, with the understanding that achievement of these objectives will maintain the skipjack stock at above levels associated BMSY. There is no requirement for relating these objectives to harvest control rules, consistency of objectives and harvest control rules will be essential in future. The additional requirement at SG100 is that the objectives should be <i>well-defined and measurable, and demonstrably consistent with P1 and P2 outcomes</i>. The assessors consider that the measurability and related requirements are largely met by the objectives set out in CMM 2008-01, against which the performance of the fishery is regularly measured and reported on by SPC and the Scientific Committee, but it is not met with respect to some other elements of the</u></p>

	management system for this fishery, particularly the bycatch measures, and therefore this PI has been scored at 80.
ISSF/OPAGAC/ALBACORA SA/EUROTHON 3.2.1: Short-term operational objectives are lacking. It may be argued that PNA and WCPFC management measures are statement of tactical objectives, but in the opinion of ISSF operational objectives must be developed and linked to harvest control rules (1.2.1 and 1.2.2) at both the PNA and WCPFC levels. Specification of fishery specific objectives must be led by the development and implementation of harvest control rules	See above; and note that a Condition has been raised for harvest control rules and reference points to operationalize stock specific short term objectives.
ISSF 3.2.1: The fishery---specific objectives are only implicit and therefore ISSF maintains its original comment and score of 60, together with a Condition to ensure that appropriate, explicit, short and long term objectives are in place.	As above
Decision making	
WWF 3.2.2: WWF recommends that the condition be amended to require, explicitly, that the minutes of all PNA meetings, especially those of the VDS Committee are made publicly available on a timely basis. WWF recommends that those annual reports should be publicly available.	The SG 80 only requires explanations for actions and this is reflected in the existing Condition.
OPAGAC/ALBACORA SA/EUROTHON 3.2.2 (a): The PNAs decision-making processes are not clearly defined, nor are they transparent.	See above
OPAGAC/ALBACORA SA/EUROTHON 3.2.2 (b): The record and continuity of PNA decisions has demonstrated the ability and will to make timely decisions, but it is unclear how they are achieved (consensus, voting, or other methods).	See above
OPAGAC/ALBACORA SA/EUROTHON 3.2.2 (c): With dynamic fisheries transparent procedures must be in place to assure that the management system can respond in a timely and appropriate manner. These procedures must be developed and made available for scrutiny.	See above
OPAGAC/ALBACORA SA/EUROTHON 3.2.2 (d): The WCPFC decision making process, based on consensus decisions, but with a provision of a third quarters majority voting system in case that non	This is not correct. The decision making process requires a three quarter majority in each of two chambers of non FFA members and

<p>consensus is achieved, is in fact ruled by the FFA 16 member countries majority, against the other members, and provides an unbalanced situation that was witnessed during the adoption of CMM 2008-01, where most of the initiatives adopted were proposed by FFA. WCPFC 7th Session in Honolulu in December 2010, was another example of that: neither the proposal presented by Japan on a capacity limitation, nor the EU proposal on a three month total fleet stop, were considered by the FFA group as management alternatives that could effectively revert the overfishing occurring in the bigeye tuna population. One more year of application of CMM 2008-01 will not improve the bigeye tuna population.</p>	<p>FFA members (Article 20 of the Convention).</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 3.2.2:</p> <p>It is very difficult to understand that the certification body could allow 2 years after the certification, to PNA to incorporate transparency, best scientific advice, monitoring and reporting in the decision making process as well as in the operation of the management scheme.</p>	<p>There is evidence that use is made of the best scientific information available; of effective monitoring and reporting of outcomes, and of opportunities for participation including in PNA processes. The shortcomings identified with respect to the SG80 scoring issues include a lack of clarity in the basis for decision-making on the VDS and a lack of explanation in some cases on the management response to relevant findings and recommendations. These are appropriately addressed by the Condition and the timeframes within it.</p>
<p>ISSF 3.2.2: PNA must respond to the need for appropriate analyses and evaluations that can be used to make licensing agreements for transparent. The burden must be on the PNA since the vessel operators are not the entities pursuing certification.</p>	<p>No response required.</p>
<p>Compliance:</p>	
<p>WWF 3.2.3: The failure of some PNA members to comply with the reporting requirements of the WCPFC via Part 2 Annual Reports, and the implications this has for their capacity and willingness to ensure that their commitments to bodies such as the WCPFC and the PNA are met. (<i>Peer Review comment</i>)</p>	<p>This factor doesn't affect the scoring of 3.2.3 which affects the scoring in the fishery.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 3.2.3 (a): Overall, each PNA member must be required to demonstrate their ability to meet the MSC enforcement obligations to implement the management measures of the PNA and the WCPFC.</p>	<p>A comprehensive MCS system is in place (Section 7.2). Sanctions are applied and are thought to provide an effective deterrent (Boxes 11 and 12), and there is no evidence of systematic non compliance in the purse seine</p>

	fishery (MRAG, 2009).
<p>OPAGAC/ALBACORA SA/EUROTHON 3.2.3 (b): There are no clear mechanisms defined, neither in PNA nor in WCPFC to apply a clear scheme of actions against non compliance that will be able to revert an overfishing situation resulted of non compliance with management measures applied by both bodies. Clear compliance and enforcement rules should be defined not only to fight IUU, but also to work against non compliance by Commission member parties.</p>	<p>Vessels or fleets that overfish are in breach of their licensing obligations, and are subject to sanctions including fines, confiscation, blacklisting under the FFA register and listed on the WCPFC IUU Black list.</p>
<p>ISSF 3.2.3: While a compliance system is in place it is not the compliance system that will have to be implemented after certification. The existing compliance system has not “<i>demonstrated</i>” that it is capable of monitoring unassociated sets separate from log sets and that the observer program is now operationally responsive to assure that timely decisions can be made. For example evidence has not shown that the 100% observer scheme has worked effectively, or more importantly that it will work effectively under a more rigorous MSC certification. This PI requires a score of 60 with a Condition that specifies a compliance implementation plan.</p>	<p>Evidence has been provided that comprehensive observer system is in place (with 100% coverage) with appropriate quality checks and WCPFC audit to monitor the reporting by observers. These include differentiation between set types. There is no evidence to date to suggest that the system is ineffective. All the evidence suggests that the existing system is robust but maybe in need of strengthening some areas .</p> <p>Under the requirements for further CoC monitoring, specialist observers are being trained to undertake the appropriate CoC validations. PNG is being used as the test case for early application. CoC systems are not subject to scoring via the FAM.</p>
<p>OPAGAC/ALBACORA SA/EUROTHON 3.2.3: The current observer system is based on National programs of the PNA countries, and there is not a central regional coordination for the activity of those observers. In fact during the 7th WCPFC Commission meeting held in Honolulu, it was clearly stated by the WCPFC Observer coordinator that no reporting was provided from the National programs to WCPFC. We, as users of the observer programs in both sides of the Pacific Ocean on board of our vessels, have serious concerns about the capacity of the WCPFC observers in:</p> <ul style="list-style-type: none"> - Being able to adequately identify the school type, especially during the FAD closure. A proof of that has been the need for further clarification of the FAD set definitions adopted in CMM 2009-02. - Being able to guarantee the separation on board 	<p>Reports on the effectiveness of the WCPFC ROP is covered in pages 99-100 of the report, which demonstrates coordination, application by national management authorities, as well as strength and weaknesses of the scheme. The assessors’ conclusion is that the observer scheme as applied is effective. The issue of set identification is covered in the Observer modules. The issue of CoC, as required by MSC Certification, is being addressed.</p>

<p>the vessels of skipjack coming from different set types.</p> <ul style="list-style-type: none"> - Being able to guarantee the separated transshipment of skipjack coming from different set types and avoiding mix on the cargo vessel. <p>A recent case of alleged murder of an observer in PNG waters, provides considerable source of concern about the level of intimidation and eventual corruption to which observers may be pressured in certain fleets.</p>	
<p>Research plans</p>	
<p>ISSF 3.2.4: The ISSF is concerned about the lack of transparency in PNA member national research plans and maintains its view that this PI should receive a score of 80.</p>	<p>SPC is science provider to the Western and Central Pacific Fisheries Commission (WCPFC) and separately to its Members including PNA, and has a very transparent research planning process. The size and strength of national research programmes varies (as reported in the WCPFC National Part 1 reports), and these are mostly undertaken in coordination with SPC.</p>
<p>Performance review</p>	
<p>WWF 3.2.5: WWF supports the recommendation but suggests that it be strengthened to require explicitly that the review be undertaken in a transparent way and that the outcomes be made publicly available.</p> <p>Client Action Plan. The response does not, in WWF’s view indicate clearly that the PNA will establish a system of regular internal and external review of all aspects of the management system. WWF believes that the client’s intentions in this respect should be clarified.</p>	<p>Such transparency is not part of the MSC standard.</p> <p>The Client (within the CAP) has provided a commitment to a continuous internal and external review process.</p>
<p>ISSF 3.2.5: Scoring Criteria for this PI Require that WCPFC management system has been subject to “occasional external reviews.” To our knowledge this important key to the management system has not happened. Therefore, this element should be scored 70 and a Condition Imposed that this occur and that the PNA aggressively support this WCPFC action.</p>	<p>WCPFC has a stated commitment to an external review consistent with the Kobe Plan of Action meets the requirement of “occasional external review”.</p>
<p>Condition Setting</p>	
<p>MSC C.1: The current wording of the condition does not follow the narrative or metric performance</p>	<p>Conditions have been revised.</p>

<p>indicator and includes prescriptive wording as to how the condition may be achieved.</p>	
<p>WWF is concerned that the approach adopted by the assessors to condition setting on Principle 1 indicators would allow catch taken outside PNA waters by vessels not included in the certification, to be subject to less rigorous or absent harvest control rules. The FAM requires that conditions:</p> <ol style="list-style-type: none"> 1. Be outcome focused (TABD33:3.4.5: closely follow the narrative or metric form of the performance indicators and scoring guideposts used in the assessment tree and are defined in terms of measurable outcomes or results expected, the specific time frame over which the condition must be met), 2. Are achievable (TABD33:3.4.8: changes to management arrangements or regulations, or re-arrangement of research priorities by these entities, in order to satisfy the Certification Body that the conditions are both achievable by the certification client and realistic in the time frame specified), and 3. Can be met by the client action plan (TABD 33:2.4.7: The Certification Body shall seek a detailed agreement from the client as to how the conditions and all milestones will be addressed („the client action plan□), by whom and the specified time period, how the action(s) is expected to improve the performance of the fishery. <p>In the case of conditions relating to Principle 1, these aspects of condition setting must apply to the <u>whole</u> skipjack stock in the Western Central pacific and management of that stock by the WCPFC.</p>	<p>Catches taken outside PNA waters will be considered by PNA in implementing their Harvest Control Rule under Condition 2.</p> <p>Conditions have been revised</p> <p>The client has delivered an appropriate Action Plan to achieve the conditions</p> <p>As above</p> <p>See comment at the top of the box.</p>
<p>Client Action Plan</p>	
<p>WWF: PNA’s note requires clarification and its implications for the Client’s ability to meet the conditions of certification made explicit.</p>	<p>This does not affect the ability of the PNA to meet conditions set out in the assessment. The CAP is an issue</p>

	which is independent of the assessment made.
<p>WWF: WWF believes that the note requires clarification and its implications for the Client's ability to meet the conditions of certification made explicit.</p> <p>WWF also recognizes the PNAO has been established to manage the fishing arrangements for the PNA and recommends the use of mechanisms such as compliance bonds to enable accountability through the to the fishing operations.</p>	This is not an MSC requirement.
<p>WWF: The difficulties in achieving solidarity between PNA members with respect to ongoing allocation and other key issues associated with the VDS and effort control (<i>Peer review comment</i>)</p>	We note this common issue with many fisheries but do not feel that it affects the scoring.
<p>Other comments</p>	
<p>OPAGAC: From the list of stake holders interviewed it is clear, that the only fishermen association that belong to the DWFN operating in the region interviewed was the Japan Purse Seine Fishing Association. The rest of the fishermen associations or companies interviewed are directly involved in the PNA countries. There is a lack of perspective from the major fishing fleets that operate in PNA waters in the report, showing the lack of interest from the major users of the PNA EEZ on this certification process. It was part our fault not been able to coordinate a meeting with your consultancy at the of the public consultation nor having time to send a writing comment expressing our doubts about it.</p> <p>In relation to the consultation process, it is very difficult to adequately examine a more that 400 pages very complex report in such a short time for people who's interests are not solely in this certification process. The comments expressed by our organization could have been better documented if more time was allowed.</p>	OPAGAC were sent details of the stakeholder consultation process on 13 June, 2010, along with other DWFN stakeholders. They had the option to seek consultation as per other groups at an early stage.
<p>ISSF Appendix:</p>	The MSC process is based on an independent, objective and factual assessment of the fishery. Inevitably this will identify both strengths and weaknesses in fishery management. These are then reported openly by the assessment team. ISSF in the Appendix have only identified points of weakness. However, overall the unassociated fishery comfortably met the MSC requirements for management of the stock (P1 score 84.4), for management of ecosystem interactions (P 2 score 86.3) and for

	<p>an effective management system (P 3 score 85.5). Some of these weaknesses were associated with the logset fishery which failed the assessment, some of the weaknesses have been addressed through Conditions and recommendations, and many other are the basis for not assessing the fishery at a perfect standard.</p>
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15.10 APPENDIX J: PNA CHAIN OF CUSTODY STATEMENT.

Parties to the Nauru Agreement

PNA Office - P.O. Box 3992
Majuro, Marshall Islands (MH) 96960

Phone: (692) 625-7626/7627 Fax: (692)625-7628

Fishery Report CoC Statement

The PNA Office has evaluated the risks in the MSC PNA unassociated purse seine Skipjack Tuna (*Katsuwonus pelamis*) supply chain and identified measures necessary to ensure robust traceability and satisfy the MSC's chain of custody requirements. These measures are to be implemented by the Client and approved by an accredited MSC certification body.

Independent consulting company MRAG Asia Pacific has undertaken a risk assessment of the supply chain from the fishery to the point of sale and transfer into ongoing MSC Chain of Custody and identified areas of risk where Chain of Custody controls will need to be implemented. These include (but are not limited to) the following key points:

- The documented control system required for managing the chain of custody that ensures only MSC eligible fish is labelled and sold as such; and mitigating the risk of fraudulent claims from within and outside the certified fishery.
- Implementation of a group chain of custody system for the management and control of chain of custody onboard catch and carrier vessels.
- Identification and confirmation of MSC free school sets brought onboard seiners
- Segregating the catch between free school and (non-MSC) log-set and FAD related fisheries
- Physical and/or temporal separation of MSC and non-MSC fish stored onboard vessels, including verification that no mixing has taken place onboard i.e. that MSC and non-MSC fish are not mixed in the same well
- Segregating and demarcation of fish on discharge to the carrier, during storage onboard carrier and during discharge on landing
- Traceability back to MSC free school set during vessel storage and delivery
- Verification, recording and reconciliation of MSC catches, inputs and output volumes

In order to assure traceability and continual monitoring, designated verifiers will be trained and deployed on all purse seiners supplying MSC material. Their deployment will be subject to a system of independent verification including debriefing, and possibly use of seals and electronic evidence.

It is the responsibility of the Client to operate MSC chain of custody systems for the supply of certified tuna, including catch and carrier vessels, to ensure that only material originating from

the unit of certification is sold as MSC certified. These systems will then be subject to audit and separate certification.

Only tuna supplied from organizations that are included within the scope of the Client's chain of custody certification can be claimed to have originated from this certified fishery.

Maurice Brownjohn OBE

Commercial Manager

15.11 APPENDIX K: CLIENT CONFIRMATION OF PUBLIC CERTIFICATION REPORT

Acceptance of this Public Certification Report was received from PNA on 19 December 2011.

15.12 APPENDIX L: DOCUMENTS RELATING TO OBJECTION

The Key documents relating to the Objection process relating to this fishery are presented below, in chronological order.

MSC Notice of Objection

This form should be completed in accordance with the MSC Objections Procedure. More information on the procedures can be found at <http://www.msc.org/get-certified/fisheries/assessment/objections>

This form may be completed and emailed to the MSC at objections@msc.org, where it will be forwarded to the Independent Adjudicator.

PART ONE: IDENTIFICATION DETAILS

Fishery assessment to which this objection applies	PNA Western and Central Pacific Skipjack Tuna (<i>Katsuwonus pelamis</i>) unassociated purse seine Fishery
Name of certification body	Moody Marine
Contact details for objecting party	
Organisation(s)	International Seafood Sustainability Foundation (ISSF)
Contact person	Susan Jackson
Address	P.O. Box 11110 McLean, VA 22102, USA
Phone Number (including country code)	+1 703-226-8101
Fax Number (including country code)	+1 703-226-8100
Email address	sjackson@iss-foundation.org

The following objection is being lodged on behalf of the above named organisation(s). I am authorised to make this submission on the above named organisation's behalf.

Name: Susan Jackson

Position: President

Signed: 

Dated: August 1, 2011

Introduction, Overview and Categorization of ISSF's Notice of Objections to Certifying Body Moody Marine, Inc.'s Determination Re: PNA Western and Central Pacific Skipjack Tuna

The International Seafood Sustainability Foundation ("ISSF") respectfully submits this introduction, overview and categorization of its objections further to its accompanying Notice of Objection. This summary outlines ISSF's credentials, its participation in the Determination to date, and categorizes its objections to the Determination. Though also contained in the Form MSC Notice of Objection, ISSF thought this outline would serve a useful overview for the Independent Adjudicator.

ISSF's Credentials

ISSF is the world's only non-profit organization combining science, non-governmental organizations and industry dedicated to sustainable management of the world's highly migratory tuna stocks. ISSF's website sets forth complete information about the organization. See www.iss-foundation.org.

ISSF's Scientific Advisory Committee consists of scientists from around the globe with expertise devoted to the study and sustainability of tuna stocks specifically, including: Dr. Victor Restrepo, Chair of ISSF's Scientific Advisory Committee and formerly the Chief of the NOAA/NMFS Sustainable Fisheries Division and head scientist for the U.S. Delegation to the International Commission for the Conservation of Atlantic Tunas (ICCAT); Dr. Robin Allen, former Director of the Inter-American Tropical Tuna Commission (IATTC); Dr. Richard B. Deriso, the current Chief Scientist for the IATTC; Dr. Gerald Scott – a former elected Chair of ICCAT's Standing Committee on Research and Statistics as well as the Chief US scientist to ICCAT; Dr. Dale Squires, the Senior Scientist and Economist for the U.S. National Marine Fisheries Service who served on the U.S. Delegation to Renegotiate South Pacific Tuna Treaty and as the Pacific Fishery Management Council Leader of the Highly Migratory Species Plan Development Team; and Dr. Iago Mosqueira, who chaired the Working Party on Tropical Tuna of the Indian Ocean Tuna Commission from 2005-10.

ISSF's other Scientific Advisory Committee members include Dr. Meryl Williams, who initiated FishWatch-AsiaPacific on behalf of the AFS and formerly served as the Director General of the WorldFish Center; Dr. Laurent Dagorn, currently the coordinator of the EU funded project (MADE) that addresses mitigating adverse ecological impacts of open ocean fisheries (tuna purse seiners and longliners) in the Indian ocean, Atlantic ocean and the Mediterranean Sea; and Dr. John Hampton, the Manager of the Oceanic Fisheries Programme (Secretariat of the Pacific Community), where he manages fisheries stock assessment and population dynamics research.

ISSF's website lists the credentials of its Scientific Advisory Committee more fully: <http://iss-foundation.org/about-us/scientific-advisory-committee/>.

Members of the Committee are volunteers who serve in their expert capacity to review scientific information, and their listing here is for purposes of describing ISSF. It does not indicate their endorsement or views regarding these particular objections.

ISSF's NGO board members include Dr. William Fox, the Vice-President and Managing Director of Fisheries for the U.S. World Wildlife Fund (WWF); Miguel Angel Jorge, Director of the National Geographic Society's Oceans Initiative; and Dr. Alfred Schumm, Marine Program Director for WWF-Germany. ISSF's NGO Stakeholder Committee includes participants from TRAFFIC, NOAA, the New England Aquarium, Conservation International, FishWise, among other non-governmental organizations. Their listing here is for purposes of describing ISSF, and does not indicate their endorsement or views regarding these objections.

Finally, ISSF's industry participants include fifteen of the world's leading tuna processors globally. ISSF's website identifies these participants:
<http://iss-foundation.org/about-us/participants/>.

ISSF's Participation in the PNA Determination

ISSF made several written submissions to the Certification Body during the fishery assessment process beginning in August, 2010 and more recently, on June 2, 2011 with its detailed comments on the draft assessment report for public consultation. Accordingly, ISSF now respectfully submits its Notice of Objection pursuant to MSC Tab Directive D-023 v 3 Section 4.4.1(b).

Categorization of ISSF's Objections

ISSF understands and appreciates the role of the Independent Adjudicator is not to re-assess the Determination, but instead to examine "whether the Certification Body made an error that materially affected the outcome of its Determination." See MSC Tab Directive D-023 v 3 Section 4.2.1. ISSF respectfully requests that the Independent Adjudicator remand the Determination on the following grounds pursuant to MSC Tab Directive D-023 v 3 Section 4.8.2:

1. Serious Procedural Irregularities under Section 4.8.2(a)
 - o The Certification Body failed to consult with all "relevant entities" when setting conditions as required under the Marine Stewardship Council Fisheries Certification Methodology Section 3.4.8. Specifically, the Certifying Body did not consult all member governments of the Western and Central Pacific Fisheries Commission (WCPFC), the intergovernmental regional fisheries management organization responsible for managing skipjack tuna throughout its Convention Area, which includes the PNA region subject to the Determination. It is impossible to understand how the Certifying Body could make any Determination at all without consulting the governments who comprise the fishery management and regulating body with authority, power

and control over management of the migratory tuna stocks subject to the Determination. Any conditions theoretically set forth are entirely illusory absent adoption by the WCPFC and implementation and enforcement by the member and cooperating non-member governments of the WCPFC. Failure to consult the member governments of this authority as directed under Section 3.4.8 is a serious procedural irregularity that undermines the validity of the entire Determination.

- The Certification Body further failed to harmonize its assessment with overlapping fisheries. Specifically, the proposed PNA fishery overlaps with the Tosakatsuo Suisan Pole and Line Skipjack Fishery (it is the same stock). MSC Tab Directive D-015 Section 2.1 requires the Certifying Body to ensure consistency with respect to evaluation, scoring and conditions for overlapping fisheries. In fact, MSC staff highlighted this need for harmonization with the Tosakatsuo fishery in their comments to the first draft report. The Certifying Body's failure to harmonize its assessment and conditions with the Tosakatsuo Pole and Line Skipjack Fishery is a procedural failure that requires remand.

2. Mistake of Material Fact under Section 4.8.2(b)(i)

- The Certification Body indicated that 70% of the skipjack tuna stock relevant to management is within waters controlled by member nations to the PNA agreement. Presumably this fact justified the Determination that the PNA nations could deliver sustainable management, absent action by the WCPFC. The fact is unsupported and incorrect at any point in time: data from the scientific stock assessment shows that, on average, the proportion of the western and central Pacific Ocean skipjack stock subject to PNA member control can be as little as 25%. At any point in time, this proportion will fluctuate due to the highly migratory nature of skipjack tuna, as well as other considerations such as changes in the environment and the amount of fishing inside and outside PNA waters. The scoring subject to this material factual error cannot be justified. Equally important, *any* Determination based on some percentage of the tuna stock in question violates the first and most fundamental MSC certification principle, that a "fishery [can] only pass if the whole fish stock(s) meet th[e] standard." See MSC Tab Directive D-003 v1.1; see *infra* 3. below.

3. The Scoring Decision Was Arbitrary and Unreasonable under Section 4.8.2(b)(iii)

- First, the Determination cannot under any set of circumstances support a passing score under Principle 3 (the fishery is subject to an effective management plan) and its associated Performance Indicators. Simply put, PNA itself is not a fishery management body with demonstrated or established authority over the whole stock and has zero record or history establishing any target and limit reference points or harvest control measures. In fact, the Determination does not address and it is unknown what occurs if PNA members cannot agree on target and limit reference points, harvest control

rules or other actions required for sustainable management. More important, PNA represents only a percentage of the nations required for sustainable management of the highly migratory Central and Western Pacific skipjack stocks, which fall under the Convention for management by the Western and Central Pacific Fishery Commission (“WCPFC”). The PNA member nations represent only 8 of the 32 nations and territories comprising the membership of the WCPFC, the intergovernmental authority responsible for management of the Central and Western Pacific skipjack stock. And data indicates that the PNA waters account on average for as little as 25% of the whole skipjack stock subject to assessment. Notably, WCPFC has never been able to reach consensus on target and limit reference points or harvest control rules for skipjack stock management, leaving the stocks subject to unilateral and unlimited catch, and unmanaged. For this same reason, objections to the proposed certification of the New Zealand Albacore Tuna Troll Fishery were resolved by specific and express conditions that WCPFC establish target and limit reference points and establish and test a harvest control rule. See *Acknowledgement by the Independent Adjudicator with respect to the Agreed Resolution of an Objection to the Final Report and Determination on the Proposed Certification of the New Zealand Albacore Tuna Troll Fishery under the MSC Principles and Criteria for Sustainable Fishing* (April 28, 2011). In sum, the proposed PNA management system is not a management system at all, but a representation of potential future management, and more importantly, PNA does not include all countries required for sustainable management of the stock. This legal and customary framework cannot yield a passing score on Principle 3 for Effective Management. See *Final Decision of the Independent Adjudicator in the Matter of an Objection to the Certification of the Faroese Pelagic Organisation North-East Atlantic Mackerel Fishery* (Jan. 28, 2011). Other serious deficiencies that render the scoring decision under Principle 3 arbitrary and unreasonable are set forth more fully in the accompanying MSC Notice of Objection Form, specifically addressing Performance Indicators 3.1.2 (Consultation, roles and responsibilities); 3.1.3 (Long term objectives); 3.2.1 (Fishery-specific objectives); 3.2.2 (Decision-making process); and 3.2.3 (Compliance and enforcement).

- Second, the Determination’s scoring for Principle 1 -- that a fishery be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations – is arbitrary and unreasonable:

No Target and Limit Reference Points under Performance Indicator 1.1.2

The Determination indicates it anticipates PNA will someday be in position to set target and limit reference points for catch quantities in PNA member jurisdictions. That is not a target and limit reference point sufficient for any passing score under Performance Indicator 1.1.2. At most it is a hope and a prayer based on nothing more than wishful thinking. WCPFC has completely failed to set skipjack tuna target and limit reference points (which are required according to its own Convention). PNA, moreover, at most would be able to set the required references, if at all, for only a portion of the highly migratory

skipjack in PNA member waters at anytime, about 25% of the stock, not the whole stock.

No Harvest Strategy under Performance Indicator 1.2.2

Nor can the Determination's scoring be reasonable in the absence of a robust and established harvest strategy. At most the current Determination references a potential future strategy, but there is no harvest strategy based on current or existing evidence. Similarly, PNA itself cannot meet the Performance Indicator requirements for an established harvest strategy on its own, without WCPFC and the twenty-four other nations and territories responsible for managing the whole stock.

Insufficient Information and Monitoring under Performance Indicator 1.2.3

The Performance Indicator requires that "[t]here is good information on all other fishery removals from the stock." The Philippines, Indonesia and Vietnam do not meet this requirement. In the case of Vietnam, in fact, catches of skipjack tuna are not known at all.

No Ability to Assess Stock Status under Performance Indicator 1.2.4

The Performance Indicator requires scoring based on a determination that the assessment is appropriate for the stock and for the harvest control rule. Because there is no established harvest control rule, it was both unreasonable and arbitrary for the Certifying Body to assess any passing score for this Principle based on this Performance Indicator.

PART TWO: OBJECTING PARTY'S CREDENTIALS

<p>Please outline your prior involvement with this assessment</p>	<p>Subject fishery - 4.4.1 (a) <input type="checkbox"/></p> <p>Written submissions - 4.4.1 (b) <input checked="" type="checkbox"/></p> <p>Meetings attended - 4.4.1 (b) <input type="checkbox"/></p> <p>Participation prevented/impaired - 4.4.1(c) <input type="checkbox"/></p>
<p>If you are objecting on the basis that you were a party to the assessment process that made written submissions to the certification body during the fishery assessment process or attended stakeholder meetings (as per Paragraph 4.4.1 (b) of the objections procedure) or that the failure of the certification body to follow procedures prevented or substantially impaired your participation in the fishery assessment process (as per Paragraph 4.4.1(c) of the objections procedure), then please provide evidence and/or outline details to support this classification.</p>	<p>ISSF has participated as a stakeholder in this assessment since June 2010, making several submissions to the assessment team, including detailed comments on the draft assessment report on June 2, 2011.</p>
<p>Please state your interest in the fishery and its certification</p>	<p>ISSF is a global partnership among leaders in marine science, the tuna industry and the World Wildlife Fund, who share a common vision to promote the long-term conservation and sustainable use of tuna stocks and the ecosystems upon which they depend. Furthermore, many tuna industry participants of ISSF purchase Western and Central Pacific skipjack, bigeye and yellowfin tuna. Also, the Board of Directors of ISSF is advised by a scientific committee comprised of preeminent</p>

	<p>tuna stock assessment scientists and fisheries management experts.</p> <p>ISSF is concerned that the Western and Central Pacific Fisheries Commission (WCPFC), that is charged with managing skipjack tuna throughout its range, has shown that it is incapable, to date, of setting effective conservation and management measures for stocks that are experiencing overfishing, such as bigeye tuna. Even if skipjack tuna in the WCPFC Convention Area is currently in a healthy status, the ineffectiveness of the WCPFC prevents the entire skipjack stock from being managed in conformity with MSC standards.</p>
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PART THREE: CATEGORISATION OF OBJECTIONS

You must complete one or more of Parts Three to Five in accordance with your answers to the following questions.

<p>Are you objecting on the basis that there was a serious procedural or other irregularity in the fishery assessment process that made a material difference to the fairness of the assessment, as per Paragraph 4.8.2 (a) of the objections procedure?</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No</p> <p>If YES, complete Part 4</p>
<p>Are you objecting on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified, and the effect of the score in relation to one or more of the particular performance indicators in question was material to the outcome of the Determination, as per Paragraph 4.8.2 (b) of the objections procedure?</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p> <p>If YES, complete Part 5</p>
<p>Are you objecting on the basis that additional information not forming part of the record¹ that is relevant to the circumstances at the date of the Determination has not been considered, as per Paragraph 4.8.2 (c) of the objections procedure?</p>	<p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p> <p>If YES, complete Part 6</p>

¹ As defined in Paragraph 4.7.5 (a) of the objections procedure.

PART FOUR: OBJECTION PURSUANT TO PARAGRAPH 4.8.2 (A)

4.1 Please identify:

- a) the procedure(s) that you or your organisation believe were omitted or incorrectly followed by the certification body in the conduct of this assessment and the relationship of these matters to the MSC's procedural rules, as set out in the MSC Fisheries Certification Methodology, Fishery Assessment Methodology, TAB Directives or any other rules that were in force at the time of the assessment; and/or

First, the Certification Body failed to consult with all “relevant entities” when setting conditions as required under the Marine Stewardship Council Fisheries Certification Methodology Section 3.4.8. Specifically, the Certifying Body did not consult all member nations and territories of the the Western and Central Pacific Fisheries Commission (WCPFC), the intergovernmental regional fisheries management organization responsible for managing skipjack tuna throughout its Convention Area, which includes the PNA geographies subject to the Determination. Any conditions theoretically set forth are entirely illusory absent adoption by the WCPFC and implementation and enforcement by the member and cooperating non-member governments of the WCPFC and failure to consult these authorities as directed under Section 3.4.8 is a serious procedural irregularity that undermines the validity of the Determination.

Second, the Certification Body further failed to harmonize its assessment with overlapping fisheries. Specifically, the proposed PNA fishery overlaps with the Tosakatsuo Pole and Line Skipjack Fishery (it is the same stock). MSC Tab Directive D-015 Section 2.1 requires the Certifying Body to ensure consistency with respect to evaluation, scoring and conditions for overlapping fisheries. MSC staff highlighted this need for harmonization with the Tosakatsuo fishery in their comments to the first draft report. The Certifying Body's failure to harmonize its assessment and conditions with the Tosakatsuo Pole and Line Skipjack Fishery is a procedural failure that requires remand. In particular, the Tosakatsuo certification has a single condition to deal with Performance Indicators 1.1.2 and 1.2.2 simultaneously, requiring actions by ***both*** WCPFC and FAJ (Fisheries Agency of Japan). The PNA assessment, on the other hand, has two conditions to deal with the same Performance Indicators 1.1.2 and 1.2.2, but the conditions require actions by either WCPFC or PNA. To achieve consistency under MSC TAB Directive D-015, the conditions must conform and require ***both*** PNA and WCPFC to take action.

4.2 Please state why you or your organisation believes that the failure to follow procedures by the certification body has significantly affected the result of the Determination such that the Determination should be altered?

The Certifying Body cannot award a passing score under any Principle without correcting and addressing these procedural irregularities, which undermine the validity of the Determination in its entirety.

PART FIVE: OBJECTION PURSUANT TO PARAGRAPH 4.8.2 (B)

- 5.1 Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believe that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the requirements of Paragraphs 4.8.2 (b) (i), 4.8.2 (b) (ii) and/or 4.8.2 (b) (iii) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

<i>Performance Indicator</i>	1.1.1 Stock Status
<i>Reason</i>	The second element of SG100 is not met. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The second element of SG100 for this PI states: "<i>There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.</i>"</p> <p>Noting that WCPFC has not adopted target and limit reference points, the assessment states that Bmsy serves as a default target (p. 37) and a score of 100 was given because the stock assessment indicates that the biomass is above Bmsy, with high certainty.</p> <p>However, on p. 37, the assessment also notes that according to Article 6 of the WCPFC convention, stock-specific reference points need to be determined according to the guidelines set out in Annex II of UNFSA. Those UNFSA guidelines set Fmsy as the default limit (not a target), which is contradictory with Bmsy being treated as a target (in other words, the biomass that would result from managing the stock using Fmsy as a limit will be greater than Bmsy).</p> <p>Therefore, the default target biomass reference point chosen by the assessment team is inconsistent with the WCPFC Convention. In addition, while the FAM in 6.2.2 allows for Bmsy to be used as a target, it also allows for the target to be a higher biomass level. In the absence of knowing what this higher biomass target is, SG100 cannot be met.</p> <p>Furthermore, this PI received a score of 95 in the Tosakatsuo Suisan Pole and Line Skipjack fishery certification. The PNA assessment report does not explain why the scores have not been harmonized in accordance with TAB 015.</p>

<i>Performance Indicator</i>	1.1.2 Reference Points (Condition 1)
<i>Reason</i>	Condition 1 states: " <i>Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met.</i> "

	<p>SG80 requirements for the entire stock cannot be met if only PNA adopts target and limit reference points. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p>
<p><i>Rationale</i></p>	<p>MSC TAB 003 clearly states that the whole stock has to meet the standard and that a fishery would not pass if the standard was not met irrespective of who, including fisheries other than the one seeking certification, was responsible for the stock not meeting the standard.</p> <p>In the responses to the Public Draft Report, the Assessment Team contends:</p> <p><i>"PNA are in a position, given the quantity of catch within their jurisdiction (70%) to implement management measures which would ensure the entire stock is managed in a sustainable manner, thus meeting the standard as specified in TAB 003. The conditions 1 and 2 require that PNA management actions take account of the range of the skipjack stock." (p. 517)</i></p> <p><i>"The range of the stock that falls under the management of PNA parties is 70%." (p. 520)</i></p> <p>The Assessment Team's assertion that 70% of the skipjack stock falls under the management of PNA countries is not supported by scientific evidence. The proportion of the stock at any one time in PNA EEZs must be based on the distribution of the assessed relative biomass of skipjack from the stock assessment results, not on any one year's catch. The stock assessment estimated that the average 2005-2008 skipjack biomass was distributed 17%, 48% and 35% into the three broad regions in the model. The EEZs of PNA countries cover approximately 0%, 45% and 11% of those three regions respectively, from which a simple estimate of the average proportion of the skipjack stock in PNA waters can be calculated as $(0 \times 0.17 + 0.45 \times 0.48 + 0.11 \times 0.35)$, or about 25% (this value could be higher if skipjack densities within a region are higher inside EEZs than they are outside, but the stock assessment does not provide such information). This 25% level is substantially below the 70% claimed by the assessment team.</p> <p>Regardless of whether the average abundance of skipjack in PNA waters is 25% or 70% of the total, or somewhere in between, the highly migratory nature of the stock must be taken into account in order to comply with TAB 003. The stock assessment model estimates high movement rates between the three regions in the assessment model. As an example, 60% of the average biomass in the eastern equatorial region</p>

	<p>corresponds to fish hatched in other regions. Therefore, fisheries that operate in one region affect the abundance of skipjack in other regions and can be responsible for the stock not meeting the standard if they are not included in the Condition. The appropriate management body that covers the entire stock is the WCPFC, and therefore the condition needs to be for WCPFC to adopt appropriate reference points.</p> <p>The following sentence from the final report (p. 2) included in the condition gives the impression that managing the stock throughout its range is optional: <i>"If required, active promotion of the adoption of equivalent target and limit reference points within the WCPFC."</i> Managing the entire stock is not optional under TAB 003.</p> <p>We also point to Section 14.2 of the Final Report which states that PI 1.1.2 is harmonized with the Tosakatsuo Suisan Pole and Line Fishery assessment. This is only partly true in the sense that both assessment scores for this PI are 75. However, the Condition set for the Tosakatsuo fishery explicitly acknowledges that both the local (Fisheries Agency of Japan) and stock-wide (WCPFC) management agencies need to adopt the reference points. In contrast, the PNA condition allows for the local and/or the stock-wide agencies to act. Therefore, harmonization has not been achieved as required by Directive 1.2 of TAB 015: <i>"As the critical outcome required of this harmonisation policy, the above steps shall ensure that consistent conclusions are achieved by the two (or more) fisheries, with respect to evaluation, scoring and particularly conditions."</i></p> <p>To be consistent with the recent New Zealand Albacore certification, the condition should read: <i>"Within four years of certification, target and limit reference points need to be agreed by WCPFC (and PNA), consistent with the management objectives and scientific stock assessment."</i></p>
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<i>Performance Indicator</i>	1.2.1 Harvest Strategy
<i>Reason</i>	The PI does not meet the SG80 guidepost for a robust and precautionary harvest strategy in place and therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The final report does not show evidence that the harvest strategy for the WCPFC is responsive to the state of the stock to meet SG80 guidelines for this PI.</p> <p>In the scoring comments for this PI, the assessment team justified a score of 80 because the <i>"WCPFC responded to the change in the results of the skipjack assessment and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the</i></p>

	<p><i>preparation of a CMM to replace CMM 2008-01 beyond 2011."</i></p> <p>The above justification is based on a potential outcome (WCPFC will not decide on a replacement CMM until December, 2011), rather than on existing evidence, and therefore SG80 guidelines are not met at the present time. This PI must be scored less than 80 and an appropriate Condition be placed.</p> <p>We also point out that the assessment team's treatment of the WCPFC in scoring this PI is inconsistent with how WCPFC was treated under 1.1.2 or 1.2.2. In the current PI (Harvest Strategy), the prominent role of WCPFC is recognized, whereas under the other two PIs (Reference Points and Harvest Control Rule) the assessment considered that PNA action alone is sufficient. We refer to our comments above (1.1.2) and reiterate that actions are needed to cover the entire stock (i.e., throughout the WCPFC).</p>
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<i>Performance Indicator</i>	1.2.2 Harvest Control Rule (Condition 2)
<i>Reason</i>	SG80 requirements for the entire stock cannot be met if only PNA adopts a harvest control rule. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt a harvest control rule. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>We have essentially the same concerns as expressed above for Condition 1 (PI 1.1.2). If only PNA adopts a harvest control rule, fisheries outside PNA EEZs can be responsible for the stock not meeting the SG80 standard.</p> <p>We also note that the assessment team states (p. 526) that "<i>The assessment team has made suggestions as to how this [SG80 outcome] should be achieved but the means of resolution is to be determined and implemented by the client.</i>" However, TAB Directive 033 does not leave this entirely up to the Client: "<i>The Certification Body shall specify conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified.</i>"</p>

<i>Performance Indicator</i>	1.2.3 Information and monitoring
<i>Reason</i>	The third element of the SG80 is not met. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	The third element of SG80 for this PI requires that " <i>There is</i>

	<p><i>good information on all other fishery removals from the stock.</i>" Several stakeholders, including ISSF, noted that this is not met for fisheries in the Philippines, Indonesia and Vietnam.</p> <p>The assessment team states that the catches of skipjack by these countries is 11% of the total (p. 527). This is incorrect. During the last 10 years, Indonesia and Philippines alone have been responsible for 25% of the total catch, on average (source: WCPFC yearbook). In the case of Vietnam, the catches of skipjack are not even known: <i>"fisheries data collection system in general and for tuna fisheries in particular of Vietnam is lacked and insufficient, and thus data of exact annual catch estimation of the tuna fisheries is not available so far"</i> (Vietnam's 2010 Annual Report to the WCPFC, WCPFC-SC6-AR/CCM-35).</p> <p>The last WCPFC stock assessment was conducted in 2010 using data up to 2009. Data deficiencies and their impacts on the assessments were addressed during the 2010 Commission meeting. For example: <i>"FFA members ... drew attention to the continuing advice from the SC that data deficiencies are affecting the quality of the scientific analysis and advice, and the WCPFC7 working papers that demonstrated the implications of incomplete, late or inaccurate data for the production of timely and reliable stock assessments. FFA members requested WCPFC7 record its concern regarding the continuing failure of CCMs to provide timely complete and accurate data and the effect of this failure on the Commission's scientific advice."</i> The final report of the PNA MSC assessment cites numerous potential improvements to the data collection systems in place for these countries; however, many of them were initiated in 2010 and it is not even known how effective they will be. While these efforts should be applauded and supported, the score given by the assessment team is based on a potential outcome rather than on existing practice. PI 1.2.3 addresses information that is collected to support the harvest strategy, not about information that could be collected.</p>
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<i>Performance Indicator</i>	1.2.4 Assessment of stock status
<i>Reason</i>	There are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment and therefore the first and third elements of SG100 for this PI are not met. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	The first element of SG100 for this PI is <i>"The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery"</i> and the third element is <i>"The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have</i>

	<p><i>been rigorously explored."</i></p> <p>As there are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment, these elements of SG100 for this PI are not met.</p> <p>The final report does give a number of reasons why the SG80 standards are met, such as evaluating status relative to reference points and taking uncertainty into account. But the SG100 standards require more than that. FAM V2 Guidance (6.3.19) explains this: "<i>particularly under SG100, it may be useful to consider whether MP/MSE approaches were used to test the robustness of the stock assessment to uncertainty and alternative hypotheses."</i></p>
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<i>Performance Indicator</i>	2.1.2 Management strategy (retained species)
<i>Reason</i>	The second element of the SG80 is not met for bigeye tuna. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii). Yellowfin should be included under Principle 1 of the assessment as target species, along with skipjack, instead of being considered under Principle 2 as retained species. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The second element of the SG80 guidepost is "<i>There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.</i>" It has been clearly established that CMM-2008-01 is not working to end overfishing of the bigeye stock, and therefore a score of 80 is unreasonable.</p> <p>In scoring PI 2.1.2, the assessment team implicitly refers to "the fishery" as the entire purse seine fishery, with a focus on unassociated sets. Whereas, under Principle 1, the assessment team has strictly limited the definition of the fishery to that given by the Client (the PNA purse seine fishery for skipjack with free school sets), treating bigeye and yellowfin as retained bycatch.</p> <p>Yellowfin, along with skipjack, are target species of purse seine unassociated set fishing operations. Larger sized yellowfin are specifically targeted, and it is not uncommon for purse seiners to catch schools of 100% yellowfin in unassociated sets. Clearly, yellowfin are targeted in these sets. In this assessment, the choice made was to assess yellowfin as retained species under P2. While the scoring of yellowfin under P1 criteria would have been similar to the scores for skipjack, by placing yellowfin in P2 the PNA has avoided the responsibility of implementing conditions for 1.1.2 Reference Points and 1.2.2 Harvest Control Rule. Under the logic in this assessment it would be possible in the future for a large portion of the total catch of the yellowfin fishery to be certified without any of that catch being certified under P1.</p>

	<p>The scoring comments in the assessment (p. 155) make reference to the fishery impacts on the bigeye stock, but there is no mention of yellowfin. Fishery impact figures show that the unassociated sets make nearly a 10% contribution to reduction in the spawning potential of the yellowfin stock. This impact is not insignificant. Therefore, consideration of yellowfin under P2 is unreasonable.</p>
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Performance Indicator	3.1.1 Legal and/or Customary Framework
Reason	<p>The management system does not include an authority that has established or has power to establish target references and limits for the Central and Western Pacific skipjack stock, and is therefore not capable of delivering sustainable fisheries. Accordingly, no passing scoring under Principle 3 is possible for this important Performance Indicator. The Certifying Body's scoring is therefore unreasonable and arbitrary requiring remand under Paragraph 4.8.2(b)(iii).</p>
Rationale	<p>"The intent of Principal 3 [Management System] is to ensure that there is an institutional and operational framework, appropriate to the size and scale of the fishery, for implementing Principles 1 and 2 that is capable of delivering sustainable fisheries in accordance with the outcomes articulated by Principles 1 and 2." See <i>MSC Fisheries Assessment Methodology Section 8.1.1</i>. Though a unit of certification "might include only a sub-set of fishers ... it is the management of the wider fleet which denotes the specific fishery for the purposes of this Component and shall therefore be the subject of the assessment under the fishery-specific management system PIs." <i>Id.</i> Performance Indicator 3.1.1 "relates to the presence or absence of an appropriate and effective legal and/or customary framework that is capable of delivering sustainable fisheries in accordance with MSC's Principles 1 and 2." <i>Id.</i> And the "Standards Council has agreed that Principle 1 applies to the whole of the fish stock(s) exploited by the fishery seeking certification. So a fishery could only pass if the whole fish stock(s) meet this standard, and it would not pass if the standard was not met irrespective of who (e.g., the fishery seeking certification or other fisheries) was responsible for the stock not meeting the standard." See MSC TAB Directive D-003 (Unit of Certification).</p> <p>Central and Western Pacific skipjack is a highly migratory stock that falls under the intergovernmental management convention of the Western and Central Pacific Fisheries Commission (WCPFC). The convention includes 25 members, 8 participating territories, and 9 cooperating non-members. The WCPFC has repeatedly failed to establish any target and limit reference points for the skipjack stock, or harvest control rules. Simply put, WCPFC has failed to manage the stock. (For this same reason, in a similar case involving Albacore, WCPFC</p>

establishment of target and limit reference points and both the establishment and testing of harvest control measures were express conditions to MSC certification. See *Acknowledgment by the Independent Adjudicator with respect to the Agreed Resolution of an Objection to the Final Report and Determination on the Proposed Certification of the New Zealand Albacore Tuna Troll Fishery under the MSC Principles and Criteria for Sustainable Fishing.*)

The PNA is a sub-set of 8 WCPFC convention nations. In 2010, 70% of the catch of the Western and Central Pacific Skipjack took place in their waters. However, this is mainly due to licensing arrangements for vessels to fish in their waters, and does not reflect the abundance of the stock in their waters. A calculation based on the stock assessment adopted by the WCPFC Scientific Committee suggest that on average, only 25% of the stock inhabits PNA waters in any given year. This situation becomes more critical considering the migratory behavior of skipjack, as the fish clearly move in and out of PNA EEZs. By its very limited definition, the PNA governments are incapable of managing the Western and Central Pacific Skipjack stock, because it cannot manage the whole fish stock defined by Principle 1. **Any** passing scoring under Performance Indicator 3.1.1 is therefore arbitrary and unreasonable. Indeed it is impossible.

PNA itself, moreover, has no established record of setting target and limit reference points or harvest controls for the highly migratory and always fluctuating percentage of the whole stock that may be in its waters at any given point in time. In short, PNA has not and cannot manage the whole stock, and cannot deliver a sustainable fishery pursuant to Performance Indicator 3.1.1.

The *Final Decision of the Independent Adjudicator in the Matter of an Objection to the Certification of the Faroese Pelagic Organisation North-East Atlantic Mackerel Fishery* illustrates the point. In that matter, the Independent Adjudicator concluded the Certifying Body's scoring decision under Performance Indicator 3.1.1 was unreasonable pursuant to paragraph 4.8.2(b)(iii) of the Objection Procedures. The Certifying Body had given a score of 80 for Performance Indicator 3.1.1, but as the Final Report indicated, "[t]he parties involved in the management of the NEA mackerel have not been able to reach a general agreement on an allocation key for the TAC. The management of the NEA mackerel stock and fisheries is a matter for agreement between all countries exploiting this stock. No such agreement exists currently and this can pose a real threat to the sustainable management of this fishery in the near future." *Id.* ¶ 20. Thus the Independent Adjudicator framed the question for consideration:

	<p>“The issue is whether it was rational for the Certification Body to have concluded that, despite the management framework being one that failed to deliver a Coastal States Agreement and not all relevant countries were party to that Agreement, there was a management system in place which met the scoring guidepost requirements.” <i>Id.</i> ¶ 25.</p> <p>The Independent Adjudicator answered that question “No”, reasoning “either there is no management system in place (the allocation key and participation of relevant countries being a fundamental part of this) or taking the yearly negotiations as part of the management system, this being essentially optional, was neither a ‘coherent, logical set of practices or procedures or within a coherent, logical supporting rule-making structure.’” <i>Id.</i> ¶ 30. Upholding the Objection, the Adjudicator concluded:</p> <p>“The underlying sustainability issue here is that if countries participating in the area in which the fishery is to operate, are essentially free to set their own quota, there is a real risk that the level of fishing will be unacceptably high and inconsistent with Principle 1. This is not a simple dispute as to quotas but rather a flaw in the management system such that the TAC can be effectively ignored.” <i>Id.</i> ¶ 31.</p> <p>The PNA Determination presents essentially the same flaw in the management system and the Determination should meet the same fate. WCPFC has not established target reference points or limits or harvest controls. (Nor has even the WCPFC subset of 8 PNA nations). Currently there is therefore no stock-wide management plan in place, and just as North-East Atlantic Mackerel were not left to the fates of hopeful future action, neither should Western and Central Pacific Skipjack hang in the winds of an unproven and unformed management scheme.</p> <p>Equally important, no action by the PNA nations can deliver a sustainable management system for the whole stock, because PNA, like the Coastal States in the North-East Atlantic Mackerel Fishery, does not represent all nations required to manage the whole stock under Principle 1. And WCPFC, the only regional fishery management organization with the ability to manage the sustainability of the whole stock, has never demonstrated it can achieve the necessary consensus, and has never established harvest controls or target and limit reference points for Central and Western Pacific Skipjack. The stock is unmanaged. Any passing scoring at all under Performance Indicator 3.1.1 is arbitrary and unreasonable.</p>
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<i>Performance Indicator</i>	3.1.2 Consultation, roles and responsibilities
<i>Reason</i>	The third element of the SG100 is not met for PNA. Therefore

	the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The third element of SG100 standard is "<i>The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.</i>"</p> <p>The final assessment report states (p. 85):</p> <p style="padding-left: 40px;"><i>"observer status in PNA Meetings is formally limited to non-PNA Members of the FFA", and</i> <i>"There does however, appear to be a lack of clarity and openness in PNA decision-making with respect to the establishment and operation of the VDS Total Allowable Effort, particularly with respect to links to the requirements of WCPFC CMM 2008-01 and the scientific advice."</i></p> <p>FAM V2 guidance (8.2.15) explains that "<i>The material point of the consultation part of the performance indicator is that the management system is open to interested or affected parties and stakeholders and that any information that is viewed as important by those parties can be fed into and be considered by the process in a way that is transparent to the interested or affected parties and stakeholders.</i>" This is clearly not the case for the PNA and therefore a score of 100 is not warranted.</p> <p>Furthermore, ISSF cannot understand why the score for this PI was increased from 90 to 95 compared to the draft assessment for public consultation. It should have been revised downwards.</p>

<i>Performance Indicator</i>	3.1.3 Long term objectives
<i>Reason</i>	PNA management policy does not meet the SG80 requirements for long-term objectives consistent with MSC Principles and Criteria and the precautionary approach. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>SG80 guidepost requires "<i>Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy.</i>"</p> <p>Even though the final assessment report acknowledges that "<i>the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention</i>" (p. 181), this PI has been given a score of 90 (the draft report for public consultation had been given a score of 80).</p> <p>The assessment team seems to have arrived at this high score</p>

	<p>largely on the basis that the WCPFC meets the SG100 requirements (on paper) and that all PNA members have ratified or acceded the UN Fish Stocks Agreement, while discounting the evident deficiency of PNA policy with regards to this PI. As explained in FAM V2 guidance (8.2.26), "<i>this performance indicator forms an important part of the overall understanding of the use or otherwise of a precautionary approach in the fishery under assessment.</i>" Therefore, the importance of PNA policy cannot be ignored.</p> <p>We also note that the score for this PI is inconsistent that for with the Tosakatsuo Suisan Pole and Line Fishery assessment (score of 80). The evidence presented in that assessment for understanding the relevance of the precautionary approach in management policy was even stronger than for the current (PNA) assessment. In the Tosakatsuo Suisan Pole and Line Fishery, Japan has ratified the UN Fish Stocks Agreement and Japan's Fisheries Basic Act contains clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, they are explicit within management policy. If the latter is lacking for the PNA skipjack fishery, how can a higher score be justified?</p>
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<i>Performance Indicator</i>	3.2.1 Fishery-specific objectives
<i>Reason</i>	The fishery-specific short term objectives do not meet the SG80 requirements. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>SG80 guidepost requires "<i>Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.</i>"</p> <p>In response to stakeholders' comments on this PI, the final assessment report states (p. 540) "<i>Short term objectives for the WCPO purse seine are determined in CMM 2008-01 as achieving over a 3-year period commencing from the date this measure comes into effect in 2009, a 30% reduction in fishing mortality on bigeye tuna in the purse seine fishery in that area and a reduction in the risk of overfishing yellowfin tuna", with the understanding that achievement of these objectives will maintain the skipjack stock at above levels associated BMSY.</i>" However, CMM 2008-01 makes no explicit statement about managing skipjack consistent with MSC's Principles 1 and 2. The assessment team's understanding that this measure will maintain skipjack biomass above BMSY is their own unsupported conclusion, one which is not explicit either in the CMM nor in the record of the WCPFC5 meeting where the CMM was adopted. Furthermore, paragraph 30 of CMM-2008-01 clearly allows for further development of purse seine fisheries that target skipjack, and therefore the conclusion that the CMM will maintain skipjack biomass above BMSY is not necessarily valid.</p>

	<p>In the scoring of PI 1.2.1, the assessment team stated "<i>WCPFC responded to the change in the results of the skipjack assessment and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011.</i>" This is an acknowledgment that current management of the purse seine skipjack fishery is not explicit yet, and is thus inconsistent with the assessment team's conclusion that skipjack management is already addressed explicitly by the CMM under PI 3.2.1.</p> <p>In conclusion, SG80 guidepost is not met. PI 3.2.1 must be scored at less than 80 and an appropriate Condition be placed.</p> <p>We also point out that the treatment of bigeye and yellowfin in the scoring of this PI is inconsistent with their treatment in the assessment under Principles 1 and 2. In PI 3.2.1, the assessment team considers "the fishery" to be the entire WCPO purse seine fishery targeting skipjack, yellowfin and bigeye. Whereas, under Principles 1 and 2, the assessment team has strictly limited the definition of the fishery as that given by the Client (the PNA purse seine fishery for skipjack with free school sets), treating bigeye and yellowfin as retained bycatch.</p>
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<i>Performance Indicator</i>	3.2.2 Decision-making process (Condition 5)
<i>Reason</i>	Condition 5 does not comply fully with TAB Directive 033 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).The PI does not exceed the SG80 guidepost for a fishery-specific management system that includes effective decision-making processes that result in measures and strategies to achieve the objectives and therefore the scoring of this condition is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>TAB 033 requires that "<i>The Certification Body shall specify conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified.</i>"</p> <p>Condition 5, as written, deals with what the CB considers to be a successful overall outcome; it does not specify milestones that spell out the significant and measurable improvements that must be achieved at each annual surveillance.</p>

<i>Performance Indicator</i>	3.2.3 Compliance and enforcement
<i>Reason</i>	There is no evidence that the MCS system in place meets the SG100 requirement that it has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The assessment team gave a score of 100 to the first element of the PI in terms of the MCS system in place having demonstrated a consistent ability to enforce management measures.</p> <p>In the scoring comments, the assessment team explains "<i>The 100% observer scheme is proven to have worked effectively, with a number of safeguards in place to ensure that non compliance and inaccurate reporting are identified.</i>" However, the only evidence in support of this given in the final report cites document WCPFC-TCC6-2010/08 which states that 100% coverage was achieved for Aug/Sep 2009. That does not mean that 100% coverage has been consistently achieved since Aug/Sep 2009. And, the reliability of this 100% value is questionable given what was discussed at TCC6 (p. 10-11): "<i>Data indicate that there was essentially 100% observer coverage during the 2009 FAD closure period (all boats had observers within a few days of the FAD closure commencement). However, when the FAD closure report was prepared, only four countries had given permission for the Secretariat to use their observer data for the report, and some of those reports had yet to be received and entered by the Commission's data provider (SPC).</i>" The observer coverage achieved during the 2009 FAD closure by the countries that did not report is essentially unknown.</p> <p>The remainder of the assessment report's references to 100% observer coverage (e.g., Boxes 8-10) appear to be statements made by government officials. These do not demonstrate a consistent ability. The assessment has not presented sufficient evidence, for example in the form of records of the actual percentage of fishing trips covered by observers, and of how many of those observer data sets were actually digitized and analyzed.</p> <p>Based on the above considerations, the assessment's conclusion that there is 100% observer coverage is unsupported.</p> <p>Besides the degree of coverage, there are important questions about data reliability and data usage that affect the effectiveness of the MCS system in place. The ability of observers to accurately identify and accurately report set types is important for the enforcement of current management measures such as the FAD closure. As discussed during the</p>

2010 Technical and Compliance Committee and in the Commission meetings, there are severe limitations. For example, the following is a subset of statements found in those reports:

- *"Data collected by observers on ROP trips should be available for analysis; however the WCPFC Secretariat has only been able to receive limited data from the Commission Data Provider (SPC) or the national programmes to be able to provide a report based on observer ROP collected data for 2009 or 2010. At the time of writing, and as noted in table 3, only four WCPFC member countries have given authorization to the data provider (SPC) to release ROP data for analysis, and to be made available to the WCPFC Secretariat."* (WCPFC-TCC6-2010/08, p. 6)

- *"Unfortunately there have been reports through the General Trip Information Forms (GEN3), as well as verbal observations given at debriefings of observers, that a small number of vessels have harassed and intimidated observers while they were trying to carry out their duties as observers. It has also been reported that some observers have been offered bribes to not report certain aspects of the fishing operation particularly in relation to FAD fishing. It has also been reported, that observers may have accepted bribes, have harassed crew members, have not responded well to their responsibilities, and destroyed vessel property and caused delays in operations."* (WCPFC-TCC6-2010/08, p. 10-11)

- *"The Secretariat spoke to the data flow obligations of CCMs under CMM 2007-01, as addressed in WCPFC7-2010-13. It noted that the poor provision of ROP data to the Secretariat and its Scientific Services Provider (SPC) negatively impacts the Commission's ability to carry out its work and receive appropriate reports for sustainable and responsible fisheries management."* (WCPFC 7, p. 47)

Given these considerations, the observer program has not demonstrated a consistent ability to enforce management measures as required by SG100.

We would also like to point out that there are limitations to other components of the MCS system. For example, in terms of the Vessel Monitoring System (VMS): *"The VMS Manager noted that it was currently not possible to monitor any activities in EEZs, and it was assumed that the VMS unit was on prior to entry into the high seas, as required. The reason the Secretariat cannot see such data is due to the system design, whereby as a result of a decision of the Commission, such data is quarantined, and the Secretariat does not have access to this data in the VMS."*

	The score given to this PI represents a potential outcome rather than existing evidence. The PI should not receive a score higher than 80.
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5.2 For each issue identified in question 5.1, please state why you or your organisation believes that the effect of the score in relation to one or more of the particular performance indicators in question was material to the outcome of the Determination such that the Determination should be altered?

Criterion 1 of MSC Principle 1 states that an accredited fishery "*shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.*" Conditions 1 and 2 (PI 1.1.2 and PI 1.2.2) are intended to result in the adoption by WCPFC of reference points and harvest control rules that meet the SG80 guideposts within four years. However, even though the WCPFC has these requirements in its own Convention, it has failed to meet them in over six years of existence. The Action Plans established with the Conditions are unlikely to achieve the desired outcome. Furthermore, the Harvest Strategy (PI 1.2.1) does not meet the SG80 guidepost for a robust and precautionary harvest strategy. The assessment team should have examined other stocks under the management of WCPFC in order to more directly evaluate the implicit harvest strategies in place. For the one major tuna stock that is experiencing overfishing (bigeye), the evidence demonstrates that the harvest strategy elements do not work together towards achieving management objectives. This additional information further demonstrates the necessity for comprehensive fishery-specific management system that includes effective decision making processes that result in measures and strategies to meet the objections, which is lacking in this instance.

PART SIX: OBJECTION PURSUANT TO PARAGRAPH 4.8.2 (C)

6.1 Using the template below, please list all additional information not forming part of the record² that is relevant to the circumstances at the date of the Determination has not been considered, as per Paragraph 4.8.2 (c) of the objections procedure. Ensure that reasons are provided as to why you or your organisation believes that the particular information in question:

- a) was known or should reasonably have been known to any party to the assessment process, and
- b) should reasonably have been made available to the certification body during the assessment process, and
- c) if considered, could have made a material difference to the outcome of the assessment;

<i>Information</i>	
<i>Reason why information should reasonably have been known</i>	
<i>Reason why information should reasonably have been made available</i>	
<i>Reason why information could have made a material difference to the outcome of the assessment</i>	

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² As defined in Paragraph 4.7.5 (a) of the objections procedure.

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OPAGAC is an Spanish association of purse seine fishing companies operating in the three main oceans (Indian, Atlantic and Pacific).

Our group, as the only purse seine group operating in the four major tuna RFMOs, has a long history of fishing in the different Oceans under strict compliance and respect for management measures and international regulations in each and every RFMO. OPAGAC associates apply the highest standards for a responsible fishing practices complying with MCS schemes, statistics and data reporting and also their sustainable approach to industrial fisheries in regards to their social accountability.

OPAGAC contributed to the stakeholder consultation on the MSC Assessment Report for PNA Western and Central Pacific Skipjack Tuna unassociated and log set purse seine Fishery in May. Having analysed the Determination and Final Report, we wish to object to the determinations reached.

In particular, OPAGAC has comments on the performance indicators and the scores presented in the final report for Stock Status, Reference Points, Harvest Strategy and Control Rule, Information and monitoring, Assessment of stock status, Consultation, roles and responsibilities, Long term objectives, Fishery-specific objectives, Decision-making process and Compliance and enforcement. Please find an overview of our detailed comments in the objection template as from p. 3

In regards of the above, and foreseen the possibility that OPAGAC objections are taken into consideration for investigation, we agree to support the costs incurred by the participation of an independent adjudicator in the process.

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OPAGAC objections to the determination reached by the certification body on the PNA Western and Central Pacific skipjack tuna

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PART FIVE: OBJECTION PURSUANT TO PARAGRAPH 4.8.2 (B)

- 5.1 Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believe that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the requirements of Paragraphs 4.8.2 (b) (i), 4.8.2 (b) (ii) and/or 4.8.2 (b) (iii) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

<i>Performance Indicator</i>	1.1.1 Stock Status
<i>Reason</i>	The second element of SG100 is not met. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The second element of SG100 for this PI states: "<i>There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.</i>"</p> <p>Noting that WCPFC has not adopted target and limit reference points, the assessment states that Bmsy serves as a default target (p. 37) and a score of 100 was given because the stock assessment indicates that the biomass is above Bmsy, with high certainty.</p> <p>However, on p. 37, the assessment also notes that according to Article 6 of the WCPFC convention, stock-specific reference points need to be determined according to the guidelines set out in Annex II of UNFSA. Those UNFSA guidelines set Fmsy</p>

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	<p>as the default limit, which is contradictory with Bmsy being treated as a target (in other words, the biomass that would result from managing the stock using Fmsy as a limit will be greater than Bmsy).</p> <p>Therefore, the default target biomass reference point chosen by the assessment team is inconsistent with the WCPFC Convention. In addition, while the FAM in 6.2.2 allows for Bmsy to be used as a target, it also allows for the target to be a higher biomass level. In the absence of knowing what this higher biomass target is, SG100 cannot be met.</p> <p>Furthermore, this PI received a score of 95 in the Tosakatsuo Suisan Pole and Line Skipjack fishery certification. The PNA assessment report does not explain why the scores have not been harmonized in accordance with TAB 015.</p>
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<i>Performance Indicator</i>	1.1.2 Reference Points (Condition 1)
<i>Reason</i>	<p>Condition 1 states: "<i>Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met.</i>"</p> <p>SG80 requirements for the entire stock cannot be met if only PNA adopts target and limit reference points. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).</p>
<i>Rationale</i>	MSC TAB 003 clearly states that the whole stock has to meet the standard and that a fishery would not pass if the standard was not met irrespective of who, including fisheries other than

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	<p>the one seeking certification, was responsible for the stock not meeting the standard.</p> <p>In the responses to the Public Draft Report, the Assessment Team contends:</p> <p><i>"PNA are in a position, given the quantity of catch within their jurisdiction (70%) to implement management measures which would ensure the entire stock is managed in a sustainable manner, thus meeting the standard as specified in TAB 003. The conditions 1 and 2 require that PNA management actions take account of the range of the skipjack stock." (p. 517)</i></p> <p><i>"The range of the stock that falls under the management of PNA parties is 70%." (p. 520)</i></p> <p>The Assessment Team's assertion that 70% of the skipjack stock falls under the management of PNA countries is not supported by scientific evidence. Their assertion is based on an assumption that the catch made in PNA EEZs in 2010 is proportional to the fraction of the skipjack stock in these waters. However, catch is often not correlated with abundance as demonstrated by numerous scientific studies (e.g., Branch et al. 2010, Nature 468:431-435). A more direct estimate of the proportion of the stock at any one time in PNA EEZs can be derived from the WCPO skipjack base case stock assessment (Hoyle et. al., WCPFC-SC6-2010/SA-WP-10 rev.1). The assessment estimated that the average 2005-2008 skipjack biomass was distributed 17%, 48% and 35% into the three regions in the model. The EEZs of PNA countries cover approximately 0%, 45% and 12% of these three regions</p>
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	<p>respectively, from which an estimate of the average proportion of the skipjack stock in PNA waters can be calculated as $(0 \times 0.17 + 0.45 \times 0.48 + 0.12 \times 0.35)$, or about 26%. This is substantially below the 70% claimed by the assessment team and would indicate that, in fact, 74% of the stock may not be under the management control of PNA countries.</p> <p>Regardless of whether the average abundance of skipjack in PNA waters is 26% or 70% of the total, or somewhere in between, the highly migratory nature of the stock must be taken into account in order to comply with TAB 003. Hoyle et. al. (2010) report high movement rates between the three regions in the assessment model. As an example, 60% of the average biomass in the eastern equatorial region in the assessment model corresponds to fish hatched in other regions. Therefore, fisheries that operate in one region affect the abundance of skipjack in other regions and can be responsible for the stock not meeting the standard if they are not included in the Condition. The appropriate management body that covers the entire stock is the WCPFC, and therefore the condition needs to be for WCPFC to adopt appropriate reference points. The following sentence from the final report (p. 2) included in the condition gives the impression that managing the stock throughout its range is optional: "<i>If required, active promotion of the adoption of equivalent target and limit reference points within the WCPFC.</i>" Managing the entire stock is not optional.</p> <p>We also point to Section 14.2 of the Final Report which states that PI 1.1.2 is harmonized with the Tosakatsuo Suisan Pole and Line Fishery assessment. This is partly true in the sense that both assessment scores for this PI are 75. However, the</p>
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	<p>Condition set for the Tosakatsuo fishery explicitly acknowledges that both the local (Fisheries Agency of Japan) and stock-wide (WCPFC) management agencies need to adopt the reference points, while the PNA condition allows for the local and/or the stock-wide agencies to act. Therefore, harmonization has not been achieved as required by Directive 1.2 of TAB 015: "<i>As the critical outcome required of this harmonisation policy, the above steps shall ensure that consistent conclusions are achieved by the two (or more) fisheries, with respect to evaluation, scoring and particularly conditions.</i>"</p> <p>To be consistent with the recent New Zealand Albacore certification, the condition should read: "<i>Within four years of certification, target and limit reference points need to be agreed by (PNA and) WCPFC, consistent with the management objectives and scientific stock assessment.</i>"</p>
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<i>Performance Indicator</i>	1.2.1 Harvest Strategy
<i>Reason</i>	The PI does not meet the SG80 guidepost for a robust and precautionary harvest strategy in place and therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The final report does not show evidence that the harvest strategy for the WCPFC is responsive to the state of the stock to meet SG80 guidelines for this PI.</p> <p>In the scoring comments for this PI, the assessment team</p>

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	<p>justified a score of 80 because the "WCPFC responded to the change in the results of the skipjack assessment and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011."</p> <p>The above justification is based on a potential outcome (WCPFC will not decide on a replacement CMM until December, 2011), rather than on existing evidence, and therefore SG80 guidelines are not met at the present time. This PI must be scored less than 80 and an appropriate Condition be placed.</p> <p>We also point out that the assessment team's treatment of the RFMO in the scoring of this PI is inconsistent with its treatment under 1.1.2 or 1.2.2. In the current PI (Harvest Strategy), the prominent role of WCPFC is recognized, whereas under the other two PIs (Reference Points and Harvest Control Rule) the assessment considered that PNA action alone is sufficient. We refer to our comments above (1.1.2) and reiterate that actions are needed to cover the entire stock (i.e., through WCPFC).</p>
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<i>Performance Indicator</i>	1.2.2 Harvest Control Rule (Condition 2)
<i>Reason</i>	SG80 requirements for the entire stock cannot be met if only PNA adopts a harvest control rule. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt a harvest control rule. Therefore the scoring of this condition meets the requirements

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	of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>We have essentially the same concerns as expressed above for Condition 1 (PI 1.1.2). If only PNA adopts a harvest control rule, fisheries outside PNA EEZs can be responsible for the stock not meeting the SG80 standard.</p> <p>We also note that the assessment team states (p. 526) that "<i>The assessment team has made suggestions as to how this [SG80 outcome] should be achieved but the means of resolution is to be determined and implemented by the client.</i>" However, TAB Directive 033 does not leave this entirely up to the Client: "<i>The Certification Body shall specify conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified.</i>"</p>

<i>Performance Indicator</i>	1.2.3 Information and monitoring
<i>Reason</i>	The third element of the SG80 is not met. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	The third element of SG80 for this PI requires that " <i>There is good information on all other fishery removals from the stock.</i> " Several stakeholders, including OPAGAC, noted that this is not met for fisheries in the Philippines, Indonesia and Vietnam.

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	<p>The assessment team states that the catches of skipjack by these countries is 11% of the total (p. 527). However, in recent years, Indonesia and Philippines alone have on average accounted for 25% of the total catch, and as much as 32% (http://wcpfc.int/statistical-bulletins). In the case of Vietnam, the catches of skipjack are not even known: "<i>fisheries data collection system in general and for tuna fisheries in particular of Vietnam is lacked and insufficient, and thus data of exact annual catch estimation of the tuna fisheries is not available so far</i>" (Vietnam's 2010 Annual Report to the WCPFC, WCPFC-SC6-AR/CCM-35).</p> <p>The last WCPFC stock assessment was conducted in 2010 using data up to 2009. The final report of the PNA MSC assessment cites numerous improvements to the data collection systems in place for these countries, but many of them were initiated in 2010 and are therefore not part of the stock assessment. While these efforts should be applauded and supported, the score given by the assessment team is based on a potential outcome rather than on existing practice.</p>
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<i>Performance Indicator</i>	1.2.4 Assessment of stock status
<i>Reason</i>	There are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment and therefore the first and third elements of SG100 for this PI are not met. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	The first element of SG100 for this PI is " <i>The assessment is appropriate for the stock and for the harvest control rule and</i>

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	<p><i>takes into account the major features relevant to the biology of the species and the nature of the fishery" and the third element is "The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored." As there are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment, these elements of SG100 for this PI are not met.</i></p> <p>The final report does give a number of reasons why the SG80 standards are met, such as evaluating status relative to reference points and taking uncertainty into account. But the SG100 standards require more than this. FAM V2 Guidance (6.3.19) "<i>particularly under SG100, it may be useful to consider whether MP/MSE approaches were used to test the robustness of the stock assessment to uncertainty and alternative hypotheses.</i>"</p>
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<i>Performance Indicator</i>	3.1.1 Legal & customary framework
<i>Reason</i>	There is non existing management system and its mechanism to solve legal disputes has not been tested nor proven to be effective. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (ii) and (iii).
<i>Rationale</i>	The first element of SG100 for this PI is " <i>The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective.</i> "

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	<p>There is not known management system in place inside the PNA framework. In addition to that, as there are no tested mechanisms to solve any legal disputes nor its appropriateness has been evaluated, these elements of SG100 for this PI are not met, thus any score above 80 is arbitrary and non reasonable.</p>
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<i>Performance Indicator</i>	3.1.2 Consultation, roles and responsibilities
<i>Reason</i>	The third element of the SG100 is not met for PNA. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The third element of SG100 standard is "<i>The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.</i>"</p> <p>The final assessment report states (p. 85):</p> <p style="padding-left: 40px;"><i>"observer status in PNA Meetings is formally limited to non-PNA Members of the FFA", and</i> <i>"There does however, appear to be a lack of clarity and openness in PNA decision-making with respect to the establishment and operation of the VDS Total Allowable Effort, particularly with respect to links to the requirements of WCPFC CMM 2008-01 and the scientific advice."</i></p> <p>FAM V2 guidance (8.2.15) explains that "<i>The material point of</i></p>

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	<p><i>the consultation part of the performance indicator is that the management system is open to interested or affected parties and stakeholders and that any information that is viewed as important by those parties can be fed into and be considered by the process in a way that is transparent to the interested or affected parties and stakeholders."</i> This is clearly not the case for the PNA and therefore a score of 100 is not warranted.</p> <p>Furthermore, OPAGAC cannot understand why the score for this PI was increased from 90 to 95 compared to the draft assessment for public consultation. It should have been revised downwards.</p>
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<i>Performance Indicator</i>	3.1.3 Long term objectives
<i>Reason</i>	PNA management policy does not meet the SG80 requirements for long term objectives consistent with MSC Principles and Criteria and the precautionary approach. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>SG80 guidepost requires "<i>Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy.</i>"</p> <p>Even though the final assessment report acknowledges that "<i>the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention</i>" (p. 181), this PI has been given a score of 90 (the draft report for public consultation had been given a score of 80).</p>

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	<p>The assessment team seems to have arrived at this high score largely on the basis that the WCPFC meets the SG100 requirements (on paper) and that all PNA members have ratified or acceded the UN Fish Stocks Agreement, while discounting the evident deficiency of PNA policy with regards to this PI. As explained in FAM V2 guidance (8.2.26), "<i>this performance indicator forms an important part of the overall understanding of the use or otherwise of a precautionary approach in the fishery under assessment.</i>" Therefore, the importance of PNA policy cannot be ignored.</p> <p>We also note that the score for this PI is inconsistent that for with the Tosakatsuo Suisan Pole and Line Fishery assessment (score of 80). The evidence presented in that assessment for understanding the relevance of the precautionary approach in management policy was even stronger than for the current (PNA) assessment. In the Tosakatsuo Suisan Pole and Line Fishery, Japan has ratified the UN Fish Stocks Agreement and Japan's Fisheries Basic Act contains clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, they are explicit within management policy. If the latter is lacking for the PNA skipjack fishery, how can a higher score be justified?</p>
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<i>Performance Indicator</i>	3.2.1 Fishery-specific objectives
<i>Reason</i>	The fishery-specific short term objectives do not meet the SG80 requirements. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	SG80 guidepost requires " <i>Short and long term objectives, which are consistent with achieving the outcomes expressed by</i>

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	<p><i>MSC's Principles 1 and 2, are explicit within the fishery's management system."</i></p> <p>In response to stakeholders' comments on this PI, the final assessment report states (p. 540) "<i>Short term objectives for the WCPO purse seine are determined in CMM 2008-01 as achieving over a 3-year period commencing from the date this measure comes into effect in 2009, a 30% reduction in fishing mortality on bigeye tuna in the purse seine fishery in that area and a reduction in the risk of overfishing yellowfin tuna</i>", with the understanding that achievement of these objectives will maintain the skipjack stock at above levels associated BMSY." However, CMM 2008-01 makes no explicit statement about managing skipjack consistent with MSC's Principles 1 and 2. The assessment team's understanding that this measure will maintain skipjack biomass above BMSY is their own conclusion, one which is not explicit either in the CMM nor in the record of the WCPFC5 meeting where the CMM was adopted. Furthermore, paragraph 30 of CMM-2008-01 clearly allows for further development of purse seine fisheries that target skipjack, and therefore the conclusion that the CMM will maintain skipjack biomass above BMSY is not necessarily valid.</p> <p>In the scoring of PI 1.2.1, the assessment team stated "<i>WCPFC responded to the change in the results of the skipjack assessment and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011.</i>" This is an acknowledgment that current management of the purse seine skipjack fishery is not explicit</p>
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	<p>and is thus inconsistent with the assessment team's conclusion that skipjack management is addressed explicitly by the CMM under PI 3.2.1.</p> <p>In conclusion, SG80 guidepost is not met. PI 3.2.1 must be scored at less than 80 and an appropriate Condition be placed.</p> <p>We also point out that the treatment of bigeye and yellowfin in the scoring of this PI is inconsistent with their treatment in the assessment under Principles 1 and 2. In 3.2.1, the assessment team considers "the fishery" to be the entire WCPO purse seine fishery targeting skipjack, yellowfin and bigeye. Whereas, under Principles 1 and 2, the assessment team has strictly limited the definition of the fishery as that given by the Client (the PNA purse seine fishery for skipjack with free school sets), treating bigeye and yellowfin as retained bycatch.</p>
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<i>Performance Indicator</i>	3.2.2 Decision-making process (Condition 5)
<i>Reason</i>	Condition 5 does not comply fully with TAB Directive 033 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).The PI does not exceed the SG80 guidepost for a fishery-specific management system that includes effective decision-making processes that result in measures and strategies to achieve the objectives and therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	TAB 033 requires that " <i>The Certification Body shall specify</i>

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	<p><i>conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified."</i></p> <p>Condition 5, as written, deals with what the CB considers to be a successful overall outcome; it does not specify milestones that spell out the significant and measurable improvements that must be achieved at each annual surveillance.</p>
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<i>Performance Indicator</i>	3.2.3 Compliance and enforcement
<i>Reason</i>	There is no evidence that the MCS system in place meets the SG100 requirement that it has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The assessment team gave a score of 100 to the first element of the PI in terms of the MCS system in place having demonstrated a consistent ability to enforce management measures.</p> <p>In the scoring comments, the assessment team explains "<i>The 100% observer scheme is proven to have worked effectively, with a number of safeguards in place to ensure that non compliance and inaccurate reporting are identified.</i>" However, the only evidence in support of this given in the final report cites document WCPFC-TCC6-2010/08 which states that 100% coverage was achieved for Aug/Sep 2009. That does not mean</p>

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 February 2010

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	<p>that 100% coverage has been consistently achieved since Aug/Sep 2009.</p> <p>The score given to this PI represents a potential outcome rather than existing evidence. The PI should not receive a score higher than 80.</p> <p>OPAGAC agrees that the ability of observers to accurately identify and accurately report set types is important for Chain-of-Custody issues in this certification. However, their ability to do so is also important for the enforcement of current management measures such as the FAD closure. As discussed during the 2010 Technical and Compliance Committee meeting of WCPFC, few members have given permission for the data collected by their national observers to become available to the WCPFC Secretariat. The importance of this issue under the FAM should not be underestimated. Recommendation 6 should include the need for all PNA members to agree to make their observer data available to WCPFC.</p> <p>The 3rd Implementing Agreement of the PNA states: “2. <i>FAD Closure</i></p> <p><i>There shall be no deployment or servicing of Fish Aggregating Devices and associated electronic equipment, or fishing by purse seine vessels on floating objects, between 0001 hours GMT on 1 July and 2359 hours GMT on 30 September each year, except that:</i></p> <p><i>(a) a Party may exclude all or part of its Fisheries Zone</i></p>
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	<p><i>from the closure if it determines that it has suffered a disproportionate burden from application of the closure and advises the depositary accordingly; and</i></p> <p><i>(b) a Party may apply appropriate arrangements set out in a Management Plan to meet the requirements of domestic vessels that are highly dependent on fishing on floating objects within the Fisheries Zone.”</i></p> <p>This exclusion for the application of WCPFC management measures, is currently taking place in the WCPFC region, with special reference to anchored FADs in the archipelagic waters of the PNA countries. OPAGAC consider that this undermines the management objectives of the WCPFC and provides a legal coverage to PNA countries that could be used against Principle 3.</p>
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Comité Européen Interprofessionnel du Thon Tropical

EUROTHON/11/028

Brussels, 2 August 2011

**Objection of EUROTHON to the determination reached by the certification body
on the PNA Western and Central Pacific skipjack tuna**

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EUROTHON is the European Tropical Tuna fishing, Processing and Trade Committee, representing Tropical Tuna producer organisations in France and Spain, and National Tuna Canners Federations in France, Italy, Portugal and Spain. These PO's and Federations are covering fishing activities in the Atlantic, Indian, and Pacific Oceans, and Tuna Canning activities in Europe, in African ACP countries, and in Latin American GSP+ countries.

EUROTHON contributed to the stakeholder consultation on the MSC Assessment Report for PNA Western and Central Pacific Skipjack Tuna unassociated and log set purse seine Fishery in May. Having analyzed the Determination and Final Report, we wish to object to the determinations reached.

In particular, EUROTHON has comments on the performance indicators and the scores presented in the final report for Stock Status, Reference Points, Harvest Strategy and Control Rule, Information and monitoring, Assessment of stock status, Legal & customary framework, Consultation, roles and responsibilities, Long term objectives, Fishery-specific objectives, Decision-making process and Compliance and enforcement. Please find an overview of our detailed comments in the objection template as from p. 3

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PART FIVE: OBJECTION PURSUANT TO PARAGRAPH 4.8.2 (B)

5.1 Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believe that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the requirements of Paragraphs 4.8.2 (b) (i), 4.8.2 (b) (ii) and/or 4.8.2 (b) (iii) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

Performance Indicator	1.1.1 Stock Status
<i>Reason</i>	The second element of SG100 is not met. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The second element of SG100 for this PI states: "<i>There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.</i>"</p> <p>Noting that WCPFC has not adopted target and limit reference points, the assessment states that Bmsy serves as a default target (p. 37) and a score of 100 was given because the stock assessment indicates that the biomass is above Bmsy, with high certainty.</p> <p>However, on p. 37, the assessment also notes that according to Article 6 of the WCPFC convention, stock-specific reference points need to be determined according to the guidelines set out in Annex II of UNFSA. Those UNFSA guidelines set Fmsy as the default limit, which is contradictory with Bmsy being treated as a target (in other words, the biomass that would result from managing the stock using Fmsy as a limit will be greater than Bmsy).</p> <p>Therefore, the default target biomass reference point chosen by the assessment team is inconsistent with the WCPFC Convention. In addition, while the FAM in 6.2.2 allows for Bmsy to be used as a target, it also allows for the target to be a higher biomass level. In the absence of knowing what this higher biomass target is, SG100 cannot be met.</p> <p>Furthermore, this PI received a score of 95 in the Tosakatsuo Suisan Pole and Line Skipjack fishery certification. The PNA assessment report does not explain why the scores have not been harmonized in accordance with TAB 015.</p>

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Performance Indicator	1.1.2 Reference Points (Condition 1)
Reason	<p>Condition 1 states: "<i>Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met.</i>"</p> <p>SG80 requirements for the entire stock cannot be met if only PNA adopts target and limit reference points. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).</p>
Rationale	<p>MSC TAB 003 clearly states that the whole stock has to meet the standard and that a fishery would not pass if the standard was not met irrespective of who, including fisheries other than the one seeking certification, was responsible for the stock not meeting the standard.</p> <p>In the responses to the Public Draft Report, the Assessment Team contends:</p> <p><i>"PNA are in a position, given the quantity of catch within their jurisdiction (70%) to implement management measures which would ensure the entire stock is managed in a sustainable manner, thus meeting the standard as specified in TAB 003. The conditions 1 and 2 require that PNA management actions take account of the range of the skipjack stock." (p. 517)</i></p> <p><i>"The range of the stock that falls under the management of PNA parties is 70%." (p. 520)</i></p> <p>The Assessment Team's assertion that 70% of the skipjack stock falls under the management of PNA countries is not supported by scientific evidence. Their assertion is based on an assumption that the catch made in PNA EEZs in 2010 is proportional to the fraction of the skipjack stock in these waters. However, catch is often not correlated with abundance as demonstrated by numerous scientific studies (e.g., Branch et al. 2010, Nature 468:431-435). A more direct estimate of the proportion of the stock at any one time in PNA EEZs can be derived from the WCPO skipjack base case stock assessment (Hoyle et. al., WCPFC-SC6-2010/SA-WP-10 rev.1). The assessment estimated that the average 2005-2008 skipjack biomass was distributed 17%, 48% and 35% into the three regions in the model. The EEZs of PNA countries cover approximately 0%, 45% and 12% of these three regions respectively, from which an estimate of the average proportion of the skipjack stock in PNA waters can be calculated as $(0 \times 0.17 + 0.45 \times 0.48 + 0.12 \times 0.35)$, or about 26%. This is substantially below the 70% claimed by the assessment team and would indicate that, in fact, 74% of the stock may not be under the management control</p>

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of PNA countries.

Regardless of whether the average abundance of skipjack in PNA waters is 26% or 70% of the total, or somewhere in between, the highly migratory nature of the stock must be taken into account in order to comply with TAB 003. Hoyle et. al. (2010) report high movement rates between the three regions in the assessment model. As an example, 60% of the average biomass in the eastern equatorial region in the assessment model corresponds to fish hatched in other regions. Therefore, fisheries that operate in one region affect the abundance of skipjack in other regions and can be responsible for the stock not meeting the standard if they are not included in the Condition. The appropriate management body that covers the entire stock is the WCPFC, and therefore the condition needs to be for WCPFC to adopt appropriate reference points. The following sentence from the final report (p. 2) included in the condition gives the impression that managing the stock throughout its range is optional: "*If required, active promotion of the adoption of equivalent target and limit reference points within the WCPFC.*" Managing the entire stock is not optional.

We also point to Section 14.2 of the Final Report which states that PI 1.1.2 is harmonized with the Tosakatsuo Suisan Pole and Line Fishery assessment. This is partly true in the sense that both assessment scores for this PI are 75. However, the Condition set for the Tosakatsuo fishery explicitly acknowledges that both the local (Fisheries Agency of Japan) **and** stock-wide (WCPFC) management agencies need to adopt the reference points, while the PNA condition allows for the local **and/or** the stock-wide agencies to act. Therefore, harmonization has not been achieved as required by Directive 1.2 of TAB 015: "*As the critical outcome required of this harmonisation policy, the above steps shall ensure that consistent conclusions are achieved by the two (or more) fisheries, with respect to evaluation, scoring **and particularly conditions.***"

To be consistent with the recent New Zealand Albacore certification, the condition should read: "*Within four years of certification, target and limit reference points need to be agreed by (PNA and) WCPFC, consistent with the management objectives and scientific stock assessment.*"



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Performance Indicator	1.2.1 Harvest Strategy
<i>Reason</i>	The PI does not meet the SG80 guidepost for a robust and precautionary harvest strategy in place and therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The final report does not show evidence that the harvest strategy for the WCPFC is responsive to the state of the stock to meet SG80 guidelines for this PI.</p> <p>In the scoring comments for this PI, the assessment team justified a score of 80 because the "<i>WCPFC responded to the change in the results of the skipjack assessment and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011.</i>"</p> <p>The above justification is based on a potential outcome (WCPFC will not decide on a replacement CMM until December, 2011), rather than on existing evidence, and therefore SG80 guidelines are not met at the present time. This PI must be scored less than 80 and an appropriate Condition be placed.</p> <p>We also point out that the assessment team's treatment of the RFMO in the scoring of this PI is inconsistent with its treatment under 1.1.2 or 1.2.2. In the current PI (Harvest Strategy), the prominent role of WCPFC is recognized, whereas under the other two PIs (Reference Points and Harvest Control Rule) the assessment considered that PNA action alone is sufficient. We refer to our comments above (1.1.2) and reiterate that actions are needed to cover the entire stock (i.e., through WCPFC).</p>

Performance Indicator	1.2.2 Harvest Control Rule (Condition 2)
<i>Reason</i>	SG80 requirements for the entire stock cannot be met if only PNA adopts a harvest control rule. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt a harvest control rule. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>We have essentially the same concerns as expressed above for Condition 1 (PI 1.1.2). If only PNA adopts a harvest control rule, fisheries outside PNA EEZs can be responsible for the stock not meeting the SG80 standard.</p> <p>We also note that the assessment team states (p. 526) that "<i>The assessment team has made suggestions as to how this [SG80 outcome] should be achieved but the means of resolution is to be determined and implemented by the client.</i>" However, TAB</p>



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	<p>Directive 033 does not leave this entirely up to the Client: "<i>The Certification Body shall specify conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified.</i>"</p>
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Performance Indicator	1.2.3 Information and monitoring
<i>Reason</i>	The third element of the SG80 is not met. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The third element of SG80 for this PI requires that "<i>There is good information on all other fishery removals from the stock.</i>" Several stakeholders noted that this is not met for fisheries in the Philippines, Indonesia and Vietnam.</p> <p>The assessment team states that the catches of skipjack by these countries is 11% of the total (p. 527). However, in recent years, Indonesia and Philippines alone have on average accounted for 25% of the total catch, and as much as 32% (http://wcpfc.int/statistical-bulletins). In the case of Vietnam, the catches of skipjack are not even known: "<i>fisheries data collection system in general and for tuna fisheries in particular of Vietnam is lacked and insufficient, and thus data of exact annual catch estimation of the tuna fisheries is not available so far</i>" (Vietnam's 2010 Annual Report to the WCPFC, WCPFC-SC6-AR/CCM-35).</p> <p>The last WCPFC stock assessment was conducted in 2010 using data up to 2009. The final report of the PNA MSC assessment cites numerous improvements to the data collection systems in place for these countries, but many of them were initiated in 2010 and are therefore not part of the stock assessment. While these efforts should be applauded and supported, the score given by the assessment team is based on a potential outcome rather than on existing practice.</p>

Performance Indicator	1.2.4 Assessment of stock status
<i>Reason</i>	There are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment and therefore the first and third elements of SG100 for this PI are not met. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	The first element of SG100 for this PI is " <i>The assessment is</i>

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	<p><i>appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery" and the third element is "The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored."</i> As there are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment, these elements of SG100 for this PI are not met.</p> <p>The final report does give a number of reasons why the SG80 standards are met, such as evaluating status relative to reference points and taking uncertainty into account. But the SG100 standards require more than this. FAM V2 Guidance (6.3.19) <i>"particularly under SG100, it may be useful to consider whether MP/MSE approaches were used to test the robustness of the stock assessment to uncertainty and alternative hypotheses."</i></p>
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Performance Indicator	3.1.1 Legal & customary framework
<i>Reason</i>	The management system and its mechanism to solve legal disputes has not been tested nor proven to be effective. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The first element of SG100 for this PI is <i>"The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective."</i></p> <p>As there are no tested mechanisms to solve any legal disputes nor its appropriateness has been evaluated, these elements of SG100 for this PI are not met, thus any score above 80 is arbitrary and non reasonable.</p>

Performance Indicator	3.1.2 Consultation, roles and responsibilities
<i>Reason</i>	The third element of the SG100 is not met for PNA. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>The third element of SG100 standard is <i>"The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement."</i></p> <p>The final assessment report states (p. 85):</p>



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	<p>"observer status in PNA Meetings is formally limited to non-PNA Members of the FFA", and</p> <p>"There does however, appear to be a lack of clarity and openness in PNA decision-making with respect to the establishment and operation of the VDS Total Allowable Effort, particularly with respect to links to the requirements of WCPFC CMM 2008-01 and the scientific advice."</p> <p>FAM V2 guidance (8.2.15) explains that "The material point of the consultation part of the performance indicator is that the management system is open to interested or affected parties and stakeholders and that any information that is viewed as important by those parties can be fed into and be considered by the process in a way that is transparent to the interested or affected parties and stakeholders." This is clearly not the case for the PNA and therefore a score of 100 is not warranted.</p> <p>Furthermore, EUROTHON cannot understand why the score for this PI was increased from 90 to 95 compared to the draft assessment for public consultation. It should have been revised downwards.</p>
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Performance Indicator	3.1.3 Long term objectives
<i>Reason</i>	PNA management policy does not meet the SG80 requirements for long term objectives consistent with MSC Principles and Criteria and the precautionary approach. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>SG80 guidepost requires "Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy."</p> <p>Even though the final assessment report acknowledges that "the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention" (p. 181), this PI has been given a score of 90 (the draft report for public consultation had been given a score of 80).</p> <p>The assessment team seems to have arrived at this high score largely on the basis that the WCPFC meets the SG100 requirements (on paper) and that all PNA members have ratified or acceded the UN Fish Stocks Agreement, while discounting the evident deficiency of PNA policy with regards to this PI. As explained in FAM V2 guidance (8.2.26), "this performance indicator forms an important part of the overall understanding of the use or otherwise of a precautionary approach in the fishery under</p>



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	<p>assessment." Therefore, the importance of PNA policy cannot be ignored.</p> <p>We also note that the score for this PI is inconsistent that for with the Tosakatsuo Suisan Pole and Line Fishery assessment (score of 80). The evidence presented in that assessment for understanding the relevance of the precautionary approach in management policy was even stronger than for the current (PNA) assessment. In the Tosakatsuo Suisan Pole and Line Fishery, Japan has ratified the UN Fish Stocks Agreement and Japan's Fisheries Basic Act contains clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, they are explicit within management policy. If the latter is lacking for the PNA skipjack fishery, how can a higher score be justified?</p>
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Performance Indicator	3.2.1 Fishery-specific objectives
<i>Reason</i>	The fishery-specific short term objectives do not meet the SG80 requirements. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>SG80 guidepost requires "<i>Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.</i>"</p> <p>In response to stakeholders' comments on this PI, the final assessment report states (p. 540) "<i>Short term objectives for the WCPO purse seine are determined in CMM 2008-01 as achieving over a 3-year period commencing from the date this measure comes into effect in 2009, a 30% reduction in fishing mortality on bigeye tuna in the purse seine fishery in that area and a reduction in the risk of overfishing yellowfin tuna</i>", with the understanding that achievement of these objectives will maintain the skipjack stock at above levels associated BMSY." However, CMM 2008-01 makes no explicit statement about managing skipjack consistent with MSC's Principles 1 and 2. The assessment team's understanding that this measure will maintain skipjack biomass above BMSY is their own conclusion, one which is not explicit neither in the CMM nor in the record of the WCPFC5 meeting where the CMM was adopted. Furthermore, paragraph 30 of CMM-2008-01 clearly allows for further development of purse seine fisheries that target skipjack, and therefore the conclusion that the CMM will maintain skipjack biomass above BMSY is not necessarily valid.</p> <p>In the scoring of PI 1.2.1, the assessment team stated "<i>WCPFC responded to the change in the results of the skipjack assessment</i>"</p>



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	<p><i>and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011."</i> This is an acknowledgment that current management of the purse seine skipjack fishery is not explicit and is thus inconsistent with the assessment team's conclusion that skipjack management is addressed explicitly by the CMM under PI 3.2.1.</p> <p>In conclusion, SG80 guidepost is not met. PI 3.2.1 must be scored at less than 80 and an appropriate Condition be placed.</p> <p>We also point out that the treatment of bigeye and yellowfin in the scoring of this PI is inconsistent with their treatment in the assessment under Principles 1 and 2. In 3.2.1, the assessment team considers "the fishery" to be the entire WCPO purse seine fishery targeting skipjack, yellowfin and bigeye. Whereas, under Principles 1 and 2, the assessment team has strictly limited the definition of the fishery as that given by the Client (the PNA purse seine fishery for skipjack with free school sets), treating bigeye and yellowfin as retained bycatch.</p>
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Performance Indicator	3.2.2 Decision-making process (Condition 5)
<i>Reason</i>	Condition 5 does not comply fully with TAB Directive 033 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii). The PI does not exceed the SG80 guidepost for a fishery-specific management system that includes effective decision-making processes that result in measures and strategies to achieve the objectives and therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).
<i>Rationale</i>	<p>TAB 033 requires that "<i>The Certification Body shall specify conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified.</i>"</p> <p>Condition 5, as written, deals with what the CB considers to be a successful overall outcome; it does not specify milestones that spell out the significant and measurable improvements that must be achieved at each annual surveillance.</p>



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Performance Indicator	3.2.3 Compliance and enforcement
<i>Reason</i>	<p>There is no evidence that the MCS system in place meets the SG100 requirement that it has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. Therefore the scoring of this PI meets the requirements of Paragraph 4.8.2.(b) (iii).</p>
<i>Rationale</i>	<p>The assessment team gave a score of 100 to the first element of the PI in terms of the MCS system in place having demonstrated a consistent ability to enforce management measures.</p> <p>In the scoring comments, the assessment team explains "<i>The 100% observer scheme is proven to have worked effectively, with a number of safeguards in place to ensure that non compliance and inaccurate reporting are identified.</i>" However, the only evidence in support of this given in the final report cites document WCPFC-TCC6-2010/08 which states that 100% coverage was achieved for Aug/Sep 2009. That does not mean that 100% coverage has been consistently achieved since Aug/Sep 2009.</p> <p>The score given to this PI represents a potential outcome rather than existing evidence. The PI should not receive a score higher than 80.</p> <p>EUROTHON agrees that the ability of observers to accurately identify and accurately report set types is important for Chain-of-Custody issues in this certification. However, their ability to do so is also important for the enforcement of current management measures such as the FAD closure. As discussed during the 2010 Technical and Compliance Committee meeting of WCPFC, few members have given permission for the data collected by their national observers to become available to the WCPFC Secretariat. The importance of this issue under the FAM should not be underestimated. Recommendation 6 should include the need for all PNA members to agree to make their observer data available to WCPFC.</p> <p>The 3rd Implementing Agreement of the PNA states: <i>"2. FAD Closure</i></p> <p><i>There shall be no deployment or servicing of Fish Aggregating Devices and associated electronic equipment, or fishing by purse seine vessels on floating objects, between 0001 hours GMT on 1 July and 2359 hours GMT on 30 September each year, except that:</i></p> <p><i>(a) a Party may exclude all or part of its Fisheries Zone from the closure if it determines that it has suffered a</i></p>

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disproportionate burden from application of the closure and advises the depositary accordingly; and

(b) a Party may apply appropriate arrangements set out in a Management Plan to meet the requirements of domestic vessels that are highly dependent on fishing on floating objects within the Fisheries Zone.”

This exclusion for the application of WCPFC management measures, is currently taking place in the WCPFC region, with special reference to anchored FADs in the archipelagic waters of the PNA countries. EUROTHON consider that this undermines the management objectives of the WCPFC and provides a legal coverage to PNA countries that could be used against Principle 3.



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PNA Western and Central Tropical Pacific skipjack tuna unassociated (free-school)purse-seine fishery

Subject fishery response to Notice of Objection

To: The Independent Adjudicator, Mr Michael Lodge
PNAtunaobjection@msc.org.

Date: Friday 26th August 2011

From: Chairman, Parties to the Nauru Agreement

(Sylvester Pokajam)

Introduction

Following the publication of objections to the determination by the independent assessors appointed by the Marine Stewardship Council that the PNA free-school skipjack purse-seine fishery be certified, [MSC has provided that](#) “The subject fishery and any other stakeholder that participated in the fishery assessment process, may also, within 15 days of the date of publication, that is by 26th August 2011, submit written representations on the matters raised in the Notice of Objection to PNAtunaobjection@msc.org.”

This document is the Representation by the Subject Fishery on the matters raised by these objections. It is made without prejudice to any representations that may additionally be made by individual Parties to the Nauru Agreement as stakeholders in this process.

PNA considers that some of the matters raised in these objections merely reopen issues already addressed in previous stages of the stakeholder process. Of the remainder, several hinge on one

fundamental issue:- the opinion of the objectors that the Pacific Island states of Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu, acting cooperatively as Parties to the Nauru Agreement and within the framework of overall limitations set on the further expansion of WCPO tuna fisheries by the full membership of the Western and Central Pacific Fisheries Commission, do not have sufficient authority to effectively ensure the continuing sustainability of the stock of skipjack tuna that is taken within their waters. The objectors feel that the WCPFC is the only competent authority for ensuring the sustainability of regional skipjack stocks, despite their own suggestion that the WCPFC has so far proven incapable of making decisions of significant effect.

PNA, on the other hand, will argue that WCPFC is competent and effective, but that its effectiveness in the case of this particular EEZ-based fishery has been entirely dependent upon the strength of the measures already imposed by PNA on the fishery within their own waters. There is a complex relationship between WCPFC, PNA, other supranational fisheries bodies, and coastal State fisheries authorities in the region, but these relationships for the most part are clearly defined. In respect of the relationship between WCPFC and PNA, the fundamental point to note is that the nations party to the Nauru Agreement agreed and signed the *Convention On The Conservation And Management Of Highly Migratory Fish Stocks In The Western And Central Pacific Ocean* on the basis that Article 10 of the Convention (which defined the functions of the Commission “without prejudice to the sovereign rights of coastal States for the purpose of exploring and exploiting, conserving and managing highly migratory fish stocks within areas under national jurisdiction”) would continue to be respected and observed.

[Delegation Paper 32](#) presented by Papua New Guinea to the sixth WCPFC meeting in Papeete in 2009 explains this in more detail. The Parties to the Nauru Agreement have become weary of having to repeatedly explain to others that the WCPFC, as a post-UNFSA body, is different from most other RFMOs, and that the stewardship functions and development aspirations of coastal States are recognized as being at least as important as the desire by distant water fishing interests to maintain or expand their access to Pacific Island-hosted fisheries. And, after months of objections from processors of cheap canned tuna, FAD-dependent fishing fleets, and industry associations from the other side of the world, we are becoming tired of pointing out that the tropical WCPO purse-seine fishery, as an almost entirely EEZ-based fishery, is different from most other transboundary tuna fisheries. It is a fishery where extremely effective transboundary management measures are being cooperatively implemented by the subgroup of WCPFC members whose waters encompass most of the fishery.

The most substantive action of the WCPFC to date – CMM 2008-01 on the conservation and management of bigeye and yellowfin tuna – was only agreed after PNA had already instituted the most far-reaching components of this measure through the 3rd Implementing Arrangement of the Nauru Agreement. WCPFC in December 2008 was thus agreeing to “an already done deal”, in the words of one WCPFC delegate.

By this certification, the MSC provides an immediate advantage to skipjack tuna caught by sustainable free-school methods and subject to strong chain-of-custody monitoring, as well as providing a strong incentive - if the certificate is to be retained - to the agreement of best-practice transboundary fishery management measures across not only this certification unit, but the entire PNA purse-seine fishery, within a defined time-period. This in turn will be a catalyst for compatible best-practice measures to be introduced across all fisheries impacting shared stocks in the region, and perhaps impacting on globally accepted standards for the tuna industry in other RFMOs

In the following pages we address the Notice of Objection item by item. Although we were concerned by the possibility that some of these objections might be motivated not so much by a desire for sustainability of the resource, but the sustainability of the supply of relatively cheap raw material to the industries operated by the objectors, we do however take heart from the assertion that the International Seafood Sustainability Association is “driven by science”, and also from the words of the former Chair of the ISSF Scientific Advisory Council – the late and much-respected Jim Joseph. He considered¹ that the PNA 3rd Implementing Arrangement constituted a series of measures that were “the broadest and most effective of any tuna fishery in the world”.

¹ (<http://honoluluweekly.com/feature/2009/06/fishing-frenzy/>)

Comments on individual objections

Reference	Stakeholder view	PNA response
<p>ISSF Objection Part 2: ISSF Credentials</p>	<p>“Members of the [ISSF Scientific Advisory] Committee are volunteers who serve in their expert capacity to review scientific information, and their listing here is for purposes of describing ISSF. It does not indicate their endorsement or views regarding these particular objections”</p>	<p>PNA1. PNA asks a simple and easily-answered question: Has the ISSF Scientific Advisory Committee endorsed the ISSF objection?</p> <p>While the internal procedures of the ISSF may not require the ISSF Scientific Advisory Committee to agree to all outputs of the Foundation, and do not necessarily affect the validity of the objections made, any major dissenting opinions within the ISSF Scientific Advisory Committee should cast doubt upon the assertion that the International Seafood Sustainability Association “regards science as the driving force in sustainably fishing the world's tuna stocks - science leads, ISSA follows²”</p> <p>The science, in the particular case of the Western and Central Pacific Ocean skipjack stock, is best represented by the work of the Oceanic Fisheries Programme of the Secretariat of the Pacific Community – contracted as the science provider for the Western and Central Pacific Fisheries Commission – and SPC-OFP has previously provided opinions concerning some of the objections made by the ISSF, including dissenting opinions on matters of a scientific nature. The fact that the SPC-OFP Programme Manager is also one of the members of the ISSF Scientific Advisory Council leads us to ask how “driven by science” this ISSF objection actually is, if it doesn’t take into account the advice of its own Scientific Advisory Council.</p> <p>It is important for the credibility of the ISSF objection that ISSF not</p>

² (<http://iss-association.org/home>) “The International Seafood Sustainability Association is a trade association whose members are tuna processors and marketers who, by virtue of their ISSA membership, agree to follow the conservation measures implemented by the International Seafood Sustainability Foundation (ISSF). ISSA regards science as the driving force in sustainably fishing the world's tuna stocks - science leads, ISSA follows. Overall, the world's tuna stocks used for processing are largely healthy. [Read More](#)”.

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		<p>be perceived as a “greenwashing” organisation set up for primary purpose of protecting the interests of a segment of the tuna processing industry. We do not believe that this is true. However, the recent emphatic opposition of ISSF towards the certification of a fishery that currently provides products processed by ISSF Participants and which is operating on what ISSF has, elsewhere, claimed is a fully sustainable stock, using harvest control mechanisms that the previous chair of the ISSF science committee hailed as “the broadest and most effective of any tuna fishery in the world”, is puzzling.</p> <p>When ISSF was first set up in March 2009, Greenpeace welcomed it and said "We expect ISSF member companies to 'walk the talk' they will deliver to tuna management bodies. This means the ISSF's political demands must also be reflected in the sourcing standards of its members. They must also be accountable to consumers who want and have the right to legal, fair and sustainable products." While we PNA small island developing countries are in no doubt that the ISSF objection is driven by a sincere desire to ensure that consumers access only sustainable fishery products, we do have some doubts about its fairness. Will it affect their profitability if any of these sustainable products are provided to the consumer by non-Participants in ISSF such as locally-based, PNA-managed fishing vessels and processors?</p>
ISSF Objection: ISSF Credentials (continued)	“ISSF’s industry participants include fifteen of the world’s leading tuna processors globally. ISSF’s website identifies these participants: http://iss-foundation.org/about-us/participants/ ”	PNA2. While fully accepting ISSF’s status as a stakeholder in this process, we wish it to be recognized that the ISSF is not an impartial stakeholder. It represents vested interests in the established tuna processing industry and as such is likely to have some natural bias against processes which are likely to restrict the supply, or increase the cost of, their raw material.

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<p>ISSF Objection: ISSF Credentials (continued)</p>	<p>"ISSF's NGO Stakeholder Committee includes participants from TRAFFIC, NOAA, the New England Aquarium, Conservation International, FishWise, among other non-governmental organizations. "Their listing here is for purposes of describing ISSF, and does not indicate their</p>	<p>The only other objectors, Eurothon and OPAGAC, are also obviously representative of the processing investments and – to a much larger extent – the Spanish and EU catching sector globally.</p> <p>An example of potential bias is provided in the views of one of the members of Eurothon which asserted that their “fleet will certainly be impacted by this certification in today's global tuna market” – that they were working with African countries on “responsible certification of the purse-seine industry” – and implying that MSC certification would have a negative impact because it covered only non-FAD fisheries. This opinion was delivered on the understanding that the consultation process was public, but was unfortunately sent to the Auditor after the deadline for considering submissions.</p> <p>We welcome the breadth that the substantially-identical Eurothon, OPAGAC and ISSF views lend to the assessment – discussion of which can only make the process stronger – but we draw attention to potential bias here for the purpose of ensuring that it is recognized in the adjudication process.</p> <p>While there are vocal objections from international commercial vested interests, we find it significant that there are no objections from what might be termed the “management and conservation” sector. Neither NGOs nor IGOs – including the RFMO concerned with the overall conservation of WCPO tuna stocks– have objected to this determination.</p> <p>Given that the ISSF Stakeholder Committee has not necessarily endorsed, or has similar views about these objections, does this list of NGO affiliates have any bearing on the objection at all? Curiously ISSF omits to mention that ISSF's Stakeholder committee also includes a representative of the Marine Stewardship Council itself.</p>

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	<p>endorsement or views regarding these objections.”</p> <p>“ISSF’s NGO board members include Dr. William Fox, the Vice-President and Managing Director of Fisheries for the U.S. World Wildlife Fund (WWF); Miguel Angel Jorge, Director of the National Geographic Society’s Oceans Initiative; and Dr. Alfred Schumm, Marine Program Director for WWF-Germany.”</p>	<p>The ISSF Statement of credentials does not actually name the rest of the Board, particularly the principal officers of the Foundation, which include the ISSF President (who was Vice President for Government/Industry Relations and Seafood Sourcing for Del Monte Foods), and the ISSF Chair (President and CEO of Bumble Bee Foods LLC).</p> <p>In view of the lack of objections to this Determination from NGO and IGO groups, this apparent desire by ISSF to hint at its NGO credentials while exhibiting coyness about its industry members is interesting.</p>
<p>ISSF Objection Part 2: ISSF Credentials: ISSF Interest in the fishery</p>	<p>“ISSF is concerned that the Western and Central Pacific Fisheries Commission (WCPFC), that is charged with managing skipjack tuna throughout its range, has shown that it is incapable, to date, of setting effective conservation and management measures for stocks that are experiencing overfishing, such as bigeye tuna.”</p>	<p>PNA3.This is an emphatic accusation by the ISSF which should require better supporting evidence. We can provide many examples to the contrary of WCPFC capability, ranging from the WCPFC high seas boarding and inspection scheme to the definitely positive effects of the 2010 FAD closure on bigeye tuna fishing mortality.</p> <p>The view of the PNA is not that the WCPFC is incompetent, but that its proper role, as the most modern tuna RFMO working under the only tuna RFMO Convention based upon the provisions of the UN Fish Stocks Agreement, is somewhat more forward-looking than the more traditional RFMOs where distant-water fishing, processing and consumer interests are accustomed to dominating the dialogue. WCPFC takes into account the competence of coastal states in applying the rule of law to the management of areas subject to national jurisdiction. And, through the principle of compatibility, integrates these various nationally-mandated subregional (PNA, FFA, and Northern Committee etc) processes</p>

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		<p>together with its own high seas initiatives.</p> <p>This ISSF accusation misses the point, which is that the management of this <i>particular</i> certification unit does not depend upon the WCPFC for its effectiveness, but upon the PNA.</p> <p>This is because the PNA skipjack purse-seine fishery is primarily an EEZ fishery, and while PNA members are fully committed to the overall regional conservation and management limits advised by science and agreed by themselves and other members of the WCPFC, the implementation, surveillance, enforcement, and allocation of EEZ harvest rights within those limits rests primarily with the coastal States that are required to manage and conserve stocks within these areas. And indeed, whose sovereign rights the WCPF Convention clearly recognises. The PNA represents highly effective cooperation between the States with ultimate responsibility for conservation and management in these areas, and the WCPFC represents a forum for dialogue, including between flag states and coastal states, and a mechanism for agreeing measures that need to be binding on all CCMs in order to be effective, particularly concerning activities on the high seas.</p> <p>The question that needs to be asked is not “is the WCPFC effective” but “is the PNA effective” when it comes to setting “conservation and management measures for stocks that are experiencing overfishing, such as bigeye tuna”.</p> <p>The analysis of the 2010 actions by PNA, supported and broadened by WCPFC, was not available during the earlier assessment process, but is currently being presented and discussed at the 2011 WCPFC Scientific Committee. The 2010 PNA measures are much more definite in their observance than the initial subset of measures that</p>

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		<p>were introduced in 2009. These effects include:-</p> <ul style="list-style-type: none"> • Greatly improved compliance with the FAD closure – based on observer reports, catch composition and timing of sets (FAD sets tend to be made before sunrise and have a characteristically different composition owing to the higher proportion of bycatch species and small tuna) • A drop in proportion of FAD-associated sets both before and after the FAD closure, not just during the closure • Excellent compliance with the requirement for 100% tuna catch retention on board, as reported by observers • Very good observance of the high seas purse-seine fishing closure by all prohibited vessels. Two cases of apparent non-observance were quickly spotted by VMS and are currently being investigated. • The effort removed from the fishery by the high seas pocket closures was not transferred to other high seas areas, and PNA in-zone fishing opportunities were not increased. Total regional purse-seine fishing effort was substantively limited for the first time in 2010. • In 2011, with further high seas closures and no increase in total allowable effort allocation in-zone, purse-seine effort is being further substantively constrained. The Solomon Islands EEZ was closed earlier in 2011, it has been announced that the Nauru zone will shortly be closed, and several thousand vessel-days have already been transferred around the region. The entire PNA purse-seine fishery may undergo closure later this year, until the start of 2012. <p>It should be noted that the actual results of these measures upon</p>

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		<p>the status of WCPO tuna are not likely to be fully observable until up to 20 years from now³. What we can observe at this stage is whether measures are actually being respected, and the direction of trends.</p> <p>Thus, although two years is not a long enough period of time in which to judge the outcome of CMM 2008-01 – which is probably going to be the primary popular yardstick by which the effectiveness of the WCPFC and the PNA 3IA is judged – it is however long enough to judge the extent of compliance, and obtain some projections on the likely impact of the measures on the fishery. Compliance by the purse-seine fishery has been good, particularly since the beginning of 2010 when the PNA 3IA came into force and 100% observer coverage was instituted. And the projections of the latest stock assessments⁴ presented at the 7th WCPFC Scientific Committee in August 2011 suggest that the measure is on track to achieve most of its primary aim – of removing excess fishing mortality of bigeye tuna.</p> <p>It should also be clearly noted that these were measures to head off the possibility that the bigeye tuna stock in the WCPO becomes overfished – a stock from which the major take is by distant-water high seas longlining and FAD fisheries (Figure 8 of the MM Assessment Report) – and that the skipjack stock targeted by the purse-seine fishery is neither threatened by overfishing nor is overfished. The lessons that were learned in 2009 were already being applied to bigeye management in 2010 and this rapid response should be viewed as confirmation that WCPO harmonised management systems are as capable as any in the world to control</p>

³ Sibert J, Senina, I, Lehodey P (2011) “Prospects for effective conservation of bigeye tuna stocks in the Western Central Pacific Ocean” [WCPFC-SC7-2011/MI-WP-05](#)

⁴ SPC-OFP (2011) *Projections based on 2011 Stock Assessments*. WCPFC-SC7-2011/[MI-WP-02 rev1](#).

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		<p>exploitation of the relatively more robust skipjack stock, should the recent actions by the joint PNA membership be not convincing enough for some industry groups.</p>
<p>ISSF Objection Part 4: (Objection on the basis that there was a serious procedural or other irregularity in the fishery assessment process that made a material difference to the fairness of the assessment)</p>	<p>1. The Certification Body failed to consult with all “relevant entities”.</p>	<p>PNA4. This objection hinges entirely on how the word “relevant” is interpreted. Again, this objection is based on a misconception about the relative roles of the PNA and the WCPFC. Briefly, the relevant entities for consultation concerning the skipjack purse-seine fishery, and specifically the major component of that fishery that takes place in the area subject to the influence of PNA management and conservation measures, are not defined as the full WCPFC membership, but those entities directly involved in the management and fishing of this particular certification unit. We consider that this consultation – the largest single-fishery consultation process ever undertaken in carrying out a Marine Stewardship Council certification assessment – was not only adequate, but more than adequate.</p> <p>In addition, the process accounts for any possible lacunae in the initial consultation through the opportunity for submissions by stakeholders in the PNA purse-seine fisheries for skipjack at every stage in the assessment and adjudication process – opportunities that were in fact taken up by these objectors.</p>
<p>Part 4: (objection on the basis that there was a serious procedural or other irregularity in the fishery assessment process that made a material difference to</p>	<p>2. The Certification Body further failed to harmonize its assessment with overlapping fisheries. Specifically, the proposed PNA fishery overlaps with the Tosakatsuo Pole and Line Skipjack Fishery (it is the same stock)</p>	<p>PNA5: We appreciate that the Tosakatsuo pole and line fishery takes skipjack from the same <i>stock</i> as the PNA purse-seine fishery, but the fisheries do not overlap. A fishery is not a stock, but is defined by a combination of factors, also including gear and geographical area. The Tosakatsuo pole and line fishery is clearly distinct, both in area and gear, from the PNA purse-seine fishery. In fact, it is evident from a comparison of the two assessments, that the PNA assessment provides considerably greater levels of</p>

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<p>the fairness of the assessment)</p>		<p>analysis and information, and if tested, can demonstrate a more robust approach to scoring. We would go so far to say that it is the Tosakatsuo assessment that should be harmonised with PNA.</p> <p>However, the main point here is that it is the PNA purse-seine fishery that has by far the main influence on the status of the skipjack stock. The status of the whole WCPO skipjack stock cannot realistically be affected by however well, or however poorly, the Tosakatsuo pole and line fishery is managed. On the other hand, the purse-seine fishery within the PNA area of influence (which is not just the PNA EEZs, but effectively the entire area of operation of any purse-seiner that is licenced to fish in any PNA waters) is the primary source of fishing mortality on the WCPO skipjack stock, as well as a significant influence on the region-wide status of certain other stocks.</p> <p>Since the majority of the skipjack catch for the WCPO takes place within the PNA area of direct conservation and management influence, PNA is a sufficient authority to ensure the conservation of the stock, certainly in the medium term pending the implementation of the recommendations for further improvement made by the assessment, and PNA has already demonstrated its capacity to take and follow through effective decisions in this regard.</p> <p>In short, although effective conservation of the stock on which the Tosakatsuo pole and line fishery is based would require action by both WCPFC and Japan, effective conservation of the stock on which the PNA purse-seine fishery is based requires action primarily by PNA.</p> <p>PNA is happy to work within WCPFC to enact or extend measures</p>

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		<p>over a broader area to better ensure the sustainability of the skipjack stock, but it must be recognised – as has already proven to be the case in the past – that the PNA members of WCPFC are far readier to take conservation and management decisions of regional scope than is the WCPFC membership as a whole. The WCPFC two-chambered system of voting makes it easy for a small number of parties to block the passage of any Conservation and Management Measure.</p> <p>To make the management of this PNA-centred fishery dependent on concerted action being agreed to by the entire WCPFC membership is not likely to be in the best interests of skipjack stock stewardship, when PNA – in the case of this specific EEZ-dominated fishery – provides a more effective option. A scientifically-guided decision setting up reference points and an indicator-triggered harvest strategy is relatively quickly agreed at the PNA level and would be effective across an area of over 16 million square kilometres (over twice the land areas of the USA and European Union combined), an area that produced over 75% of the Western and Central Pacific Ocean skipjack catch in 2010 (based on analysis of the SPC-OFP data on catch by area, comparing the catch across PNA EEZs and closed areas compared to the total WCPO catch), and will consider fisheries impacts across the entire range of the stock. As has happened in the past, PNA action would set the scene for enacting compatible measures towards the edge of the range of the stock.</p> <p>One example of PNA decision having effect over virtually the entire WCPO skipjack purse-seine fishery, even with the failure of the entire WCPFC membership to agree to it immediately, is the 2011 ban on setting on whale sharks. This affects any purse-seine vessel that is licenced to fish in PNA waters over its entire range, and this</p>

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		<p>prohibition, reinforced by 100% observer coverage, is thus effective upon at least 80% of the distant water (EEZ and high seas) purse-seiners operating in the WCPO. This number will rise when the loophole for the US fleet is closed with the abrogation of the US multilateral fisheries access treaty.</p>
<p>ISSF Objection Part 5.1. 1.1.1 Stock Status</p> <p>(Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(note that the OPAGAC and Eurothon objections under this item are almost identical, including long passages of identical wording)</p>	<p>The second element of SG100 is not met. ISSF does not believe that <i>"There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years."</i></p> <p>... the assessment states that B_{msy} serves as a default target (p. 37) and a score of 100 was given because the stock assessment indicates that the biomass is above B_{msy}, with high certainty. However, on p. 37, the assessment also notes that according to Article 6 of the WCPFC convention, stock-specific reference points need to be determined according to the guidelines set out in Annex II of UNFSA. Those UNFSA guidelines set F_{msy} as the default limit (not a target), which is contradictory with B_{msy} being treated as a target (in other words, the biomass that would result from managing the stock using F_{msy} as a limit will be greater than B_{msy}). Therefore, the default target biomass reference point chosen by the assessment team is inconsistent with the WCPFC Convention.</p>	<p>PNA6: We note that ISSF has removed its own broad assessment of the status of skipjack stocks from its website, but the graphic is still available at http://www.iss-association.org/FileContents.phx?fileid=1a08540a-6ef1-46eb-8b40-e309e7dd41da, where it is opined that all 5 global skipjack stocks "are in a healthy state, meaning overfishing is not occurring".</p> <p>ISSF objects to the assessment team having noted that B_{msy} can be considered a default target reference point. ISSF draws attention to the possible incongruity of treating B_{msy} as a <i>target</i> reference point when the WCPF Convention calls for UNFSA Annex II guidelines to be applied, and when these guidelines call for F_{msy} to be treated as a <i>limit</i> reference point.</p> <p>However, as the ISSF website itself acknowledges the default norm that is currently globally accepted for tuna fishery reference points is the "Kobe Plot", which tracks B/B_{msy} and F/F_{msy} over time on a two dimensional plot (eg http://www.iss-association.org/stocks states that "An overfished stock is one whose current abundance (usually measured by spawning biomass) is below B_{msy}, the average spawning biomass that would result from fishing at F_{msy} permanently. Overfishing occurs when the current level of fishing mortality exceeds F_{msy}, the fishing mortality that will maximize yield in the long term. An overfished stock is one whose current abundance (usually measured by spawning biomass) is below B_{msy}, the average spawning biomass that would result from fishing at F_{msy} permanently." http://iss-foundation.org/wp-content/uploads/downloads/2011/05/ISSF-2011-01-Stock-Assessments-</p>

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		<p>101.pdf is also relevant)</p> <p>The Kobe Plot – the accepted global standard for tuna fisheries – treats F_{msy} and B_{msy} as precautionary reference points. If fishing mortality is kept to F_{msy}, the stock biomass will fluctuate around B_{msy} depending on interannual variability in recruitment etc.</p> <p>However there is no incompatibility between considering F_{msy} by itself as a limit reference point and B_{msy} as a target reference point. It is easy enough to see that we might agree to not, under any circumstances, allow more fishing effort than would allow F to exceed F_{msy} but that this would still permit the stock biomass B to fluctuate over and under B_{msy} depending on environmental conditions.</p> <p>In short, the default target reference point – B_{msy} – is not inconsistent with the WCPFC Convention. Although it is theoretically possible for the biomass (B) of the WCPO skipjack stock to drop below levels that would produce MSY when F_{msy} is treated as the limit reference point, this has not occurred, and B has indeed remained above B_{msy} with a high degree of certainty for the entire assessed history of the skipjack stock. In any case, PNA is currently working on a more sophisticated target reference point that would take these possibilities into account, and WCPFC is working on a limit reference point for the skipjack stock, both of which are expected to be effectively adopted within the time period laid out by the certification process, if not well before.</p> <p>The most urgent issue with reference points however is not the skipjack stock – which is recognised to be well within all reasonable biological reference points and indeed is probably one of the most robust and healthy fish stocks in the entire Pacific Islands region –</p>

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		<p>but the stocks whose indicators are approaching or exceeding their default reference points (as currently understood by the “Kobe Plot”). PNA members have been taking joint actions to try and ensure that F – the indicator for the limit reference point for one of the associated non-target stocks (bigeye) – is brought back to below F_{msy} levels by reducing effort and applying several other measures (eg: reduction in reliance on floating object sets) within the purse-seine fishery, and has met considerable resistance from some WCPFC members.</p> <p>However, with the bigeye fishery – which is not under assessment as part of this MSC process – a large part of the solution to the problem of excessive bigeye fishing mortality is likely to lie with the management of the distant-water high seas longline fishery. PNA is working on a harvest control strategy that will include consideration of the effects of both of these fisheries.</p> <p>We cannot say why this PI received a score of 95 in the Tosakatsuo Suisan Pole and Line Skipjack fishery certification and a score of 100 in the PNA Purse-seine Skipjack fishery determination, except to note that the chances of PNA activating formal, meaningful reference points covering the entire stock in accordance with “all relevant internationally agreed standards and recommended practices and procedures” (Article 5, WCPF Convention) are much higher than either the Japan Government or the WCPFC joint membership doing the same, within the same timeframe.</p> <p>The fundamental issue in considering this particular objection is that the current global default target reference point for tuna fisheries is B/B_{msy} and this has indeed not been exceeded on average, or indeed at any point, for the WCPO skipjack stock during the history of the PNA skipjack purse-seine fishery, with a high</p>

Reference	Stakeholder view	PNA response
		<p>degree of certainty.</p> <p>The principal conclusions of the latest skipjack stock assessment for the WCPO “are that skipjack is currently exploited at a moderate level relative to its biological potential. Furthermore, the estimates of $F_{current}/F_{MSY}$ and $B_{current}/B_{MSY}$ indicate that overfishing of skipjack is not occurring in the WCPO, nor is the stock in an overfished state. These conclusions appear relatively robust, at least within the statistical uncertainty of the current assessment. Fishing pressure and recruitment variability, influenced by environmental conditions, will continue to be the primary influences on stock size and fishery performance.” (Simon Hoyle, Pierre Kleiber, Nick Davies, Adam Langley, and John Hampton (2011) <i>Stock Assessment Of Skipjack Tuna In The Western And Central Pacific Ocean</i>. WCPFC-SC7-2011/SA-WP-04)</p>
<p>ISSF Objection: 1.1.2 Reference Points (Condition 1)</p> <p>(Part 5.1. Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p>	<p>Condition 1 states: <i>"Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met."</i></p> <p>SG80 requirements for the entire stock cannot be met if only PNA adopts target and limit reference points. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>The Assessment Team's assertion that 70% of the skipjack stock falls under the management of PNA countries is not supported by scientific evidence. The proportion of the</p>	<p>PNA7: This objection again hinges on the opinion of the objector that PNA is not in a position to implement effective conservation and management measures for the PNA skipjack purse-seine fishery, and that such measures can only effectively be implemented by the whole WCPFC joint membership.</p> <p>If that opinion is adjudged to be without merit then this objection should fail.</p> <p>Our response to this particular opinion is briefly stated in the 3rd row of this table above (response PNA3).</p> <p>In addition, we would point out that this objection fails to take into account:</p> <p>(a) that PNA management measures have effective influence</p>

Reference	Stakeholder view	PNA response
<p>OPAGAC and Eurothon objections are almost identical and are not responded to separately here</p>	<p>stock at any one time in PNA EEZs must be based on the distribution of the assessed relative biomass of skipjack from the stock assessment results, not on any one year's catch. The stock assessment estimated that the average 2005-2008 skipjack biomass was distributed 17%, 48% and 35% into the three broad regions in the model. The EEZs of PNA countries cover approximately 0%, 45% and 11% of those three regions respectively, from which a simple estimate of the average proportion of the skipjack stock in PNA waters can be calculated as $(0 \times 0.17 + 0.45 \times 0.48 + 0.11 \times 0.35)$, or about 25% (this value could be higher if skipjack densities within a region are higher inside EEZs than they are outside, but the stock assessment does not provide such information). This 25% level is substantially below the 70% claimed by the assessment team.</p>	<p>far beyond PNA borders. For example, vessels that fish in closed high seas areas, or which set around whale sharks anywhere in the WCPO, or which do not carry a PNA observer, may not be licenced to fish in any PNA EEZs. Purse-seine fishing entirely outside PNA EEZs is not economically viable for the great majority of purse-seiners, save perhaps the very large (EU and Latin American) vessels that normally fish in the ETP or other RFMO high seas areas;</p> <p>(b) Tuna are not equally fishable throughout the region. Skipjack are most fishable (in terms of cost per unit of catch) in the tropical area within and adjacent to PNA EEZs. Although MULTIFAN-CL has pioneered spatially-explicit stock status modelling, the three MULTIFAN SKJ assessment "regions" are still notably coarse-grained and each single "region" covers a wide range of skipjack population density and catchability;</p> <p>(c) Although a small but significant proportion of the skipjack stock is located outside the PNA area of influence (eg EEZs of non-PNA countries and temperate high seas areas), this portion of the stock is little-fished in comparison to its biomass. It is not actually subject to a level of fishing effort high enough to move total skipjack stock status indicators beyond sustainability reference points – it is small in relation to the fishing effort within the large proportion of the fishery managed by PNA.</p> <p>The 25% number quoted in the objection thus takes into account only the geographical area of the PNA EEZs in relation to the total WCPO, and not the effective proportion of the fished skipjack stock that is subject to PNA fishery management rules, which have significant influence even in high seas areas for this particularly</p>

Reference	Stakeholder view	PNA response
		fishery, and which control the activities of the great majority of distant-water purse-seiners in the fishery. Most of the WCPO does not consist of prime purse-seine skipjack fishing grounds.
1.1.2 Reference Points (continued)	Regardless of whether the average abundance of skipjack in PNA waters is 25% or 70% of the total, or somewhere in between, the highly migratory nature of the stock must be taken into account in order to comply with TAB 003. The stock assessment model estimates high movement rates between the three regions in the assessment model. As an example, 60% of the average biomass in the eastern equatorial region corresponds to fish hatched in other regions. Therefore, fisheries that operate in one region affect the abundance of skipjack in other regions and can be responsible for the stock not meeting the standard if they are not included in the Condition. The appropriate management body that covers the entire stock is the WCPFC, and therefore the condition needs to be for WCPFC to adopt appropriate reference points.	<p>Apart from being a multi-nation cooperative process in its own right, the Palau Arrangement Vessel Days Scheme explicitly contains an inter-area fishing opportunities trading scheme to account for movements and geographical shifts in the density of the skipjack stock.</p> <p>It is technically true that if a large fishing effort for skipjack were to start up on the portion of the stock outside the PNA area of management competence, despite it having proven uneconomic to date, and if WCPO skipjack does indeed form one unit stock with efficient mixing between all subregions, then the status of the PNA fishery might be compromised. However, there is an existing agreement among WCPFC members (CMM 2008-01) to restrict purse-seine catches of yellowfin and bigeye across the whole WCPO and this also serves to restrict catches of skipjack to around 2004 levels, so a large new fishery could not quickly or legally start up. A new CMM to extend CMM 2008-01 will include explicit limitations on total skipjack fisheries in the WCPO, to supplement the existing, effective, limitations on the fishing method.</p>
1.1.2 Reference Points (continued)	<p>The following sentence from the final report (p. 2) included in the condition gives the impression that managing the stock throughout its range is optional: "If required, active promotion of the adoption of equivalent target and limit reference points within the WCPFC." Managing the entire stock is not optional under TAB 003.</p> <p>We also point to Section 14.2 of the Final Report which</p>	This sentence does not actually say that "Managing the entire stock is optional". It recognises that PNA acting as a unit, within existing WCPFC agreements that provide a basic framework for managing the fishery and limiting total regional catch, is extremely likely to be able to ensure the conservation and sustainability of the PNA purse-seine skipjack fishery. It does however recognise, as does PNA, that WCPFC-wide implementation of compatible measures would be ideal and specifies that further actions will need to be

Reference	Stakeholder view	PNA response
	<p>states that PI 1.1.2 is harmonized with the Tosakatsuo Suisan Pole and Line Fishery assessment. This is only partly true in the sense that both assessment scores for this PI are 75. However, the Condition set for the Tosakatsuo fishery explicitly acknowledges that both the local (Fisheries Agency of Japan) and stock-wide (WCPFC) management agencies need to adopt the reference points. In contrast, the PNA condition allows for the local and/or the stock-wide agencies to act. Therefore, harmonization has not been achieved as required by Directive 1.2 of TAB 015: "As the critical outcome required of this harmonisation policy, the above steps shall ensure that consistent conclusions are achieved by the two (or more) fisheries, with respect to evaluation, scoring and particularly conditions."</p> <p>To be consistent with the recent New Zealand Albacore certification, the condition should read: "Within four years of certification, target and limit reference points need to be agreed by WCPFC (and PNA), consistent with the management objectives and scientific stock assessment."</p>	<p>implemented as a condition of certification, and foresees that these actions are likely to need to be pioneered and tested by PNA before being accepted by the entire WCPFC membership.</p> <p>As outlined above (response PNA5) the main point that should be recognised here is that it is the PNA purse-seine fishery that has by far the main influence on the status of the skipjack stock. The status of the whole WCPO skipjack stock cannot realistically be affected by however well, or however poorly, the Tosakatsuo pole and line fishery is managed. On the other hand, the purse-seine fishery within the PNA area of influence (which is not just the PNA EEZs, but effectively the entire area of operation of any purse-seiner that is licenced to fish in any PNA waters) is the primary source of fishing mortality on the WCPO skipjack stock.</p> <p>In short, although effective conservation of the stock on which the Tosakatsuo pole and line fishery is based would require action by both WCPFC and Japan, effective conservation of the stock on which the PNA purse-seine fishery is based requires action primarily by PNA.</p> <p>Since the majority of the skipjack catch for the WCPO takes place within the PNA area of direct conservation and management influence, PNA has demonstrated its capability for being a sufficient authority to ensure the conservation of the stock while the incremental improvements required as a condition of certification are implemented, and PNA has already demonstrated its capacity to take and follow through effective decisions in this regard.</p> <p>The same argument applies when comparing this certification unit with WCPO albacore fisheries, each of which catches a far smaller proportion of the total regional catch of albacore than the PNA-</p>

Reference	Stakeholder view	PNA response
		<p>managed purse-seine fishery of skipjack. WCPFC-wide implementation of management rules in these fisheries is particularly necessary since the albacore fishery is largely a high seas fishery. The PNA skipjack purse-seine fishery is unusual among major UNCLOS Annex 1 fisheries in that it takes place primarily within EEZs - to an even greater extent now that fishing has been severely restricted over large areas of the adjacent high seas. At the same time there is effective cooperation between States in the conservation and management of this fishery, as required by international law.</p> <p>It may also be relevant to note that PNA is likely to have target and limit reference points agreed and effectively implemented through a harvest strategy by the end of 2012, and that this will cover at least 75% of the skipjack catch in the WCPO. The WCPFC Scientific Committee has been working on a limit reference point for several years but has thus far reached no agreement on what to recommend to WCPFC, and this has resulted in requests by PNA members within WCPFC to fast-track this work (WCPFC7 Final Summary Report Paragraph 304). PNA can and will implement such measures within its own fisheries and will propose that WCPFC members adopt and apply compatible measures throughout the range of the stock.</p>
<p>ISSF Objection: Part 5.1. 1.2.1 Harvest Strategy</p> <p>(Objection on the basis that the score given by the certification body in relation to one or more</p>	<p>ISSF feels that “The PI does not meet the SG80 guidepost for a robust and precautionary harvest strategy in place and therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii)”.</p> <p>Rationale: The final report does not show evidence that the harvest strategy for the WCPFC is responsive to the state of the stock to meet SG80 guidelines for this PI. In the</p>	<p>PNA8: The SG80 guidepost for “a robust and precautionary harvest strategy in place” is that <i>“The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points. The harvest strategy may not have been fully tested but monitoring is in place and evidence exists that it is achieving its objectives.”</i></p>

Reference	Stakeholder view	PNA response
<p>performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(OPAGAC and Eurothon objections are almost identical and are not responded to separately here)</p>	<p>scoring comments for this PI, the assessment team justified a score of 80 because the "WCPFC responded to the change in the results of the skipjack assessment and the more cautionary tone of the scientific advice in 2010 by deciding to address the management of skipjack explicitly in the preparation of a CMM to replace CMM 2008-01 beyond 2011."</p> <p>The above justification is based on a potential outcome (WCPFC will not decide on a replacement CMM until December, 2011), rather than on existing evidence, and therefore SG80 guidelines are not met at the present time. This PI must be scored less than 80 and an appropriate Condition be placed.</p> <p>We also point out that the assessment team's treatment of the WCPFC in scoring this PI is inconsistent with how WCPFC was treated under 1.1.2 or 1.2.2. In the current PI (Harvest Strategy), the prominent role of WCPFC is recognized, whereas under the other two PIs (Reference Points and Harvest Control Rule) the assessment considered that PNA action alone is sufficient. We refer to our comments above (1.1.2) and reiterate that actions are needed to cover the entire stock (i.e., throughout the WCPFC).</p>	<p>Although the scientific advice resulting from the 2010 skipjack assessment was indeed more cautionary, the internationally-accepted indicators of skipjack stock sustainability are still well within precautionary limits. This 2010 assessment was notable not because it showed that immediate management action was necessary, but because it was the first time that scientific advice had suggested that precautionary action might actually need to be considered for skipjack. PNA immediately recommended to WCPFC that a CMM to replace CMM 2008-01 would need to explicitly include consideration of skipjack, and set in train further actions at the PNA level intended to ensure sustainability into the future.</p> <p>One of the key features of the PNA management of the purse-seine skipjack fishery is the limitation of effort through the Vessel Days Scheme. The Total Allowable Effort is set at a level that designed to limit the purse-seine fishery to 2004 levels, and effort units are scaled by vessel size. The first TAE was agreed four years ago in consultation with the WCPFC science provider, SPC-OFP, and is revised from time to time in light of this advice. A vessel-days effort "input" limit rather than a catch "output" limit has been used because it is more immediately accountable using the regional Vessel Monitoring System, and less prone to under-reporting. This PNA-wide precautionary TAE is apportioned between the EEZs of PNA members, who have the right to allocate these EEZ vessel-days fishing opportunities as they will, provided they do not exceed the days apportioned – in which case they must top up their apportionment with days from another PNA country with an underused allocation resulting from year-to-year variation in the distribution of fisheries and stocks.</p> <p>Although total days fishing opportunities were greater than the actual EEZ fishing effort in the first two years of operation of the</p>

Reference	Stakeholder view	PNA response
		<p>PNA VDS, with the closure of the high seas pockets to PNA-licensed purse-seine fishing in 2010 and the closure of further high seas areas in 2011, plus a clearer legal definition of the vessel-day itself in the Palau Arrangement, the VDS has now started to come into effective play as a limitation on purse-seine effort. In October 2010 the Nauru zone's allowable effort allocation was used up, and the Nauru EEZ was declared closed to all Nauru-licensed purse-seiners, unless extra days were acquired from the under-used allocations of other PNA countries. In 2011 so far the Solomon Islands EEZ has already been declared closed, Nauru has just issued a notice to fleets that the Nauru PAE is over 80% expired and the zone is likely to be closed at the end of September 2011. The vessels licenced under the FSM Arrangement have been informed that the multilateral allocation of days will soon expire, and they are required to source any further fishing opportunities from existing national VDS allocations. Several countries have already traded days in 2011, including Papua New Guinea, Federated States of Micronesia, Palau, Marshall Islands, and Solomon Islands.</p> <p>If purse-seine fishing continues at the current rate It is quite likely that the entire PNA TAE will be used before the end of 2011, and the entirety of PNA waters closed to all purse-seine fishing⁵ in addition to the high seas areas already closed.</p> <p>Thus, through a combination of high seas fishing prohibitions and in-zone limits, the PNA has implemented an effective precautionary cap on the WCPO purse-seine fishery. There are various other advantages to the VDS – including the benefit of a relatively “economically pure” process for valuing fishing opportunities</p>

⁵ except of course for the US fleet, which has so far claimed exemption from these VDS measures by virtue of the US-FFA multilateral treaty. The treaty in its current form, including this exemption, will however cease to be effective in the middle of 2012, and the production from these vessels is excluded from the certification until these loopholes are closed.

Reference	Stakeholder view	PNA response
		<p>(several PNA countries are considering an auction process next year) but the main benefit is that the VDS is much more finely “tunable”, in response to the status of sustainability indicators and the dictates of harvest control rules, than the former mechanism used by the PNA of imposing a simple cap on the number of vessels allowed to operate in PNA waters.</p> <p>We assume that the PI did not fulfil the SG100 guidepost here because the elements of the current harvest strategy were not explicitly <i>designed</i> to address the target and limit reference points. That is the next step, which is currently under way, with the consideration of more finely-tuned reference points and a formal harvest strategy triggered by them. These elements do however work together towards achieving management objectives reflected in the target and limit reference points, as currently expressed by the “Kobe plot” of stock status considered at each PNA and WCPFC meeting. These various measures are currently aimed at restoring or preserving the stock status of bigeye and yellowfin tuna, but also provide effective controls on the skipjack fishery, given that several species are caught in purse-seine nets. They include a regional limit on the Total Allowable Effort by purse-seine fleets, reviewed from year to year in the light of scientific advice on the status of precautionary stock indicators, as well as specific measures designed to modify the impact of this fishery on more vulnerable components of the catch, such as the length of the FAD closed season intended to reduce fishing mortality on bigeye tuna by purse-seiners.</p> <p>Monitoring is indeed in place, and there is good evidence these elements are achieving their objectives. A complete solution for the problem of excessive fishing mortality on bigeye will require measures that also effectively control the high seas distant water</p>

Reference	Stakeholder view	PNA response
		<p>longline fleets, but skipjack – the stock targeted by the fishery under assessment here – is manageable through a harvest strategy effective on the purse-seine fishery, particularly given the current status of indicators and the relative size of the fishery.</p>
<p>ISSF Objection: Part 5.1. Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination:</p> <p>1.2.2 Harvest Control Rule (Condition 2)</p> <p>OPAGAC and Eurothon objections are almost identical and are not responded to separately here</p>	<p>SG80 requirements for the entire stock cannot be met if only PNA adopts a harvest control rule. In order to comply with TAB Directives 003 and 015, the Condition must recognize that both PNA and WCPFC need to adopt a harvest control rule. Therefore the scoring of this condition meets the requirements of Paragraph 4.8.2.(b) (iii).</p> <p>Rationale: We have essentially the same concerns as expressed above for Condition 1 (PI 1.1.2). If only PNA adopts a harvest control rule, fisheries outside PNA EEZs can be responsible for the stock not meeting the SG80 standard. We also note that the assessment team states (p. 526) that "The assessment team has made suggestions as to how this [SG80 outcome] should be achieved but the means of resolution is to be determined and implemented by the client." However, TAB Directive 033 does not leave this entirely up to the Client: "The Certification Body shall specify conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified."</p>	<p>PNA9: The PNA response is essentially the same as expressed above for Condition 1. When PNA adopts formal harvest control rules for the PNA skipjack purse-seine fishery they will ensure that the exploitation rate of the PNA skipjack purse-seine fishery is reduced as limit reference points are approached, taking into account a wide range of uncertainties – as required by SG100 for this PI. And since PNA measures directly manage at least 75% of the skipjack catch and strongly influence the remainder, through the WCPFC Convention requirement for compatible measures to be adopted by WCPFC and its members, the adoption of an appropriate harvest control rule by PNA would be effective.</p> <p>Naturally, the ideal outcome would be for the entire WCPFC membership to adopt such a rule immediately, but experience shows that a management system which restricts distant-water fishing effort is much more likely to be implemented if adopted first by PNA⁶. As noted previously the WCPO purse-seine fishery is unusual among tuna fisheries in that the vast majority of the catch now is taken within PNA EEZs.</p> <p>A wider WCPFC rule is not necessary to ensure this condition is met because, in the unlikely event that uncontrolled expansion of fishing on the main target skipjack stock occurred outside the PNA area of management competence, in contravention of WCPFC agreements on limiting fisheries that take bigeye and yellowfin to</p>

⁶ http://icsf.net/icsf2006/uploads/publications/samudra/pdf/english/issue_58/art05.pdf

Reference	Stakeholder view	PNA response
		<p>approximately 2004 levels, driving the status of the stock towards limit reference points, the PNA harvest control rules would reduce the exploitation rate of the PNA skipjack purse-seine fishery. The PNA management system would guarantee the sustainability of any portion of the stock that was taken with the MSC label attached.</p> <p>The PNA already has a strong track record in implementing the Palau Arrangement Vessel Days Scheme, and some of the recent results of what is in effect a harvest control rule – a pre-determined set of actions triggered by the approach of an indicator (days) to a precautionary reference point (allowable effort limit, set at a level intended to reduce fishing mortality F on a component of the catch) – are illustrated in our response to 1.2.1 (PNA8) above. As mentioned there, the VDS now provides a firm control on the expansion of the purse-seine fishery, along with considerable flexibility to account for shifting stock dynamics and changes in fishing patterns.</p> <p>And the VDS is just one component of a package of PNA purse-seine measures - including high seas area closures, a ban on transshipment at sea, FAD closures, catch retention, 100% observer coverage – that manage a fishery that substantively controls the sustainability of the skipjack stock. It has regularly been pointed out that fishing mortality in the PNA area is much higher than in the rest of the range of the skipjack stock – current/virgin biomass ratio estimates are much lower for area 2 of the MULTIFAN-CL model – and the PNA control of the only component of the stock that might be said to have been heading towards sustainability limits is thus the critical factor in ensuring the sustainability of the whole stock.</p> <p>It should also be noted that a new CMM to extend CMM 2008-01</p>

Reference	Stakeholder view	PNA response
		<p>will include explicit limitations on total skipjack fisheries in the WCPO, even if it does not immediately include specific harvest control rules. The political dynamics of the situation suggest that these more sophisticated RP/HCR measures will need to be developed for subregional application and testing and later introduced to the entire WCPFC area through the principle of compatibility. However, every opportunity will continue to be given for new management measures to be discussed and agreed by the entire WCPFC membership.</p> <p>It must be recalled that this is a distant-water fishery prosecuted largely by non-PNA owned vessels largely in waters subject to PNA sovereign rights, and the usual constraints to taking swift and immediate action in response to overfishing are not as overpowering as in management systems where fishing interests are more powerful. PNA countries have already demonstrated their willingness and ability to take management decisions of major effect in response to scientific advice about likely overfishing of bigeye, including FAD closures, area closures (EEZ as well as high seas), and effort caps, and are equally capable of taking action to further preserve the sustainability of the skipjack stock. PNA has effective management control over most of the FAD and log (associated-) set purse-seine fishery as well as the certifiable free-school fishery, and would reduce the associated set fishery as necessary to maintain the sustainability and thus the certifiability of the free-school fishery.</p>
<p>ISSF Objection: Part 5.1. 1.2.3 Information and monitoring</p>	<p>The third element of the SG80 is not met. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>Rationale: The third element of SG80 for this PI requires</p>	<p>PNA10: We consider that there IS information that should be considered “good” on all other fishery removals from the WCPO skipjack stock. We would make two important points:</p> <ol style="list-style-type: none"> 1. The data emerging from Philippines and Indonesia has

Reference	Stakeholder view	PNA response
<p>(Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>OPAGAC and Eurothon objections are almost identical and are not responded to separately here</p>	<p>that "There is good information on all other fishery removals from the stock." Several stakeholders, including ISSF, noted that this is not met for fisheries in the Philippines, Indonesia and Vietnam.</p> <p>The assessment team states that the catches of skipjack by these countries is 11% of the total (p. 527). This is incorrect. During the last 10 years, Indonesia and Philippines alone have been responsible for 25% of the total catch, on average (source: WCPFC yearbook). In the case of Vietnam, the catches of skipjack are not even known: "fisheries data collection system in general and for tuna fisheries in particular of Vietnam is lacked and insufficient, and thus data of exact annual catch estimation of the tuna fisheries is not available so far" (Vietnam's 2010 Annual Report to the WCPFC, WCPFC-SC6-AR/CCM-35).</p> <p>The last WCPFC stock assessment was conducted in 2010 using data up to 2009. Data deficiencies and their impacts on the assessments were addressed during the 2010 Commission meeting. For example: "FFA members ... drew attention to the continuing advice from the SC that data deficiencies are affecting the quality of the scientific analysis and advice, and the WCPFC7 working papers that demonstrated the implications of incomplete, late or inaccurate data for the production of timely and reliable stock assessments. FFA members requested WCPFC7 record its concern regarding the continuing failure of CCMs to provide timely complete and accurate data and the effect of this failure on the Commission's scientific advice."</p> <p>The final report of the PNA MSC assessment cites</p>	<p>improved significantly since the assessment started, and a precautionary approach was taken in the previous stock assessments by assuming that these catches were towards the upper end of the range of probability. The recent improvement is already documented⁷, and is expected to elevate the information from "good" to "complete" before the next certification event;</p> <p>2. Complete information on other fishery removals from the stock is not quite as crucial in stock assessment when fishery-independent and multiple source of data are in use, such as the tagging programme and ecosystem trophic modelling through SEAPODYM. The assessment software used in the region – particularly MULTIFAN-CL – has been designed specifically to take into account these additional sources of information and compensate for any data shortfalls or lateness in reporting that would devalue more catch/effort data-dependent assessment methodologies.</p> <p>Regarding the ISSF assertion that the assessment team is incorrect in its estimation of the percentage of the total catch of pacific skipjack by fisheries in the Philippines, Indonesia and Vietnam waters, it is important not to confuse catches within geographical areas with catches by flag states. When a Philippines-flagged vessel is licenced to fish in a PNA country, its catch and effort is monitored as closely as any other vessel licenced to fish in that zone. It is fisheries IN the waters of Philippines and Indonesia that were considered in the past to be less data-rich. The reporting from these fisheries is however now considered to be up to IOTC and WCPFC standards.</p>

⁷ Eg: Williams, P (2011) Changes to the data available for stock assessments. [WCPFC-SC7-2011/SA IP-03](http://www.wcpfc.org/SC7-2011/SA_IP-03)

Reference	Stakeholder view	PNA response
	<p>numerous potential improvements to the data collection systems in place for these countries; however, many of them were initiated in 2010 and it is not even known how effective they will be. While these efforts should be applauded and supported, the score given by the assessment team is based on a potential outcome rather than on existing practice. PI 1.2.3 addresses information that is collected to support the harvest strategy, not about information that could be collected.</p>	<p>And, as noted by SPC in its views on the ISSF comments of 2nd June, “SPC is now in a position to include catch by the main gear types for these fisheries specified separately in the stock assessments. This is being done for the 2011 assessments”. The catch of tuna by Vietnamese vessels within the WCPFC Convention Area is considered to be currently insignificant, for the purposes of stock assessment.</p> <p>It should also be noted that any vessel wishing to fish in PNA waters is effectively prohibited from fishing on the high seas (monitored by observers and port-to-port VMS), so there is now little uncertainty about the high seas component of the catch.</p>
<p>ISSF Objection: Part 5.1. Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination: 1.2.4 Assessment of stock status</p> <p>OPAGAC and Eurothon objections are almost identical and are not responded to</p>	<p>There are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment and therefore the first and third elements of SG100 for this PI are not met. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>Rationale: The first element of SG100 for this PI is "The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery" and the third element is "The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored." As there are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment, these elements of SG100 for this PI are</p>	<p>PNA11: The effectiveness and robustness of stock assessments are not measured against harvest control rules. Stock assessments are judged by measuring the predictions of the stock assessment model against actual catches (or other assessed parameters).</p> <p>As the PNA purse-seine free-school skipjack MSC assessment explains, there is as yet no formal harvest control rule – formalisation is a condition that is imposed as part of the certification process itself – but the agreed management processes and triggers that are already in place are directly informed by the stock assessment, and do take into account the major features relevant to the biology of the species and the nature of the fishery according to the SG100 requirement. The principle control rule that has been in operation for the last four years is the setting of the Total Allowable Effort limit for the fishery, based on the results of the MULTIFAN-CL assessment and amended from year to year. There are several other established facets to the management process which are explained in the assessment document and</p>

Reference	Stakeholder view	PNA response
separately here	<p>not met.</p> <p>The final report does give a number of reasons why the SG80 standards are met, such as evaluating status relative to reference points and taking uncertainty into account. But the SG100 standards require more than that. FAM V2 Guidance (6.3.19) explains this: "particularly under SG100, it may be useful to consider whether MP/MSE approaches were used to test the robustness of the stock assessment to uncertainty and alternative hypotheses."</p>	<p>which have been agreed between all eight PNA member States. The next step, of formalising these into a Harvest Strategy is one of the conditions of the assessment and PNA already has this process under way, both for enactment in the PNA fishery and for proposal to the full membership of WCPFC.</p> <p>As mentioned by SPC-OFP in SPC in its views on the ISSF comments of 2nd June, the stock assessment in use is of high quality and could immediately be used within an RP/HCR framework. Similarly, the controls on effort exemplified by the VDS are readily adaptable to such a framework.</p>
<p>ISSF Objection: Part 5.1 2.1.2 Management strategy (retained species)</p> <p>(Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(Neither OPAGAC nor Eurothon make an objection under 2.1.2)</p>	<p>The second element of the SG80 is not met for bigeye tuna. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii). Yellowfin should be included under Principle 1 of the assessment as target species, along with skipjack, instead of being considered under Principle 2 as retained species. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>Rationale: The second element of the SG80 guidepost is "There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved." It has been clearly established that CMM-2008-01 is not working to end overfishing of the bigeye stock, and therefore a score of 80 is unreasonable. In scoring PI 2.1.2, the assessment team implicitly refers to "the fishery" as the entire purse seine fishery, with a focus on unassociated sets. Whereas, under Principle 1, the assessment team has</p>	<p>PNA12: As pointed out in both the Assessment and the SPC-OFP comments on the previous ISSF objection, the client and assessor are not obliged to assess target species outside the unit of certification. The fact that PNA is not asking to attach the MSC label to yellowfin tuna taken by the PNA fishery does not weaken the sustainability of the PNA purse-seine skipjack fishery. In point of fact, if yellowfin had been added to the species considered for certification, there is every likelihood that it would have passed, given the current status of the stock, and the shared management processes. PNA is however taking SPC advice and developing harvest control rules for yellowfin, taking into account assessed indicators of stock status against precautionary reference points, and it is likely that the yellowfin free-school purse-seine fishery may be submitted as a separate unit for assessment in future.</p>

Reference	Stakeholder view	PNA response
	<p>strictly limited the definition of the fishery to that given by the Client (the PNA purse seine fishery for skipjack with free school sets), treating bigeye and yellowfin as retained bycatch. Yellowfin, along with skipjack, are target species of purse seine unassociated set fishing operations. Larger sized yellowfin are specifically targeted, and it is not uncommon for purse seiners to catch schools of 100% yellowfin in unassociated sets. Clearly, yellowfin are targeted in these sets. In this assessment, the choice made was to assess yellowfin as retained species under P2. While the scoring of yellowfin under P1 criteria would have been similar to the scores for skipjack, by placing yellowfin in P2 the PNA has avoided the responsibility of implementing conditions for 1.1.2 Reference Points and 1.2.2 Harvest Control Rule. Under the logic in this assessment it would be possible in the future for a large portion of the total catch of the yellowfin fishery to be certified without any of that catch being certified under P1. The scoring comments in the assessment (p. 155) make reference to the fishery impacts on the bigeye stock, but there is no mention of yellowfin. Fishery impact figures show that the unassociated sets make nearly a 10% contribution to reduction in the spawning potential of the yellowfin stock. This impact is not insignificant. Therefore, consideration of yellowfin under P2 is unreasonable.</p>	
<p>ISSF Objection: Part 5.1. 3.1.1 Legal and/or Customary Framework (Objection on the basis that the score given by</p>	<p>The management system does not include an authority that has established or has power to establish target references and limits for the Central and Western Pacific skipjack stock, and is therefore not capable of delivering sustainable fisheries. Accordingly, no passing scoring under Principle 3 is possible for this important Performance Indicator. The Certifying Body's scoring is therefore</p>	<p>PNA13: This is another objection that stands or falls on the validity of the determination that PNA is indeed an effective management body for this fishery. Again we would point out that the WCPO purse-seine fishery for skipjack is unusual among regional fisheries for highly-migratory species in that the vast majority of the catch, especially since the closure of the high seas pockets, is taken from EEZs – from areas subject to direct processes of national law. And</p>

Reference	Stakeholder view	PNA response
<p>the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>OPAGAC and Eurothon objections under this item are very brief and essentially state that there is no management system for this fishery in existence, especially not one with a transparent mechanism for solving legal disputes</p>	<p>unreasonable and arbitrary requiring remand under Paragraph 4.8.2(b)(iii).</p> <p>Rationale: “The intent of Principal 3 [Management System] is to ensure that there is an institutional and operational framework, appropriate to the size and scale of the fishery, for implementing Principles 1 and 2 that is capable of delivering sustainable fisheries in accordance with the outcomes articulated by Principles 1 and 2.” See MSC Fisheries Assessment Methodology Section 8.1.1. Though a unit of certification “might include only a sub-set of fishers ...it is the management of the wider fleet which denotes the specific fishery for the purposes of this Component and shall therefore be the subject of the assessment under the fishery-specific management system PIs.” Id. Performance Indicator 3.1.1 “relates to the presence or absence of an appropriate and effective legal and/or customary framework that is capable of delivering sustainable fisheries in accordance with MSC’s Principles 1 and 2.” Id. And the “Standards Council has agreed that Principle 1 applies to the whole of the fish stock(s) exploited by the fishery seeking certification. So a fishery could only pass if the whole fish stock(s) meet this standard, and it would not pass if the standard was not met irrespective of who (e.g., the fishery seeking certification or other fisheries) was responsible for the stock not meeting the standard.” See MSC TAB Directive D-003 (Unit of Certification). Central and Western Pacific skipjack is a highly migratory stock that falls under the intergovernmental management convention of the Western and Central Pacific Fisheries Commission (WCPFC). The convention includes 25 members, 8 participating territories, and 9 cooperating</p>	<p>in the case of PNA countries, national laws and processes that are substantially harmonised when it comes to the elements crucial for the management and conservation of tuna fisheries, and the application of ecosystem approaches. The indicators and precautionary reference points that have been used for several years by PNA tuna fisheries managers to guide their collective decisions – summarised in the “Kobe Plot” – are the same indicators and reference points that have been accepted by the international T-RFMO process as standard for use in tuna fisheries worldwide. PNA management of the tuna fishery is based on the status of the stock as a whole, and PNA expects WCPFC members to apply compatible measures in any other areas of the WCPO where the skipjack purse-seine fishery is active, as provided for by the Convention and developing the precedent provided by CMM 2008-01 paragraphs 12 and 18.</p>

Reference	Stakeholder view	PNA response
	<p>non-members. The WCPFC has repeatedly failed to establish any target and limit reference points for the skipjack stock, or harvest control rules. Simply put, WCPFC has failed to manage the stock. (For this same reason, in a similar case involving Albacore, WCPFC establishment of target and limit reference points and both the establishment and testing of harvest control measures were express conditions to MSC certification. See Acknowledgment by the Independent Adjudicator with respect to the Agreed Resolution of an Objection to the Final Report and Determination on the Proposed Certification of the New Zealand Albacore Tuna Troll Fishery under the MSC Principles and Criteria for Sustainable Fishing.)</p> <p>The PNA is a sub-set of 8 WCPFC convention nations. In 2010, 70% of the catch of the Western and Central Pacific Skipjack took place in their waters. However, this is mainly due to licensing arrangements for vessels to fish in their waters, and does not reflect the abundance of the stock in their waters. A calculation based on the stock assessment adopted by the WCPFC Scientific Committee suggest that on average, only 25% of the stock inhabits PNA waters in any given year. This situation becomes more critical considering the migratory behavior of skipjack, as the fish clearly move in and out of PNA EEZs. By its very limited definition, the PNA governments are incapable of managing the Western and Central Pacific Skipjack stock, because it cannot manage the whole fish stock defined by Principle 1. Any passing scoring under Performance Indicator 3.1.1 is therefore arbitrary and unreasonable. Indeed it is impossible.</p> <p>PNA itself, moreover, has no established record of setting</p>	

Reference	Stakeholder view	PNA response
	<p>target and limit reference points or harvest controls for the highly migratory and always fluctuating percentage of the whole stock that may be in its waters at any given point in time. In short, PNA has not and cannot manage the whole stock, and cannot deliver a sustainable fishery pursuant to Performance Indicator 3.1.1.</p> <p>The Final Decision of the Independent Adjudicator in the Matter of an Objection to the Certification of the Faroese Pelagic Organisation North-East Atlantic Mackerel Fishery illustrates the point.</p>	
<p>ISSF Objection: Part 5.1.</p> <p>3.1.2 Consultation, roles and responsibilities</p> <p>(Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(OPAGAC and Eurothon objections are almost identical and are not responded to separately here)</p>	<p>The third element of the SG100 is not met for PNA. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>Rationale The third element of SG100 standard is "The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement."</p> <p>The final assessment report states (p. 85): "observer status in PNA Meetings is formally limited to non-PNA Members of the FFA", and "There does however, appear to be a lack of clarity and openness in PNA decision-making with respect to the establishment and operation of the VDS Total Allowable Effort, particularly with respect to links to the requirements of WCPFC CMM 2008-01 and the scientific advice."</p> <p>FAM V2 guidance (8.2.15) explains that "The material point of the consultation part of the performance indicator is that the management system is open to interested or affected parties and stakeholders and that any information that is viewed as important by those parties can be fed into</p>	<p>PNA14: The management of western tropical Pacific tuna fisheries is possibly the most open and consultative process in the region. It consumes vast amounts of resources and time from the government, non-government, and private sectors. The management of an EEZ-based fishery is, however, most appropriately decided by nationals of the coastal state(s) involved. If there are foreign interests with a stake in a national fishery these are most appropriately maintained through consultative and contractual arrangements rather than direct membership of the decision-making body. PNA both collectively, and through its individual members, maintains a plethora of such consultative arrangements, even if these do not always coincide with full meetings of the PNA.</p> <p>A PNA member-driven process is particularly appropriate for the operation of the VDS, where allocations for national EEZs are managed by national processes under the exercise of sovereign rights. Similarly, the setting of the Total Allowable Effort (TAE) that limits the total sum of these national allocations is a responsibility that is shared between the nations involved. PNA members can, and do, include industry and other stakeholders in their</p>

Reference	Stakeholder view	PNA response
	<p>and be considered by the process in a way that is transparent to the interested or affected parties and stakeholders." This is clearly not the case for the PNA and therefore a score of 100 is not warranted.</p> <p>Furthermore, ISSF cannot understand why the score for this PI was increased from 90 to 95 compared to the draft assessment for public consultation. It should have been revised downwards.</p>	<p>delegations to PNA meetings and other decision-making processes. And regular consultations are held both at the multilateral level, between PNA or FFA and various fleets (including USA, Korea, Japan, China, Taiwan etc), with processors, and at the bilateral level.</p> <p>Distant water interests are also provided full opportunity for involvement in wider regional decisions, through membership of WCPFC or observership of FFA. And fisheries meetings of SPC are open, with speaking rights for all. The scientific process has been open from the start, from the first meeting of the Standing Committee on Tuna and Billfish organised by SPC in 1987, where the international groundwork for the present WCPFC-wide stock assessment, indicator, and precautionary reference points-setting process was begun.</p> <p>Prior to the assessment, NGOs had participated in a number of PNA meetings, not least the VDS Committee meetings. NGOs, as well as domestic industry interests, now regularly attend PNA meetings. These include representatives from WWF, Greenpeace and the Pew Charitable Trust. No request to attend such meetings has been made by ISSF. It is perhaps notable that national delegations to PNA meetings often contain domestic tuna industry representatives, including representatives of at least one company that is an ISSF participant.</p> <p>All in all, the opportunities for involvement of non-Pacific Island interests in the management of tuna stocks in PNA waters are far greater than the opportunities for involvement by PNA interests in the management of the same stocks in non-Pacific Island waters, or the management of industries that are dependent on the exploitation of fish stocks in PNA waters.</p>

Reference	Stakeholder view	PNA response
		<p>Complaints about lack of transparency in PNA processes in the past have syntactically parsed to complaints about the reduced ability of external or exploitative interests to influence PNA decisions. Pacific small Island states are well aware of their vulnerability and one of the most effective features of PNA, in its job of promoting small island development and natural resource conservation, is that the Parties have a forum within which they can express themselves frankly to each other purely as developing countries with a common set of interests in a particular fishery. If decisions are made within this forum that have impact outside the mandate of PNA, then they are taken to other fora, such as FFC and WCPFC, or to individual affected stakeholders, for discussion.</p>
<p>ISSF Objection: Part 5.1. 3.1.3 Long term objectives</p> <p>(Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(OPAGAC and Eurothon objections are almost</p>	<p>Reason: PNA management policy does not meet the SG80 requirements for long-term objectives consistent with MSC Principles and Criteria and the precautionary approach. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>Rationale: SG80 guidepost requires "Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy." Even though the final assessment report acknowledges that "the Nauru Agreement, the core PNA instrument does not explicitly require objectives consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention" (p. 181), this PI has been given a score of 90 (the draft report for public consultation had been given a score of 80). The assessment team seems to have arrived at this high score</p>	<p>PNA15: The PNA management system, while regionally harmonised and agreed, is implemented through processes of national law. PNA member national fisheries legislation has been developed and refined over the last 30 years with the substantive assistance of the Forum Fisheries Agency in accordance with a region-wide set of agreed common principles. These common elements include specific Harmonised Minimum Terms and Conditions as well as general principles such as the Ecosystem Approach.</p> <p>The Nauru Agreement (and its implementing arrangements) is the core PNA instrument, but is not the only such instrument. PNA countries also implement the Palau Arrangement and the FSM Arrangement, and are parties to the Niue Treaty and various other regional fisheries instruments. But, as mentioned, the actual implementation of these PNA agreements is at the national level, where they provide a strong element of regional commonality to the framework of national fisheries legislation and of national tuna fisheries ecosystem management plans.</p>

Reference	Stakeholder view	PNA response
<p>identical and are not responded to separately here)</p>	<p>largely on the basis that the WCPFC meets the SG100 requirements (on paper) and that all PNA members have ratified or acceded the UN Fish Stocks Agreement, while discounting the evident deficiency of PNA policy with regards to this PI. As explained in FAM V2 guidance (8.2.26), "this performance indicator forms an important part of the overall understanding of the use or otherwise of a precautionary approach in the fishery under assessment." Therefore, the importance of PNA policy cannot be ignored.</p> <p>We also note that the score for this PI is inconsistent that for with the Tosakatsuo Suisan Pole and Line Fishery assessment (score of 80). The evidence presented in that assessment for understanding the relevance of the precautionary approach in management policy was even stronger than for the current (PNA) assessment. In the Tosakatsuo Suisan Pole and Line Fishery, Japan has ratified the UN Fish Stocks Agreement and Japan's Fisheries Basic Act contains clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, they are explicit within management policy. If the latter is lacking for the PNA skipjack fishery, how can a higher score be justified?</p>	<p>In short, the PNA management process cannot be assessed in isolation, and is not <i>enforced</i> by a regional body. PNA agreements are implemented through national law, and need to be assessed in the context of all the national commitments, aims, objectives, and principles that have been agreed by all PNA members.</p> <p>Objectives consistent with the precautionary approach are also implicit in the extremely high-quality scientific processes that inform PNA fishery management decisions. The indicators derived from these assessments are considered in relation to the interim sustainability reference points agreed by global tuna RFMO members at their Kobe meeting in 2009, and this relationship directly informs the management decisions made by PNA, particularly the adjustment of a Total Allowable Effort level for the fishery.</p> <p>Thus there are definite long-term objectives and clear principles across the entire Pacific Island fisheries management process, thanks to the high level of regional fisheries management cooperation that exists through PNA, FFA and SPC. PNA does however accept the recommendation of the MSC determination that the management objectives and principles be articulated and completely self-contained within PNA agreements, and that harvest control rules need to take more into account than the current tuna RFMO standard, and that precautionary action to become even more responsive to unexpected changes in the fishery. Work has already started on defining formal target and limit reference points and indicators that will more appropriately and explicitly implement sustainability objectives for the several stocks involved in this fishery, as qualified by relevant environmental and economic factors, including the special</p>

Reference	Stakeholder view	PNA response
<p>ISSF Objection Part 5.1. 3.2.1 Fishery-specific objectives</p> <p>(Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(OPAGAC and Eurothon objections are almost identical and are not responded to separately here)</p>	<p>Reason: The fishery-specific short term objectives do not meet the SG80 requirements. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>Rationale: SG80 guidepost requires "Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system." In response to stakeholders' comments on this PI, the final assessment report states (p. 540) "Short term objectives for the WCPO purse seine are determined in CMM 2008-01 as achieving over a 3-year period commencing from the date this measure comes into effect in 2009, a 30% reduction in fishing mortality on bigeye tuna in the purse seine fishery in that area and a reduction in the risk of overfishing yellowfin tuna", with the understanding that achievement of these objectives will maintain the skipjack stock at above levels associated BMSY." However, CMM 2008-01 makes no explicit statement about managing skipjack consistent with MSC's Principles 1 and 2. The assessment team's understanding that this measure will maintain skipjack biomass above BMSY is their own unsupported conclusion, one which is not explicit either in the CMM nor in the record of the WCPFC5 meeting where the CMM was adopted. Furthermore, paragraph 30 of CMM-2008-01 clearly allows for further development of purse seine fisheries that target skipjack, and therefore the conclusion that the CMM will maintain skipjack biomass above BMSY is not necessarily valid.</p>	<p>requirements of developing States.</p> <p>PNA16: The VDS effort limit, and the trading system that permits flexibility of geographic application according to climatic and migration patterns, is specifically tailored for the management of the skipjack purse-seine fishery. The limits, although initially set at a level designed to protect the less-robust components of the catch – yellowfin and especially bigeye tuna – also control skipjack catches at biomass levels that have so far proven to be well above B_{msy}.</p> <p>The most fundamental issue to consider here is that any tuna purse-seine fishery management system which conserves bigeye and yellowfin tuna by limiting effort is practically, and inevitably, going to also conserve skipjack tuna, since skipjack is by far the largest component of the purse-seine catch. To suggest otherwise borders on the frivolous. The objectives of CMM2008-01, and of the 3rd Implementing Arrangement of the Nauru Agreement which was incorporated wholesale into CMM-2008-01, are explicit. And the certification condition for PNA to implement more explicit skipjack harvest controls in the event that purse-seining becomes so efficient and highly-targeted that purse-seiners can fish within the existing effort limit yet overfish skipjack while at the same time avoid overfishing yellowfin, bigeye, and non-tuna bycatch species, should cover any remaining worries by OPAGAC, Eurothon and ISSF that this fishery lacks explicit management objectives.</p> <p>PNA will also continue to promote the explicit inclusion of skipjack into the WCPFC management measure that supplements or replaces CMM 2008-01.</p>

Reference	Stakeholder view	PNA response
<p>ISSF Objection Part 5.1. 3.2.2 Decision-making process</p> <p>(Objection on the basis that the score given by the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(OPAGAC and Eurothon objections are almost identical and are not responded to separately here):</p>	<p>Reason: Condition 5 does not comply fully with TAB Directive 033 and 015, the Condition must recognize that both PNA and WCPFC need to adopt appropriate target and limit reference points. Therefore the scoring of this condition is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).The PI does not exceed the SG80 guidepost for a fishery-specific management system that includes effective decision-making processes that result in measures and strategies to achieve the objectives and therefore the scoring of this condition is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p> <p>Rationale: TAB 033 requires that "The Certification Body shall specify conditions that are auditable and verifiable. The Certification Body shall specify milestones that spell out the significant and measurable improvements (in terms of outcomes) that must be achieved at each annual surveillance, as well as what constitutes a successful overall outcome to achieve the 80 performance level over time period of the condition. Where possible, quantitative metrics shall be specified." Condition 5, as written, deals with what the CB considers to be a successful overall outcome; it does not specify milestones that spell out the significant and measurable improvements that must be achieved at each annual surveillance.</p>	<p>PNA17: The argument contained in this objection again hinges on the objectors' perception that this fishery – although it is largely based in and almost entirely dependent upon the combined EEZs of PNA members – can only be effectively managed by the full WCPFC membership.</p> <p>As outlined above, as well as being entirely competent to jointly manage this largely EEZ-based fishery, the 8 countries of the PNA have an extremely effective decision-making process, as is proven by the record of decisions concerning the management of this fishery in recent years – decisions that are not only rapidly but effectively executed, even when the full WCPFC membership does not agree to compatible measures. For example, it is readily demonstrated from VMS data that almost all purse-seiners licenced to fish in PNA waters have an excellent compliance record of not fishing on the eastern high seas areas that were closed by PNA in 2011. The only exceptions are the OPAGAC and USA vessels, and processes have already been put in train to effectively close the loopholes that permitted this.</p>
<p>ISSF Objection: Part 5.1. 3.2.3 Compliance and enforcement</p> <p>(Objection on the basis that the score given by</p>	<p>Reason There is no evidence that the MCS system in place meets the SG100 requirement that it has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. Therefore the scoring of this PI is arbitrary and unreasonable under Paragraph 4.8.2.(b) (iii).</p>	<p>PNA18: The objections state that “observer coverage is essentially unknown” for the 2009 FAD closure. This is not the case. However the 2-month 2009 FAD closure under WCPFC CMM 2008-01 was the first time that 100% observer coverage had been attempted in the region, and the result can be considered exceptional, even if the mechanisms for getting reports from national observer programs into WCPFC database had not all been agreed and</p>

Reference	Stakeholder view	PNA response
<p>the certification body in relation to one or more performance indicators cannot be justified and this was material to the outcome of the Determination)</p> <p>(OPAGAC and Eurothon objections make similar points to ISSF but in less detail and both make the same additional point about PNA territorial and archipelagic waters being excluded from certain WCPFC reporting agreements and PNA measures.)</p>	<p>Rationale: The assessment team gave a score of 100 to the first element of the PI in terms of the MCS system in place having demonstrated a consistent ability to enforce management measures. In the scoring comments, the assessment team explains "The 100% observer scheme is proven to have worked effectively, with a number of safeguards in place to ensure that non compliance and inaccurate reporting are identified." However, the only evidence in support of this given in the final report cites document WCPFC-TCC6-2010/08 which states that 100% coverage was achieved for Aug/Sep 2009. That does not mean that 100% coverage has been consistently achieved since Aug/Sep 2009. And, the reliability of this 100% value is questionable given what was discussed at TCC6 (p. 10-11): "Data indicate that there was essentially 100% observer coverage during the 2009 FAD closure period (all boats had observers within a few days of the FAD closure commencement). However, when the FAD closure report was prepared, only four countries had given permission for the Secretariat to use their observer data for the report, and some of those reports had yet to be received and entered by the Commission's data provider (SPC)." The observer coverage achieved during the 2009 FAD closure by the countries that did not report is essentially unknown. The remainder of the assessment report's references to 100% observer coverage (e.g., Boxes 8-10) appear to be statements made by government officials. These do not demonstrate a consistent ability. The assessment has not presented sufficient evidence, for example in the form of records of the actual percentage of fishing trips covered by</p>	<p>implemented, and despite the fact that the implementation guidelines for the FAD closure were not available until 2010. The fully-operative PNA 100% observer coverage that started on schedule in January 2010 has however been demonstrably effective, as reported at the WCPFC Scientific Committee in August 2011⁸.</p> <p>It helps in the measurement of observer coverage that, in 2010, FFA member countries (including all PNA countries) agreed that it would be a requirement that every licenced purse-seine vessel should include the name and programme of the onboard observer on zone entry reports. This is now part of the FFA Harmonised Minimum Terms and Conditions for Access (HMTCs), and this allows, through cross-checks between PNA observer programmes, verification of the 100% observer coverage requirement, as well as rapid identification of reports. Any purse-seine vessel entering a PNA zone to fish without a PNA observer aboard is required to transit immediately to the nearest port and take an observer aboard.</p> <p>It should also be noted that the efficient operation of the PNA national observer programmes, and the processing of PNA national observer reports for the effective management of the purse-seine fishery in PNA national waters, is not dependent upon those reports being processed by WCPFC. WCPFC is not the management body for this particular fishery, but the Parties to the Nauru Agreement. Even so, all PNA members have now gone through the process of authorising their national observer data to be released to the WCPFC secretariat.</p>

⁸ Eg: Hampton and Williams (2011) *Analysis of purse seine set type behaviour in 2009 and 2010*. [WCPFC-SC7-2011/MI-WP-01](http://www.wcpfc.int/SC7-2011/MI-WP-01)

Reference	Stakeholder view	PNA response
	<p>observers, and of how many of those observer data sets were actually digitized and analyzed. Based on the above considerations, the assessment's conclusion that there is 100% observer coverage is unsupported. Besides the degree of coverage, there are important questions about data reliability and data usage that affect the effectiveness of the MCS system in place. The ability of observers to accurately identify and accurately report set types is important for the enforcement of current management measures such as the FAD closure. As discussed during the 2010 Technical and Compliance Committee and in the Commission meetings, there are severe limitations. For example, the following is a subset of statements found in those reports:</p> <p>- "Data collected by observers on ROP trips should be available for analysis; however the WCPFC Secretariat has only been able to receive limited data from the Commission Data Provider (SPC) or the national programmes to be able to provide a report based on observer ROP collected data for 2009 or 2010. At the time of writing, and as noted in table 3, only four WCPFC member countries have given authorization to the data provider (SPC) to release ROP data for analysis, and to be made available to the WCPFC Secretariat." (WCPFC-TCC6-2010/08, p. 6) - "Unfortunately there have been reports through the General Trip Information Forms (GEN3), as well as verbal observations given at debriefings of observers, that a small number of vessels have harassed and intimidated observers while they were trying to carry out their duties as observers. It has also been reported that some observers have been offered bribes to not report certain aspects of the fishing operation particularly in</p>	<p>Pacific Island countries have developed considerable joint capacity to train and manage a high-quality network of observers over the last two decades, and these systems are constantly evolving and improving. The strength of the system is the exception <i>esprit de corps</i> that is has developed between the various national observer programmes, the extensive regional training and support network, and the professionalism of the observers themselves.</p> <p>PNA National Observer Programmes have implemented a range of safeguards over the integrity of observer programmes. Observers are placed on vessels by professional coordinators, trip lengths are limited, observers are rotated at end of each trip, debriefed, and observer and vessel reports are verified by other measures including outturn and transshipment reports and more recently cross-verification with VMS positions and activity patterns.</p> <p>PNA observers of course face the same difficulties that are faced by all distant-water observers, but programme managers are vigorously evaluating and improving with substantial regional assistance not only through the PNA network, but from SPC, FFA and WCPFC itself. And PNA fisheries authorities do not condone, or turn a blind eye to worries about, observer malfeasance. For example, the Nauru National Observer Programme was set up in late 2009 and the Board of Directors of the Nauru Fisheries and Marine Resources Authority declared a "zero tolerance policy" for any cases of observer malfeasance that might crop up.</p> <p>On VMS, the fact that the WCPFC Convention mandates the WCPFC VMS to cover the high seas and not CCM EEZs has no bearing on how in-zone VMS is used effectively by the Parties to the Nauru Agreement in the management of the PNA skipjack purse-seine</p>

Reference	Stakeholder view	PNA response
	<p>relation to FAD fishing. It has also been reported, that observers may have accepted bribes, have harassed crew members, have not responded well to their responsibilities, and destroyed vessel property and caused delays in operations." (WCPFC-TCC6-2010/08, p. 10-11) - "The Secretariat spoke to the data flow obligations of CCMs under CMM 2007-01, as addressed in WCPFC7-2010-13. It noted that the poor provision of ROP data to the Secretariat and its Scientific Services Provider (SPC) negatively impacts the Commission's ability to carry out its work and receive appropriate reports for sustainable and responsible fisheries management." (WCPFC 7, p. 47)</p> <p>Given these considerations, the observer program has not demonstrated a consistent ability to enforce management measures as required by SG100.</p> <p>We would also like to point out that there are limitations to other components of the MCS system. For example, in terms of the Vessel Monitoring System (VMS): "The VMS Manager noted that it was currently not possible to monitor any activities in EEZs, and it was assumed that the VMS unit was on prior to entry into the high seas, as required. The reason the Secretariat cannot see such data is due to the system design, whereby as a result of a decision of the Commission, such data is quarantined, and the Secretariat does not have access to this data in the VMS."</p> <p>The score given to this PI represents a potential outcome rather than existing evidence. The PI should not receive a score higher than 80.</p> <p>OPAGAC and Eurothon make an additional point :</p>	<p>fishery. Apart from being of value in MCS work (through intensive collaborative subregional operations as well as ongoing national monitoring/patrolling), in-zone VMS is of critical importance in the operation of the PNA Vessel Days Scheme, including identification of non-fishing (transit) durations, and vessels are subject to a very high level of scrutiny.</p> <p>The point made by OPAGAC and Eurothon about purse-seine vessels that are operating within the limits of territorial and archipelagic waters being optionally exempted by the from the PNA seasonal FAD closure is not relevant to this determination, because the determination concerns only the certification of fish originating from non-FAD sets. Fish that might be caught on FADs within archipelagic waters at any point in time would be equally as subject to the PNA chain of custody process and observer verification as fish caught on FAD sets in EEZs outside the FAD closed season. They are not eligible for the MSC label.</p> <p>The point is not even relevant to the sustainability of the skipjack stock. The main purpose of the FAD closed season is to reduce overfishing on the bigeye stock, and reduce the ecological risks associated with FAD-associated bycatch, not to maintain skipjack sustainability. The purse-seine FAD closure will never be a complete solution to the bigeye overfishing problem as long as the longline fishery continues to take large amounts of bigeye tuna. The harvest strategy that will be developed as a requirement of this certification will however take all of these factors into account: the several fishing methods; the several species taken by these methods (both target and bycatch); and the need for effective compatibility of strategies between all jurisdictions.</p>

Reference	Stakeholder view	PNA response
	<p>OPAGAC agrees that the ability of observers to accurately identify and accurately report set types is important for Chain-of-Custody issues in this certification. However, their ability to do so is also important for the enforcement of current management measures such as the FAD closure. As discussed during the 2010 Technical and Compliance Committee meeting of WCPFC, few members have given permission for the data collected by their national observers to become available to the WCPFC Secretariat. The importance of this issue under the FAM should not be underestimated. Recommendation 6 should include the need for all PNA members to agree to make their observer data available to WCPFC.</p> <p>The 3rd Implementing Agreement of the PNA states: “2. FAD Closure There shall be no deployment or servicing of Fish Aggregating Devices and associated electronic equipment, or fishing by purse seine vessels on floating objects, between 0001 hours GMT on 1 July and 2359 hours GMT on 30 September each year, except that: (a) a Party may exclude all or part of its Fisheries Zone from the closure if it determines that it has suffered a disproportionate burden from application of the closure and advises the depositary accordingly; and (b) a Party may apply appropriate arrangements set out in a Management Plan to meet the requirements of domestic vessels that are highly dependent on fishing on floating objects within the Fisheries Zone.” This exclusion for the application of WCPFC management measures, is currently taking place in the WCPFC region, with special reference to anchored FADs in the archipelagic</p>	

Reference	Stakeholder view	PNA response
	<p>waters of the PNA countries. OPAGAC consider that this undermines the management objectives of the WCPFC and provides a legal coverage to PNA countries that could be used against Principle 3.</p>	
<p>5.2 For each issue identified in question 5.1, please state why you or your organisation believes that the effect of the score in relation to one or more of the particular performance indicators in question was material to the outcome of the Determination such that the Determination should be altered?</p>	<p>Criterion 1 of MSC Principle 1 states that an accredited fishery "shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity." Conditions 1 and 2 (PI 1.1.2 and PI 1.2.2) are intended to result in the adoption by WCPFC of reference points and harvest control rules that meet the SG80 guideposts within four years. However, even though the WCPFC has these requirements in its own Convention, it has failed to meet them in over six years of existence. The Action Plans established with the Conditions are unlikely to achieve the desired outcome. Furthermore, the Harvest Strategy (PI 1.2.1) does not meet the SG80 guidepost for a robust and precautionary harvest strategy. The assessment team should have examined other stocks under the management of WCPFC in order to more directly evaluate the implicit harvest strategies in place. For the one major tuna stock that is experiencing overfishing (bigeye), the evidence demonstrates that the harvest strategy elements do not work together towards achieving management objectives. This additional information further demonstrates the necessity for comprehensive fishery-specific management system that includes effective decision making processes that result in measures and strategies to meet the objections, which is lacking in this instance.</p>	<p>PNA19: Although the format requires an itemised evaluation of why ISSF believes that any of the issues they raise above should contribute to altering the final outcome of the determination – that the PNA free-school purse-seine fishery for skipjack be certified subject to the various recommendations and conditionalities being implemented within the specified timeframe, ISSF only provides one argument:- that WCPFC has thus far not adopted formal reference points and harvest control rules and, with the implication that the Parties to the Nauru Agreement are not competent to manage the fishery, that the free-school purse-seine fishery for skipjack in PNA waters will not be sustainably managed because WCPFC is predicted not to be able to come to an agreement on reference points and harvest control rules within the next five years.</p> <p>We will not repeat our response to this argument, save to note that OPAGAC, Eurothon and ISSF between them presumably have sufficient influence within national or entity WCPFC delegations to ensure that WCPFC does not, in fact, come to a consensus agreement to formalise the existing de-facto reference points nor agree harvest control rules. Fortunately, PNA exists, it intends to introduce RP/HCR management principles, and it is effective.</p>
<p>6.1 Please list all</p>	<p>No view</p>	<p>PNA20: PNA notes that the Objector does not present any further</p>

Reference	Stakeholder view	PNA response
additional information not forming part of the record that is relevant to the circumstances at the date of the Determination has not been considered, as per Paragraph 4.8.2 © of the objections procedure		information to assist the determination, and that the objections made above are based entirely upon continued differences of opinion with the Assessment Team concerning the interpretation of the available information, rather than based on new information that might materially change the fundamental basis of the determination.

25 August 2011

Mr Michael Lodge
Independent Adjudicator
PNA WCPFC Skipjack Fishery
MSC
London UK
PNAtunaobjections@msc.org

Dear Mr Lodge

Please find attached a written submission from the WCPFC Secretariat correcting or clarifying a number of statements in the objections that were lodged in respect of the WCPFC skipjack fishery.

Thank you for the opportunity to submit this information for consideration during the adjudication process. If you require any further information please contact Professor Glenn Hurry at glenn.hurry@wcpfc.int.

Yours sincerely



Professor Glenn Hurry
Executive Director WCPFC

WCPFC Submission on matter raised in objections to the PNA skipjack tuna MSC Assessment

This submission is provided to correct and explain some of the issues raised by parties who lodged objections to the MSC certification. There are specific areas that the WCPFC wishes to clarify.

Section	Point of Objection/ Clarification	Objector
4.8.2 (b) (iii)	The statement “ Notably, WCPFC has never been able to reach consensus on target and limit reference points or harvest control rules for skipjack stock management, leaving stocks subject to unilateral and unlimited catch and unmanaged.”	ISSF

The WCPFC wishes to advise MSC that the reason for this is that setting harvest control rules and target and limit reference points for the fishery has not been ripe for the Commission to date. This is a young Commission only established in 2004 and the focus of its activities has been on adopting the necessary management tools to effectively manage its fish stocks, including establishing all MCS tools, bycatch measures, the proper functioning and structure of the Commission, in addition to the adoption of conservation and management measures for seven key tuna and billfish species.

The work on reference points in the WCPFC commenced in 2007, through the development of a scoping paper and draft work plan on the potential costs, benefits and difficulties of alternative approaches to reference points and implementation of an MSE within the WCPO.

The Commission has progressed this work each year and specific indicators and reference points have been considered this year for the first time at the Scientific Committee meeting based on the research papers from the CSIRO and the SPC-OFP. This is to be complimented by a Management Strategy Workshop in March 2012. The outcomes of this workshop will allow the WCPFC to develop harvest strategies and target and limit reference points for its fish stocks. This is expected to happen at the meetings of the Scientific Committee the Technical and Compliance Committee and the Commission's Annual meeting in 2012.

However, despite the lack of formal reference points and harvest control rules, the Commission's tuna stocks are not "subject to unilateral and unlimited catch and unmanaged". Reference to the Commission's Conservation and Management Measures show that it has been rigorous in the proper assessment and management of key tuna and billfish stocks, including bigeye, yellowfin, Northern

Pacific and South Pacific albacore, Northern Pacific and South Pacific striped marlin, swordfish, and Pacific bluefin tuna (CMMs 2005-03, 2006-04, 2008-01, 2009-03, 2010-01, 2010-04, and 2010-05).

The well regarded and respected Secretariat of the Pacific Community (SPC) provides assessment of WCPFC tuna stocks as requested by the Commission and the annual meeting of the Scientific Committee provides scientific recommendations on key tuna and tuna-like species to the Commission. The WCPFC Commission has imposed limits in terms of catch and effort for purse seine, longline and other fisheries, establishing no take zones, and controlling the use of FADs.

Section	Point of Objection Clarification	Objector
1.1.2	Target and Limit reference points..."the WCPFC has completely failed to set skipjack tuna target and limit reference points (which are required according to its own convention)	ISSF

The WCPFC approach is described above. In addition, the WCPF Convention Article 5 tasks the Commission to 5(a) "*...adopt measures to ensure long-term sustainability of highly migratory fish stocks in the Convention area and promote the objective of their optimum utilization...*", and 5b "*...ensure that such measures are based on the best scientific evidence available and are designed to maintain and restore stocks at levels capable of producing maximum sustainable yield.*" Skipjack tuna stocks in the WCPFC area has been well above the level capable of producing MSY based on full stock assessment of skipjack conducted in 2002, 2003, 2005, 2008, 2010 and 2011 by the SPC-OFP

Section	Point of Objection/ Clarification	Objector
Part 2	Objecting Parties Credentials the statement "...ISSF is concerned that the WCPFC that is charged with managing skipjack tuna throughout its range has shown that it is incapable to date of setting effective conservation and management measures for stocks that are experiencing overfishing such as bigeye"	ISSF

None of the stocks in the WCPF Convention Area are overfished and only bigeye tuna subject to overfishing. This overfishing of bigeye tuna is being addressed by CMM 2008/01 in 2008. For your information, a preliminary evaluation of the measure 2008/01 was conducted by the SPC which can be found at <http://www.wcpfc.int/meetings/2010/7th-regular-session-commission...>(Document number: WCPFC7-2010-15). The general view perceived so far is that the measure may have worked better than was initially anticipated, although all of the data from 2010 must be analyzed before a final judgment on its success can be made. To be more precautionary, however, the WCPFC Commission will discuss a revised version of CMM 2008/01 at the Commission meeting in December 2011, to strengthen the controls over bigeye, yellowfin and skipjack tuna catches.

Section	Point of Objection/ Clarification	Objector
1.2.3	Information and Monitoring, the statement...”there is good information on all removals from the stock. Several stakeholders including ISSF noted that it is not met for fisheries in Philippines, Indonesia and Vietnam. “	ISSF; OPAGAC, Eurothon

WCPFC recognized one of the highest sources of uncertainty in its stock assessment was insufficient or lack of fishery data from Indonesia and Philippines. Since the SPC-OFP’s proposal in 2003, the Commission Members voluntarily funded the ‘Indonesia and Philippines Data Collection Project’ to collect biological and landing data from port sampling and to estimate total annual catches by species and by gear of the two countries.

Later, the Commission requested the Secretariat to develop a proposal for funding support from the Global Environment Facility for the expansion of this project to include Vietnam. After two years, the GEF approved WCPFC Secretariat’s proposal (West Pacific East Asia Oceanic Fisheries Management Project, WPEA) and funded almost USD 1 million to address the priority transboundary concerns which include: (1) high tuna catch in the west Pacific east Asia area but incomplete scientific knowledge of tuna resources on the western edge of the Pacific Ocean warm pool LME; (2) threatened sustainability of transboundary resources from overfishing and IUU fishing, and lack of comprehensive governance framework; and (3) insufficient capacity for international collaboration.

WPEA was officially initiated in January 2010 and collected data and estimated annual catch through this project and contributed in reducing uncertainty of tuna stock assessment in 2010 and 2011. In addition, the three WPEA participating countries developed National Tuna Management Plans for government approval and implementation for proper and sustainable management of tuna stocks in their waters.

Recently, all the three countries are Members or Cooperating Non-members of the Commission and they are required to fully comply with the Commission’s conservation and management measures. At this stage, each government is facilitating their capacity building to fully abide by international norms in various tuna fishery matters.

Section	Point of Objection/ Clarification	Objector
2.1.2	Management Strategy, the statement...”It has been clearly established that CMM 2008/01 is not working to end overfishing of the bigeye stock”	ISSF

This statement in 2.1.2 is incorrect. To date nothing has been “clearly established “ in relation to the success of otherwise of 2008/01. As stated above the information presented at this year’s SC suggests that the measure is working but further clarification is needed before any final evaluation can be made. The SPC will need to process the 2010 and 2011 catch data before any final assessment can be made. The seventh Scientific Committee meeting just finished in mid August 2011 recommended that a minimum of 32% be reduced in fishing mortality from the average levels for 2006–2009 to return the fishing mortality rate to F_{MSY} . This recommended level of reduction is equivalent to a minimum 39% reduction of the 2004 level in fishing mortality, and a 28% reduction of the average 2001–2004 levels, which still remains consistent with the direction taken with CMM 2008-01.

Section	Point of Objection/ Clarification	Objector
3.1.1	Legal and or Customary Framework, the statement ..."simply put WCPFC has failed to manage the stock" ...	ISSF

The latest stock assessment shows that skipjack tuna in the WCPFC Convention Area is well above MSY and any level that would be set as a reasonable target reference point! It is well managed as described in previous sections and in paragraphs 10, 17 and 18 of CMM 2008/01.

Section	Point of Objection/ Clarification	Objector
3.2.3	Compliance and enforcement, the statement..."that does not mean the 100% observer coverage has been achieved consistently since Aug/ Sept 2009. And the reliability of the 100% value is questionable what was discussed at TCC6."	ISSF and noted by OPAGAC and Eurothon

100% observer requirement for 2009 was only for the 2 months of the FAD closure period and this was reported in the 2010 report. The requirement for full 100% observer coverage did not commence until January 2010 so there was nothing else that could be reported at TCC in 2010 for 2009.

The Regional Observer Program (ROP) reports on what has happened in a full calendar year. to fall in line with the reporting cycle that SPC with what SPC reports for observer data, etc so the WCPFC use the same time period January to December Therefore in 2010 as the year is not complete when TCC occurs we report what has happened for a full year in 2009.

At TCC6 in 2011, we will report for the full 2010 year, and all indications are that there were no major problems with 100% observer coverage, and according to reports we received from national programmes and flag States on placements, 100% observer coverage was attained for the whole year of 2010. There were very few problems at the commencement of the 100% coverage in 2010, as the 2 month 100% coverage for the FAD closure period in 2009 was a trial run which ironed out some of the problems, thus allowing all vessels to have observers on board from January 1st to December 31st in 2010.

Submission Relating to the Notice of Objection by ISSF to Moody Marine, Inc.'s Determination Re: PNA Western and Central Pacific Skipjack

John Hampton
Secretariat of the Pacific Community
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I am making this submission in my capacity as Manager of the Secretariat of the Pacific Community's Oceanic Fisheries Programme (SPC-OFP). SPC-OFP provides scientific advice on the status of tuna stocks in the western and central Pacific Ocean (WCPO) and related issues to SPC members, including those participating in the Forum Fisheries Agency (FFA) and the Parties to the Nauru Agreement (PNA). We also provide scientific services, primarily regional assessments of oceanic fish stocks (tunas, billfish and sharks), data management, research and the evaluation of management options, to the Western and Central Pacific Fisheries Commission (WCPFC). I, and other staff of the SPC-OFP, were consulted by the Assessors in the development of the PNA Skipjack Assessment, and SPC is listed as a stakeholder in the assessment.

I am also a member of the ISSF's Scientific Advisory Committee (SAC) in a voluntary capacity as an expert. While the SAC has been informed of the assessment, and of ISSF's opposition to the certification, the SAC has not been asked to provide advice on any of these matters to the ISSF Board.

I wish to comment mainly on two issues that are central to ISSF's objection: (i) that the skipjack stock in the western and central Pacific is highly migratory, and the implications that flow from that regarding management; and (ii) that limit and target reference points, harvest strategies and harvest control rules have not yet been applied by PNA or WCPFC.

Skipjack are 'highly migratory'

ISSF make much of the designation of skipjack as 'highly migratory' and that the skipjack 'stock' occurs throughout the WCPO. They argue on this basis that the skipjack 'stock' cannot be effectively managed by PNA actions alone, and that fully coordinated management by WCPFC covering the entirety of the skipjack stock distribution is an absolute requirement for effective management. However, none of these issues are as black and white as the objection claims:

- Skipjack tuna are indeed classified as a ‘highly migratory species’ and are listed as such in Annex I of UNCLOS. The common interpretation of this, which is alluded to throughout the ISSF objection, is that individual fish commonly make vast migrations throughout their range and that as a result the ‘stock’ is a well mixed unit in which the effects of fishing are rapidly dissipated over the whole range. In fact, few tunas behave in this way and skipjack certainly do not. Sibert and Hampton (2003)¹, in analyzing a large amount of skipjack tagging data, found that the median lifetime displacement of skipjack is of the order of 420-470 nautical miles. In assessing the management implications of these findings, the authors concluded:

“This result means that international cooperation is required for effective conservation and management of these species [skipjack and yellowfin tuna]. However, the results also suggest that Pacific Island countries can implement effective domestic management policies to promote conservation and sustainable utilization of tuna stocks within their EEZs.”

The analyses conducted by Sibert and Hampton (2003) considered single EEZs, and the first part of the conclusion above was that international cooperation between neighbouring EEZs was required. Had the paper considered the PNA EEZs as a unit, the second part of the recommendation, that Pacific Island countries can implement effective domestic fisheries management policies, would have been even stronger.

- Further evidence of restricted mixing of skipjack tuna comes from two other modeling approaches. First, the stock assessment model used for skipjack, MULTIFAN-CL, allows the western and central Pacific to be partitioned into a number of regions, three in the case of skipjack (Figure 1). In the 2011 skipjack assessment (Hoyle et al. 2011)², the estimated movement rates between region 1 and regions 2 and 3 were found to be relatively restricted (the opposite was incorrectly claimed on p. 13 of the objection). In particular, it was noted by Hoyle et al. (2011) that more than 90% of the biomass found in region 1 is the result of local recruitment, suggesting that this region and the fisheries that occur there are relatively isolated from regions 2 and 3, where the bulk of the total catch is taken. This would imply relatively little potential for fisheries in the North Pacific to be adversely impacted by those in the equatorial regions.
- Second, a high spatial resolution approach to modeling skipjack distribution and abundance using a model known as SEAPODYM has been developed (Lehodey et al. 2011)³. The model has

¹ Sibert, J. and J. Hampton. 2003. Mobility of tropical tunas and the implications for fisheries management. *Marine Policy* 27: 87 – 95.

² Hoyle, S., P. Kleiber, N. Davies, A. Langley, and J. Hampton. Stock assessment of skipjack tuna in the western and central Pacific Ocean. WCPFC-2011/SC7-SA-WP-04.

³ Lehodey, P., I. Senina, B. Calmettes, J. Hampton, S. Nicol, P. Williams, J. Jurado Molina, M. Ogura, H. Kiyofuji, and S. Okamoto. 2011. SEAPODYM working progress and applications to Pacific skipjack tuna population and fisheries. WCPFC-2011/SC7-EB-WP-06.

been applied to estimating the effect of the tropical purse seine fishery on the Japanese coastal and offshore fisheries in the region 1. Lehodey et al. (2011) reported that:

“A simulation was carried out to investigate the link between the tropical purse seine fishery and the Japanese domestic fishery, by removing the fishing effort of all tropical purse seine fisheries during the period of simulation. The result (Fig. 3.16) showed a large increase of biomass in the equatorial region that is the core habitat of the population where the maximum catch occurs, but no direct effect on the subtropical region.”

This result is consistent with the findings in the 2011 skipjack assessment.

To summarise, the available scientific evidence points to skipjack not being a single stock, mixing rapidly throughout the western and central Pacific, in the sense that many might imply from the term “highly migratory”. Overall, mixing rates appear to be fairly restricted, particularly between the equatorial and sub-tropical/temperate North Pacific. Therefore, there is strong rationale for regional approaches to management of skipjack and other fisheries in the WCPO. The ISSF objection belabours the point that only 25%⁴ of the skipjack ‘stock’ occurs in PNA waters, arguing that this essentially invalidates unilateral management action by the PNA. However, I believe that the premise of this argument is flawed for two reasons: (i) as argued above, there is considerable partitioning of the skipjack stock, particularly in the north-south direction, making simplistic arguments regarding overall biomass distribution somewhat misleading; and (ii) perhaps more fundamentally, that while terms such as “management of stocks” are quite common, at an operational level, we do not manage stocks (which are subject to many sources of variability other than fisheries); rather, we manage the fisheries that exploit them and their impacts. Therefore, in any debate about the influence of PNA management actions on performance measures for the WCPO skipjack fishery as a whole, I would argue that it is the extent of the catch, and therefore fishing mortality, under the control of the PNA (approaching 70% of the WCPO skipjack catch in 2010⁵), rather than the percentage of biomass that is the important indicator.

My preliminary conclusion is that management action by the PNA, which in recent times has also impacted events outside their EEZs (e.g. the closure of the high seas pockets), can potentially have a high degree of influence on overall management performance measures in the WCPO skipjack fishery. Therefore, the ISSF’s core argument: “PNA itself cannot meet the Performance Indicator requirements for an established harvest strategy on its own” is not necessarily correct.

⁴ The 25% estimate is likely to be an underestimate, because of the assumption of uniform distribution of skipjack within the broad regions defined in the skipjack assessment model (Figure 1). The real percentage is likely to be considerably higher because of the concentration of skipjack biomass in the equatorial zone.

⁵ The Assessment report (p. 520) incorrectly stated that “The range of the stock that falls under the management of PNA parties is 70%”. This is a misinterpretation of the 70% figure for total catch occurring in PNA waters.

Reference points, harvest strategies and harvest control rules

ISSF is correct that reference points have not been formally adopted by WCPFC, however default reference points are in effect applied – F_{MSY} and B_{MSY} . It is perhaps unclear as to whether these are being applied as targets or limits, but probably more towards the latter. These do need to be formalised, which is appropriately the subject of a condition. However, defaults have been used, and this should be recognised. This is particularly evident in the case of bigeye tuna, for which recent assessments have estimated that current levels of fishing mortality (F) are considerably in excess of F_{MSY} (by 46% on average for the period 2006-2009 according to Davies et al. 2011⁶). The key recommendation of the WCPFC Scientific Committee at its Seventh Regular Session (SC7) was that fishing mortality be reduced by 32% from the current level, thus returning fishing mortality to the F_{MSY} level ($1.46 \times [1-0.32] = 1.00$). Therefore the Commission has used F_{MSY} as an initial target for reducing fishing mortality of bigeye tuna.

At SC7, further progress was made towards formally adopting reference points. In particular, recommendations were made concerning the adoption of limit reference points, with further technical work being scheduled in the work programme and budget for 2012 to support a decision by the Commission. Also, the development of target reference points will be considered at a Management Objectives Workshop, to be held in 2012, with some specific technical work on the evaluation of alternative target reference points for skipjack scheduled to be presented there. Given that WCPFC is still a fairly young organization (now just in its seventh year), it seems overly critical for ISSF to say that “WCPFC has completely failed to set skipjack target and limit reference points”, given its early focus on the development of management tools and dealing with the issue of bigeye tuna overfishing. F/F_{MSY} and B/B_{MSY} (total and spawning biomass) have in fact been used as performance measures in stock status determinations for skipjack (and other tunas assessed by SPC-OFP) since 2005 at the first Regular Session of the Scientific Committee. Skipjack assessments have always shown the current F to be $\ll F_{MSY}$ and current biomass to be $\gg B_{MSY}$. Therefore, it has not been a priority to develop targets and harvest control rules for skipjack, given the other priorities over the past seven years. However, with the replacement CMM for CMM 2008-01 now under development, and the inclusion of skipjack in that CMM, this is squarely on the agenda.

Other issues raised in Part 5

1.2.1 Harvest strategy

The ISSF comments that the current harvest strategy is not responsive to the status of the skipjack stock. While this is true to an extent, there has been recent movement to increase responsiveness, in particular through the inclusion of skipjack in a new CMM for tropical tuna (bigeye, yellowfin AND skipjack), which is currently under development by WCPFC. Within this new CMM, and also at the PNA level, it will be important to more explicitly consider scientific information on stock status in total allowable effort determinations. Currently, these are linked to historical effort levels with no explicit

⁶ Davies, N., S. Hoyle, S. Harley, A. Langley, P. Kleiber, and J. Hampton. 2011. Stock assessment of bigeye tuna in the western and central Pacific Ocean. WCPFC-2011/SC7-SA-WP-02.

consideration of stock status. Making this link more explicit is in fact covered in Condition 1, which requires PNA to adopt harvest control rules linked to a harvest strategy and reference points.

1.2.3 Information and monitoring

ISSF challenged the Assessment finding that there is good information on all other fishery removals from the stock, claiming that “Philippines, Indonesia and Vietnam do not meet this requirement”. There has been much recent progress in tuna fishery monitoring in these countries, and complete catch by gear type, as well as size and species composition information is now available for the fisheries based in Indonesia and Philippines. These data were included in the 2011 assessments of skipjack, yellowfin and bigeye tuna presented at SC7. For Vietnam, more work is required to obtain catch estimates from their small-scale purse seine fishery, with the first estimates expected next year. However, the level of annual skipjack catch is thought to be in the vicinity of 20,000 tonnes, or approximately 1% of the total WCPO skipjack catch. All three countries submitted Annual Reports (Part 1) to SC7, and these are available on the WCPFC website. It is also worth noting that the recent good progress in these countries has been due largely to a GEF-funded project being executed by WCPFC in cooperation with the national fisheries administrations. A second phase of this project is expected, which will further improve fishery monitoring and catch estimation.

The ISSF are correct in their assertion that skipjack catches in Indonesia, Philippines and Vietnam in recent years have been up to 25% of the total skipjack catch in the WCPO.

1.2.4 Assessment of stock status

The point of contention here seems to be that the skipjack assessment has not been used in a reference point and harvest control rule framework. However, this point is made elsewhere. The fact is that the western and central Pacific skipjack assessment is recognized to be of high quality, and has been designed to be used in a reference point / harvest control rule framework as required. As noted earlier, stock status has been systematically reported against default reference points since 2005. Under these circumstances, the high score given by the assessors would seem to be appropriate.

2.1.2 Management strategy (retained species)

The ISSF argues that yellowfin (and, in earlier comments, bigeye tuna) should be included under Principle 1 of the assessment as target species, along with skipjack, instead of being considered under Principle 2 as retained species. There is no doubt that yellowfin, along with skipjack, are target species of purse seine unassociated set fishing operations. Larger sized yellowfin are specifically targeted, and it is not uncommon for purse seiners to catch schools of 100% yellowfin in unassociated sets. However, under MSC procedures, the client and/or assessor are not obligated to assess target species outside the unit of certification under P1 (and this is possibly an issue that the MSC might need to address when reviewing its FAM). In this assessment, the choice made was to assess yellowfin (and bigeye) as retained species under P2. While this was a legitimate choice under the MSC FAM, in my view, it would have been preferable to assess yellowfin as a target species under P1, thus requiring the consideration of stock status in relation to reference points, inclusion in the harvest strategy, etc. I would therefore recommend that the PNA, in the development of its harvest strategy, consider the impact of the unassociated set purse seine fishery on yellowfin stock status, even if it continues to be assessed as a

retained species under P2. In any case, had yellowfin been assessed under P1, it is unlikely that the scoring would have changed substantially, and may have even increased given the benefits of the larger average size of yellowfin caught in unassociated sets and the resulting higher yield-per-recruit that is achieved from this fishery (compared to associated purse seine sets).

In the case of bigeye tuna, it is much more difficult to justify a classification of target species. Bigeye have a relatively low catch rate in unassociated purse seine sets, with most of their catch by purse seine coming from sets associated with drifting FADS, anchored FADs and naturally occurring floating objects such as logs. This in fact is a major potential sustainability benefit of the certification – it would encourage or reward purse seine operations that have minimal impact on bigeye tuna. Therefore, the assessment of bigeye tuna as a retained species under P2 seems appropriate.

Final remarks

The largest tuna fishery management challenge in the WCPO remains the excessive fishing mortality on bigeye tuna. A large proportion of this fishing mortality is generated by purse seine fishing on FADs and other floating objects. The catches of mainly juvenile bigeye in these sets not only have a large impact on the stock, but also on the profitability of longliners targeting bigeye tuna of larger size. Purse seine unassociated sets targeting skipjack and larger yellowfin tuna catch relatively little bigeye. The proposed certification of skipjack tuna caught in such sets would create an important first incentive for the tuna industry to avoid fishing operations that have the highest impact on bigeye tuna. While the ISSF objection makes many valid points, it misses this very important one.

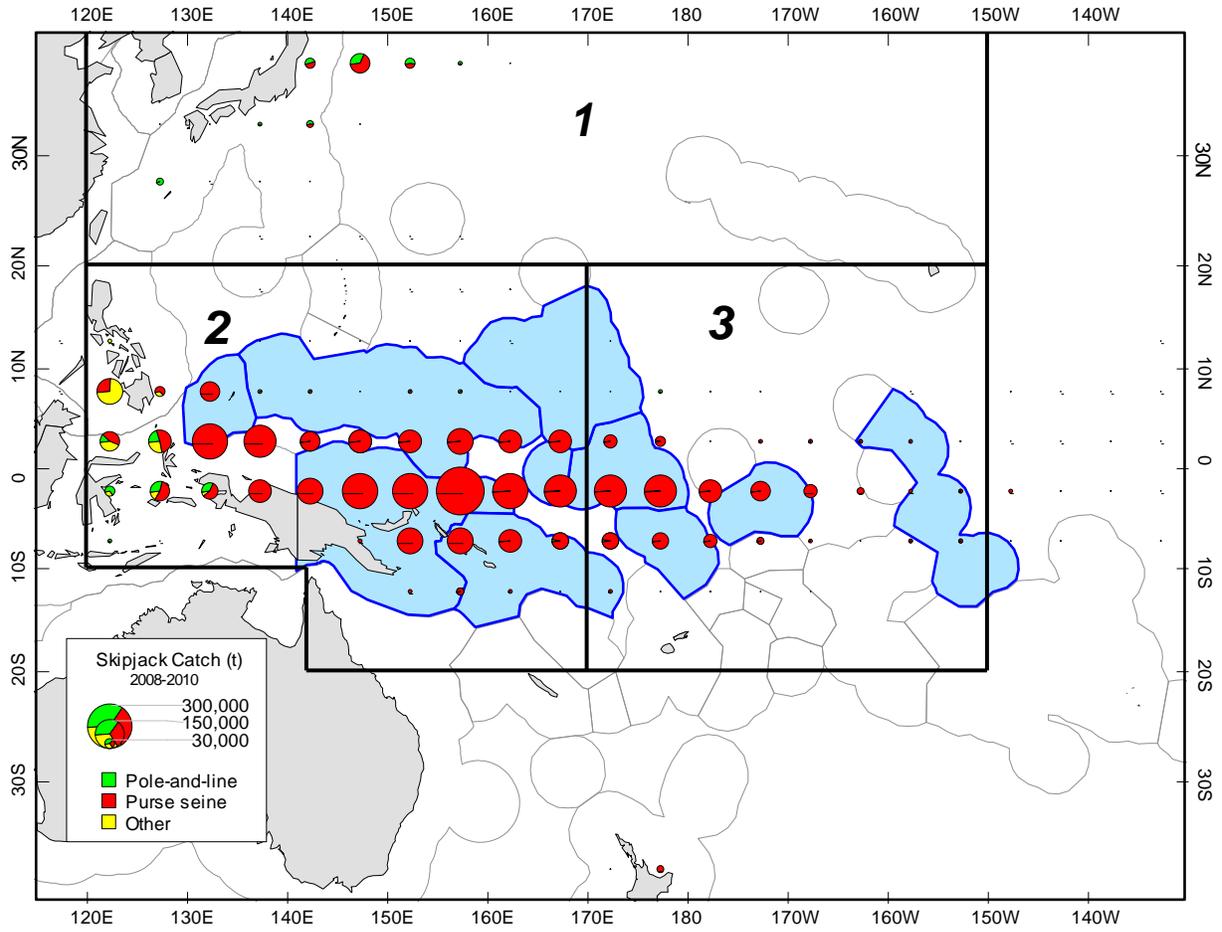


Figure 1. Skipjack catch by main gear types, 2008-1010. The PNA EEZs are highlighted in blue. The black lines indicate the three sub-regions defined in the 2011 skipjack assessment model.



23 August 2011
File Ref: DB/1

Mr Michael Lodge
Independent Adjudicator
PNA Western and Central Pacific Skipjack tuna fishery

PNA tunaobjection@msc.org

Dear Mr Lodge,

Please find attached a written submission from the secretariat of the Pacific Islands Forum Fisheries Agency (FFA) regarding matters raised in the objections submitted to the certification of the skipjack free school fishery of the Parties to the Nauru Agreement (PNA).

The FFA secretariat is charged (inter alia) with providing technical advice and services to its 17 members, including the 8 member countries of the PNA. The FFA secretariat is a stakeholder that has engaged in the assessment process through interviews with the assessment team.

Thank you for the opportunity to submit this information for consideration during the adjudication process. If you require additional information, please do not hesitate to contact Mr Wez Norris, Director, Fisheries Management (wez.norris@ffa.int).

Yours sincerely,

Su'a N. F. Tanielu
DIRECTOR-GENERAL

Attach...

Cc: Official & Fisheries Contacts of the Parties to the Nauru Agreement

The following information is provided by the Forum Fisheries Agency Secretariat to provide additional context or clarification of certain matters raised in the three objections to the certification of the PNA free-school skipjack fishery. FFA would be pleased to accept the opportunity to provide greater clarification if required.

Section	Point of Objection	Objector
1.1.2	Reference Points – use of B_{MSY} as TRP is inconsistent with WCPFC Convention	All

The reference to UNFSA Annex II quoted in the objections is from Article 6a of the WCPFC Convention, which describes how the WCPFC will give effect to the Precautionary Principle. This must be read and interpreted in the context of other parts of the Convention. The most important of these is Article 5; *Principles and measures for conservation and management*. In particular, Article 5b states that *...Members of the Commission shall...ensure that such measures...are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield...* The Convention therefore highlights B_{MSY} (the stock level that produces MSY) as a target reference point.

In a 2003 report on a reference point workshop¹, the Inter American Tropical Tuna Commission noted similar advice from the secretariat of the International Commission for the Conservation of Atlantic Tunas: *The ICCAT Convention specifies as one of its objectives the "maintenance of the populations ... at levels which will permit the maximum sustainable catch and which will ensure the effective exploitation of these fishes in a manner consistent with this catch." Thus, the implicit target is a biomass around the biomass corresponding to MSY (B_{MSY}) and/or the fishing mortality corresponding to MSY (F_{MSY}).* ICCAT therefore assumed that not only was B_{MSY} an appropriate TRP, but that so too was F_{MSY} .

Article 5b of the WCPFC Convention goes further to qualify the use of B_{MSY} according to *...relevant environmental and economic factors, including the special requirements of developing States...* Indicating that the Commission could decide to apply a standard that is different to B_{MSY} in particular circumstances. In this case, it is highly unlikely that PNA will accept formal TRPs for SKJ that approximate MSY and will be looking to more relevant and precautionary levels such as (but not necessarily) MEY.

Interpreting Article 6a in that wider context, it is also worth reiterating that UNFSA Annex II are "Guidelines" and are drafted using non-prescriptive and non-binding language. In particular, paragraph 7 of the Guidelines states: *The fishing mortality rate which generates maximum sustainable yield **should** be regarded as a minimum standard...*(emphasis added).

Leaving aside the legal argument, the objection could be interpreted as suggesting that the concept of having F_{MSY} as a limit reference point (LRP) and B_{MSY} as a TRP is an unacceptable contradiction. It is not uncommon for harvest strategies to employ F and B based LRPs that don't approximate each other. For example the Commonwealth Harvest Strategy Policy and Guidelines (Australia)² set default LRPs of $\frac{1}{2}B_{MSY}$ and F_{MSY} . The Harvest Strategy Standard for New Zealand Fisheries³ also sets a higher standard of fishing mortality reference points than those for biomass.

¹ <http://www.iattc.org/PDFFiles2/Ref%20Point%20WS%20Oct%202003%20%20Report%20ENG.pdf>

² <http://www.afma.gov.au/managing-our-fisheries/harvest-strategies/>

³ <http://www.fish.govt.nz/NR/rdonlyres/487988D0-F768-4297-ADDE-B5E1DFA53404/0/harveststrategyfinal.pdf>

An approach of using F based LRPs in conjunction with B based LRPs that are of a lower standard can be useful to achieve two outcomes:

1. To control the rate at which biomass is reduced towards its LRP. That is, if the rate of removals is limited to F_{MSY} , then any “fish down” of the stock would occur more slowly over a greater period of time than if higher levels of fishing mortality were permitted;
2. To allow more rapid recovery of stocks that are depleted beyond a biomass LRP. That is, in the case of a stock that is below its biomass LRP, then the higher standard for the F LRP will require a faster recovery than would otherwise be the case; and/or
3. To allow for acceptable “natural” fluctuations in biomass under stable fishing mortality without necessarily triggering management action. That is, as the objection notes, in a n equilibrium system, use of F_{MSY} as a LRP should result in the stock being maintained at B_{MSY} . However, it is clear that equilibrium does not exist in tuna stocks, meaning that even with a constant rate of fishing mortality, the biomass will fluctuate, particularly in a variable stock such as skipjack. Having a LRP lower than B_{MSY} caters for this.

In summary, the use of B_{MSY} as a TRP is consistent with the WCPFC Convention and using B_{MSY} as a TRP does not necessarily preclude the use of F_{MSY} as a LRP as recommended in UNFSA.

Section	Point of Objection	Objector
1.1.2	Reference Points – Insist that any conditions must be binding on both PNA and WCPFC to adopt reference points.	All

The method described in the objections to determine the percentage biomass that exists in PNA EEZ is fundamentally flawed as it assumes that biomass is distributed evenly throughout the stock assessment model regions. This is clearly not the case and as an example, would result in a conclusion that an area such as the Gulf of Carpentaria in Australia, which falls within the regions used in the objections, could support a skipjack fishery of the same magnitude as some PNA countries, which is implausible. Regions are used in the stock assessment to provide spatial stratification of fishery types and not to represent any assumption of homogenous biomass distribution.

Nevertheless, the key issue is not the distribution of the biomass, but the distribution of the fishery and what that means in terms of the *control* that PNA is able to exert over the entire fishery. The assessment report uses the figure of 70% of catch in the fishery as a means of establishing that control. The relative authority that PNA have over the entire fishery exists on two levels.

Firstly, the purse seine fishery has developed over a period of decades and overwhelmingly relies on PNA EEZs. Management measures agreed by PNA therefore apply by default to the majority of the fishery.

At the second level, the WCPFC Convention contains strong provisions on compatibility of measures. Article 8 of the Convention describes a two way compatibility requirement for measures adopted in the high seas and in EEZs.

For example, WCPFC was unsuccessful in introducing tropical tuna management in 2007 as a result of fundamental differences amongst the membership (a characteristic of most RFMOs). As a result PNA introduced the Third Implementing Arrangement. As described above, these measures applied automatically to the bulk of the fishery. More importantly, they set an important benchmark, and the WCPFC was very responsible in adopting compatible measures through CMM 2008-01. While CMM 2008-01 contains specific objectives relevant to bigeye and yellowfin, it also specifies purse seine effort limits, which control the harvest levels of skipjack.

Section	Point of Objection	Objector
1.2.1	Harvest Strategy – high score based on proposed future actions (WCPFC and PNA) rather than proven capacity	All

There is a harvest strategy and harvest limits in place at both the PNA and WCPFC level. The Vessel Day Scheme is a direct control on fishing opportunities in PNA EEZs where the bulk of fishing occurs. This is recognised and reinforced through CMM 2008-01 (paragraph 17).

More importantly, CMM 2008-01 places explicit flag based limits on purse seine fishing opportunities in the high seas (paragraph 10) and requires compatible measures in non-PNA EEZs (within the bounds of 20N and 20S – paragraph 18).

This is a good example of the ability of PNA to implement management measures and then, with support from the wider FFA membership, use provisions such as Article 8 of the WCPFC convention to seek compatible measures.

The objections correctly note that this is an area for future development. FFA members have made their views known that they seek more explicit recognition of fishing opportunities (effort limits), including by expanding the scope beyond the equatorial band.

Section	Point of Objection	Objector
1.2.3	Information and Monitoring – lack of understanding of catch in Indonesia, Philippines and Vietnam	All

It is correct to say that the data available to the WCPFC from fisheries in Indonesia and Philippines could be improved and that such enhancements would increase the certainty of tropical tuna assessments. Since 2006, there have been substantial and fundamental improvements in the magnitude and quality of the data available for these fisheries, and as anticipated, this has increased the reliability of the stock assessments. These improvements will continue.

There are also ways and means of accounting for uncertainty in this relatively small portion of the skipjack fishery in the overall harvest strategy and the harvest control rules. For example, the Client Action Plan advocates in response to condition 1, that a combination of empirical and model based indicators and reference points would be investigated. The strength of such an approach is that it reduces reliance on the indices of abundance in the stock assessment model that may not be highly responsive to changes in data poor aspects of the fishery.

Section	Point of Objection	Objector
1.2.4	Stock Assessment – no HCR to test the assessment against and no specific testing such as MP/MSE.	All

The stock assessments prepared by SPC for the WCPFC have been used to produce management projections using both deterministic and stochastic methodologies over the past few years. The results of this projection work have been instrumental in allowing PNA, FFA and WCPFC to evaluate management strategies and assess potential outcomes from various options. They have also been integrated with financial information held by FFA to provide an economic element to the evaluations.

Importantly, the projection work has also allowed for greater exploration of the results of some key uncertainties in the stock assessments (such as the impact of different assumed recruitment trends). This has in turn led to the development of model improvements in subsequent assessments.

Section	Point of Objection	Objector
2.1.2	Management Strategy (retained spp) – BET should be scored lower because CMM 2008-01 is not working.	ISSF

Most assessments to date of the effectiveness of CMM 2008-01 have been based on assumed outcomes and are therefore theoretical. In terms of the purse seine fishery, the major measure to reduce BET mortality is the 3 month FAD closure. This measure did not commence until July 2010 (there was a 2 month closure in 2009, which was undermined by a lack of clarity around the operational rules – this was rectified in 2010 through CMM 2009-02, which reflects the PNA FAD closure rules). Latest data from the WCPFC data manager and science service provider indicates that this measure is in fact having a significant impact on the catch of juvenile bigeye tuna. Advice to SC7 (SC7-MI-WP-03⁴) indicates that the proportion of FAD sets in 2010, particularly in the months immediately before and after the FAD closure was significantly lower than previous levels. The FAD closure also resulted in a demonstrable reduction of bigeye catch, with obvious stock benefits.

The 2011 stock assessment for bigeye tuna suggests a notable decrease in fishing mortality of juveniles in 2010, which further supports the likely success of this measure, noting of course that the 2010 information in the stock assessment will be improved in the future (SC7-SA-WP-02⁵ Figure 40 (run 3j)).

Of note, SC7-MI-WP-03 reports a moderate reduction in the catch of skipjack during the FAD closure, but that average fish size was larger. This is expected to bring positive impacts on stock status by selecting more mature fish.

The most recent assessment of the current harvest strategy for tropical tunas was presented to SC7 (SC7-MI-WP-02⁶ and associated excel spreadsheet available at the same location). Noting the caveats on the results of the projections in the working paper, these results suggest that CMM 2008-01 is in fact having a positive impact on bigeye tuna.

⁴ <http://www.wcpfc.int/meetings/2011/7th-regular-session-scientific-committee>

⁵ Ibid

⁶ Ibid

SC7 concluded the following about bigeye (summary report paragraph 169 and 173⁷): *Projections to 2021 indicate that fishing mortality would be reduced to close to the FMSY level, and the stock would move to a slightly overfished state. However, these conclusions should be treated with caution because projections are based on incomplete data and the assumption that catch and effort levels in 2010 will be maintained...The SC recommends that the Commission should consider the results of updated projections at WCPFC8, and adopt additional measures to secure additional reductions in fishing mortality above those expected from the current CMM, to ensure that fishing mortality is reduced to at least the FMSY level, and remove the risk of the stock being overfished. Measures that reduce fishing mortality across a range of fish sizes (e.g. fishing gears) are likely to produce the best results.*

Management of WCPO bigeye will continue to evolve over the next few years. FFA members have agreed to apply an extended FAD closure to foreign fishing vessels and PNA Ministers have agreed to a 1 month additional closure next year. This strengthened closure will further contribute to the reduction in bigeye fishing mortality from the purse seine fishery, responding to the scientific advice for additional reductions in fishing mortality.

Section	Point of Objection	Objector
3.1.1	Legal and Customary – criticism of ability of WCPFC and PNA to manage the stock as a whole.	ISSF

It is incorrect to refer to this fishery as “unmanaged”. The skipjack fishery is the subject of a detailed integrated package of management and MCS measures as well as research and monitoring. This includes, but is not limited to the following:

- VDS effort limits that apply in PNA EEZs;
- Specified flag based effort limits in the high seas;
- FAD closure (aimed at bigeye conservation but with potential benefits to skipjack);
- 100% catch retention;
- Spatial closures;
- Registration requirements at both the FFA and WCPFC level;
- Harmonised minimum terms and condition for access to FFA member EEZs⁸, which include a range of reporting requirements, transshipment measures, data provision and enforcement provisions;
- Ban of at-sea transshipment and 100% observer coverage on transshipments in port;
- Port to Port VMS monitoring of licensed vessels;
- WCPFC VMS monitoring on non-licensed vessels;
- 100% observer coverage;
- Stronger requirements for data reporting than in any other RFMOs; and
- Regular stock assessments.

Again, fisheries management will always be evolutionary, but taken together the above represent a strong package of management arrangements towards the sustainable management of the fishery and the stocks within it.

⁷ Ibid

⁸ <http://www.ffa.int/mtcs>

Section	Point of Objection	Objector
3.1.1	Legal and Customary – no “tested” dispute settlement process.	Eurothon and OPAGAC

It is incorrect to state that there are no tested mechanisms for the PNA to solve any legal disputes nor that its appropriateness has not been evaluated. PNA Members are already parties to three treaties that provide for varying degrees of dispute settlement, namely the UN Law of the Sea Convention, UNFSA, and the WCPFC Convention; all of which have a basic obligation regarding the importance of settling disputes by peaceful means. Article 27 of UNFSA reflects this very well: *States have the obligation to settle their disputes by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.*

PNA Members have indeed used some of these mechanisms to resolve disputes, for example through negotiation, judicial settlement, suspension or withdrawal from the FFA regional register of vessels, IUU listing through the WCPFC. These mechanisms have proven to be quite effective in resolving disputes for the PNA Members, given that vessel operators that do not do so could potentially be black-listed from fishing in the region.

Moreover, it is incorrect to state that there is no known management system in the PNA framework. There are two well-established PNA arrangements, namely the FSM Arrangement for Regional Fisheries Access and the Palau Arrangement for the Management of the Western Pacific Fishery. These arrangements also state a clear obligation for any disputes to be resolved by peaceful means, such as negotiations. The PNA Members have certainly utilised these means to resolve their disputes.

The solidarity of the PNA Members since their establishment nearly 30 years ago is a clear testament to *inter alia* their ability to work though any differences using existing formal and informal dispute settlement mechanisms.

Section	Point of Objection	Objector
3.1.2	Consultation – lack of ability of stakeholders to participate.	All

PNA has broadened its existing scope of observership. A wider range of NGOs and private entities have participated in PNA meetings in the last 12 months.

In addition, from time to time, PNA also conducts specific consultation exercises with stakeholders. This has included specific briefing sessions on the VDS, a processing industry forum, bilateral meetings with DWFN governments, information papers to bodies such as TCC seeking views on proposed management measures and discussion in the WCPFC and subsidiary body meetings.

In addition, crucial decisions, such as changes to the Minimum Terms and Conditions for access by foreign fishing vessels are made by the Forum Fisheries Committee, which has wide observership.

Section	Point of Objection	Objector
3.1.3	Long Term Objectives – PNA policy is deficient in identifying such objectives and linking them to principles of sustainability.	All

FFA members have invested heavily in the development of regional planning frameworks that carry the weight of international policy. Of most importance to this criterion are the FFA Strategic Plan and the Regional Tuna Management and Development Strategy (RTMADS⁹). Both contain specific objectives based on the sustainable management of tuna stocks. The RTMADS breaks these further into a number of goals and operational level outcomes to be pursued at the regional and national level.

The objections refer to the Japan Fisheries Basic Act as evidence of implementation of such principles in support of the Tosakatsuo Suisan pole and line fishery; so it is worth noting that principles such as the precautionary approach are also reflected in the national fisheries legislation, regulation and operational policy of PNA countries. All PNA countries have undergone formal processes to implement the Ecosystem Approach to Fisheries Management and there have been resulting changes to the legislation, regulation and management plans in each country.

Section	Point of Objection	Objector
3.2.1	Fishery specific Objectives – none are specified and the inference to CMM 2008-01 achieving conservation is inappropriate.	All

CMM 2008-01 is designed primarily to reduce fishing mortality on bigeye, and to a lesser extent, yellowfin and this is evidenced by the specific objectives it sets out. However, it is inappropriate to determine that it is therefore irrelevant to the management of skipjack. In particular (as referenced above), it sets out specific purse seine effort limits in a range of areas of the WCPFC fishery.

PNA have a well established position that restrictions on purse seine effort are not a BET conservation measure, and this is evidenced by the development of the FAD closure in the Third Implementing Arrangement and CMM 2008-01 as better tailored responses to the impact of FAD fishing on bigeye. Whether that position, or the fact that CMM 2008-01 is expected to provide a degree of skipjack stock protection is articulated adequately in a WCPFC meeting record is largely meaningless.

The development of these limits has been incremental (PNA limits in CMM 2005-01, High seas limits in 2006-01 and requirement for compatible measures in other EEZs in 2008-01). This is evident of an evolutionary management regime, and has been appropriate given the scientific advice following stock assessments in 2005 and 2008. The nature of the scientific advice changed following the 2010, but remained relatively benign as: *Due to the rapid change of the fishing mortality and biomass indicators relative to MSY in recent years, increases of fishing effort should be monitored.*

The projection work described above that was presented to SC7 also highlights that under current conditions (measures already implemented under the VDS, 3IA and CMM2008-01), the skipjack stock will remain above B_{MSY} and fishing will remain below F_{MSY} .

⁹ <http://www.ffa.int/node/302>

FFA members advocated at WCPFC7 that the Commission should take action over and above that scientific advice by including it more specifically in the next measure, and this was accepted by WCPFC. As described above, the letter from FFA members to other Commission members in May 2011 articulates several ideas as to the nature of this recognition.

Section	Point of Objection	Objector
3.2.3	Compliance and Enforcement: <ul style="list-style-type: none"> • No real evidence that 100% observer coverage has been achieved. • No provision of ROP data to the WCPFC. • Questions of the quality of observer information, given references to intimidation and bribery. • VMS inadequate as WCPFC secretariat cannot see in EEZs. 	All (more detail in ISSF)

Paragraph 3 of CMM 2007-01 requires preparation of an annual report on the Regional Observer Programme. The annual report considered in 2010 was for 2009 (WCPFC7-2010-26¹⁰). The main requirement from the ROP in 2009 was 100% coverage during the 2 month FAD closure and the annual report confirms that this was achieved. For 2010, the coverage was extended to 100% all year and the annual report submitted to TCC7 will demonstrate that this was achieved.

The criticisms of the quality of data are unjustified. While it is true that all observer programmes experience issues similar to those identified in the objection, independent observers remain an excellent source of high quality, detailed information on fishing activities. The training standards applied to PNA observers through the PIRFO scheme implemented by FFA and SPC is world class, resulting in data that strongly supports management, compliance and science.

In terms of the availability of data to the WCPFC, all PNA members have authorised release of ROP data to the Commission. PNA have also authorised the release of ROP data related to the Federated States of Micronesia Agreement which is held by FFA. As Parties to the US Treaty, PNA have also authorised release of that ROP data. While the data has always been available to SPC in conducting its science work on behalf of WCPFC, these authorisations significantly increase the data formally held by the Commission.

The “Pacific VMS” administered by the WCPFC Secretariat is for the high seas only, and this is stipulated in the Convention itself. While it is true that the WCPFC Secretariat is not able to view activities in EEZs, there are provisions in the Convention, CMMs and the Commission’s rules for the access to and dissemination of data that allow coastal States to access that data. This allows coastal States, particularly in the cooperative environment that FFA members operate within, to adequately monitor the activity of fishing vessels.

There are a range of other programmes in place at the national, sub-regional and regional level that contribute directly towards consistent, robust compliance and enforcement. This includes the VMS and observer programmes referred to above, the FFA good standing register, patrol vessels in all but one PNA members, cooperative surveillance under the Niue Treaty, participation in sub-regional operations with military assets from Australia, France, New Zealand and the US and subsequent “back-end” coordination and data analysis through FFA and SPC.

¹⁰ <http://www.wcpfc.int/meetings/2010/7th-regular-session-commission>



INTERTEK MOODY MARINE LTD

Ref: 82122

**PNA Western and Central Pacific Skipjack Tuna Unassociated Purse-
Seine Fishery**

Client: PNA

Certification Body Response to Notice of Objection:

1. ISSF

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1. Introduction

The following report outlines the Moody Marine's (Certification Body) response to the objections raised under TAB-D-023 v3 (the Objection Process or OP) to the Marine Stewardship Council (MSC) certification of the PNA Western and Central Pacific Skipjack Tuna Unassociated Purse-Seine Fishery.

The objection was submitted by ISSF on 1 August 2011.

The objection was reviewed by the MSC appointed Independent Adjudicator (IA). The decision of the IA was that the objection was admissible.

Further submissions to the objection have been received from PNA, the West and Central Pacific Fisheries Commission (WCPFC), the Secretariat of the Pacific Community (SPC) and the Pacific Islands Forum Fisheries Agency (FFA). These are considered in the responses below where appropriate, and in Section 4.

The MSC Objections Procedure allows for the IA to remand the determination to the Certification Body (CB) if he or she determines that:

- a) There was a serious procedural or other irregularity in the fishery assessment process that made a material difference to the fairness of the assessment; or (i.e. Part Four of the Objection)
- b) The score given by the CB in relation to one or more performance indicators cannot be justified, and the effect of the score in relation to one or more of the particular performance indicators in question was material to the outcome of the Determination because:
 - i) The CB made a mistake as to a material fact; or
 - ii) The CB failed to consider material information put forward in the assessment process by the fishery or stakeholder; or
 - iii) The scoring decision was arbitrary or unreasonable in the sense that no reasonable CB could have reached such a decision on the evidence available to it; (i.e. Part Five of the Objection) or
- c) It is necessary to remand the Determination in order to enable the CB to consider additional information described in Section 4.7.5 (b) and described in the notice of objection (i.e. Part Six of the Objection).

The Moody Marine assessment team have therefore responded here, in relation to the above criteria, for each of those elements of the objection which were upheld by the MSC independent adjudicator, i.e.:

Part Four

Part Five:

2. Response to Objection: Part 4

Two issues were raised by ISSF in relation conformance with the MSC Assessment Procedure:

2.1 Consultation with ‘relevant entities’

The issue raised is that all member nations and territories of the WCPFC were not consulted, specifically in the implementation and enforcement of Conditions of Certification.

In response, we would point out that the consultation process involved was, necessarily, fully publicised to all stakeholders and the assessment team was open to representations from any concerned stakeholders.

The Stakeholders consulted included WCPFC, SPC representatives, Forum Fisheries Agency, the PNAO, the competent authorities, fishing industry stakeholders, WWF and ISSF. The process of stakeholder consultation, and meetings with stakeholders was entirely consistent with MSC scheme requirements and the process that has been adopted to date with other fisheries; the collection of information from competent authorities and the open invitation for other parties to participate as they wish (e.g. assessment of fisheries in Europe have not included contact with every EU member state, similarly for fisheries managed by CCAMLR and other tuna fisheries managed by WCPFC, ICCAT and IOTC). Information on management practices etc has been made available by representatives of the organisations; other members of these organisations are entirely welcome to engage in the assessment process – thus ensuring that relevant information is available to the assessment team, and the fairness of the assessment is assured.

In relation to meeting conditions, it is clearly not the case that RFMO engagement is necessary for the requirements of conditions to be achieved. Principle 2 conditions, many Principle 3 conditions and even some Principle 1 conditions may be, and regularly are, met by client groups independently of overarching management organisations. Nevertheless, we take the objectors comment to relate mainly to Principle 1 conditions for this fishery, in relation to reference points and harvest controls.

The MSCs latest directive on condition setting (TAB-D-033 v1, Section 3.4.8) clarifies that the CB “*shall consult with all relevant entities when setting conditions if those conditions are likely to require investment of time or money by the entities, or changes to management... in order to satisfy the CB that the conditions are both achievable by the certification client and realistic in the time frame specified.*” So specific consultation with WCPFC on conditions (as an organisation) would only be necessary if the certification client, PNA, were unable to address the conditions itself. As discussed in detail in Section 3 below, the assessment team was satisfied that PNA would be able to implement the conditions specified (although in some cases the option does remain to alternatively achieve the required outcomes with WCPFC cooperation).

In relation to Section 4.8.2 a) of the OP, therefore, we are confident that there were no procedural irregularities that made a difference to the fairness of the assessment.

2.2 Harmonisation with overlapping fisheries

The objectors question the degree of harmonisation with fisheries already certified, which target the same stock; in this case, the Tosakatsuo Suisan skipjack pole and line fishery. Requirements for harmonisation with overlapping fisheries are set out in TAB-D-015 v2.1. The MSC naturally recognise that different fisheries and assessment teams will exhibit some differences, but require (Section 2.1) “*that key assessment products and outcomes are harmonised with the earlier assessment of overlapping certified fisheries... harmonisation would be evidenced by... the achievement of consistent conclusions with respect to evaluation, scoring and particularly conditions.*”

The first aspect of harmonisation is therefore that the Tosakatsuo fishery has met Principle 1 requirements, so the PNA fishery would also meet these requirements.

Scores for the two fisheries for Principle 1 are as follows:

PI	PNA	Tosakatsuo
1.1.1	100	95
1.1.2	75	75
1.2.1	80	80
1.2.2	60	75
1.2.3	90	95
1.2.4	95	95
Principle 1	84.4	86

Apart from PI 1.2.2 where the PNA fishery achieved a lower conditional score, all scores were within 5 points. The same two conditional scores were awarded for each fishery.

The difference in the wording of the conditions reflects the wording of Section 2.1 above regarding the ability of the client to effect changes in fishery management which would satisfy the SG80 requirements of the PI concerned.

In framing the condition for the PNA skipjack fishery, the assessors took into account the much greater degree of control by PNA over fishing in the WCPO for skipjack compared to the control that could be exercised by the much smaller Tosakatsuo pole and line fleet. The assessors considered that given the scale of PNA coverage and control over the fishery, that this organisation could propose an Action Plan, and deliver against this plan, that explicit and appropriate target and limit reference points and harvest controls for skipjack be adopted by PNA *and/or the WCPFC*. For the Tosakatsuo Suisan fishery (given the scale of the fishery), such changes could only be effected via the WCPFC. This is therefore a more demanding condition on the client (PNA), but with a more certain outcome.

In relation to Section 4.8.2 a) of the OP, therefore, we are confident that there were no procedural irregularities that made a difference to the fairness of the assessment.

Response to Objection: Part 5

3.1 PI 1.1.1

PI Requirement	The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing
Score allocated	100
Response to Objection	<p>ISSF argues that the second element of SG100 is not met in the absence of the adoption of formal target and limit reference points, and that the use of B_{MSY} as a target reference point is inconsistent with the WCPFC Convention.</p> <p>The use of B_{MSY} is consistent with guidance in the FAM (6.2.10) which says: <i>There may be situations where well-managed stocks do not have target reference points or do not have limit reference points. The stock will still need to be assessed in terms of the overall outcome objectives, i.e. for SG80 that the stock status is highly likely to be above the point at which there is an appreciable risk that recruitment is impaired, and will be at or around a level consistent with B_{MSY}.</i> Based on this guidance, it is commensurate for the assessors to have used the test of whether there is a high degree of certainty that the WCPO skipjack stock is above B_{MSY}. This conclusion is established in section 5.2 of the</p>

	<p>report.</p> <p>The objection states that “<i>the UNFSA guidelines set Fmsy as the default limit (not a target), which is contradictory with Bmsy being treated as a target.</i>”</p> <p>There is no contradiction in the use of F_{MSY} as a LRP and B_{MSY} as a TRP. The adoption of Fmsy as a limit reference point rather than a target reference point is a “<i>result of both practical experience and scientific analysis which showed that treating FMSY as a target often resulted in over-depletion of fish stocks</i>” (see Sainsbury (2008), Best Practice Reference Points for Australian Fisheries).</p> <p>In addition, ISSF argues that SG100 cannot be met because a target can be higher than B_{MSY} and it is not possible to know if a target has been met if the target is not known.</p> <p>The FAM (6.2.10) provides some guidance on the issue, specifically with respect to SG80 when it notes in respect of stocks which do not have target reference point that “<i>The stock will still need to be assessed in terms of the overall outcome objectives, i.e. for SG80 that the stock status is highly likely to be at or around a level consistent with B_{MSY}.</i>” This establishes that a stock without a target reference point can meet SG80, and since the additional requirement for SG100 is essentially the high degree of certainty involved, there does not appear to be any reason why a stock without a target reference point could not meet SG100 where there is a <u>high degree of certainty</u> that the stock has been fluctuating around B_{MSY}, or has been above B_{MSY} <u>over recent years</u>.</p> <p>In addition, there is a high degree of certainty that the stock has been more than double B_{MSY} over recent years as shown in Section 5.2 of the report, and therefore has been above target reference point levels likely to be adopted by the WCPFC.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.2 PI 1.1.2

PI Requirement	Limit and target reference points are appropriate for the stock.
Score allocated	75
Response to Objection	<p>We would observe that Section 4.8.2 b) of the OP (and Part 5 of this Objection) relates to the scoring of PIs. As there is no dispute over the score awarded – rather the wording of the associated condition – then this element of the objection relates more to that in Part 4 of the OP – our Section 2 above.</p> <p><i>The score for this PI is therefore unaltered.</i></p> <p>Adding to our response in Section 2.2, we would offer the following specific observations on this subject.</p> <p>The point in question is whether management measures implemented by PNA would be sufficient to ensure sustainable outcomes for the stock as a whole. (References to TAB-D-003 are not relevant as the assessment has shown that the whole stock <u>does</u> meet the MSC standard at present.)</p>

This is a very important point for the assessment outcome and has been given substantial consideration by the assessors.

Not surprisingly, there is no specific guidance on how reference points should be set for shared stocks in the FAM or the UNFSA or for WCPO stocks in the WCPFC Convention. Article 7 of the WCPFC Convention makes it clear that coastal states are to apply the principles in the Convention, including the precautionary approach (with reference points) within areas under national jurisdiction in the exercise of their sovereign rights. This may be taken as authority for coastal state WCPFC members to adopt limit and target reference points for fisheries in their waters. However, such reference points are not necessarily appropriate for an MSC assessment. So, for example, a WCPFC Member might legitimately adopt reference points for a fishery in its waters or collectively with other Members in order to avoid local depletion, but such reference points may not be appropriate for an MSC assessment.

The test of whether it would be appropriate for reference points set by PNA to be used to achieve SG80 would seem to depend on whether reference points set by PNA could deliver outcomes where “*The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity, and “The target reference point is such that the stock is maintained at a level consistent with B_{MSY} ”*”. It has been shown that the actual numerical positions of the reference points can be readily established – the ability of put these into effect is more critical.

Consideration of this issue is informed by the discussion in the ISSF objection about the extent of PNA coverage over the catch and stock, where it is clear that PNA has control over a substantial part of the catch, but a smaller share of the stock. On this issue, the assessors have given more weight to the extent of PNA control over the catch, and considered that the extent of coverage and control of the fisheries for WCPO skipjack is sufficient that PNA would be able to establish reference points that would meet the tests in the scoring elements of SG80.

In the opening section of the objection, ISSF states that: *The Certification Body indicated that 70% of the skipjack tuna stock relevant to management is within waters controlled by member nations to the PNA agreement. Presumably this fact justified the Determination that the PNA nations could deliver sustainable management, absent action by the WCPFC. The fact is unsupported and incorrect at any point in time: data from the scientific stock assessment shows that, on average, the proportion of the western and central Pacific Ocean skipjack stock subject to PNA member control can be as little as 25%. The scoring subject to this material factual error cannot be justified.”*

The information on PNA coverage of the WCPO skipjack catch used in the assessment is set out on page 29 and in Table 4. When scoring, the assessors used the figure of 58% of the WCPO skipjack catch in PNA waters for 2009 was used as shown in Table 4. However, prior to the publication of the Draft Report, the assessors were aware of a higher PNA catch, which was confirmed by email prior to the response to the PCDR comments. This is provisionally estimated at 70% for 2010, and is as a result of the High Seas closures. Nevertheless, the assessors did not alter the scores to reflect additional PNA management dominance in the fishery, given that 58% in itself was already sufficient to justify the scoring. In the final report, reference is inadvertently made to 70% of the stock, instead of 70% of the catch, in one response to a stakeholder comment. This incorrect estimate was not used at any point in the assessment including the scoring of any PI, and a review of the report contents and scoring, indicate that assessors consistently took account of the Catch %, 58% as was which latterly became 70% in

	<p>response to the application of the closure of the High Seas pockets.</p> <p>It is the conclusion of the assessment team that such control over catches from the stock would allow PNA to establish appropriate reference points, and to manage the extractions from the stock (taking account of catches both within PNA waters, and outside of PNA waters), at levels which would meet the requirements of the MSC standard. As WCPFC could provide stock-wide management measures, Condition 1 provides alternatively or additionally for reference points to be established by the WCPFC, but is clear that this is not essential for effective management of the stock as a whole. The SPC additional representation in particular provides further support for this based on skipjack migratory behaviour.</p> <p>The second element to the ISSF objection to the scoring of this PI is that harmonization with the condition for this PI set for the Tosakatsuo Pole and Line Fishery has not been achieved as required by Directive 1.2 of TAB 015. This is addressed in Section 2 above.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.3 PI 1.2.1

PI Requirement	There is a robust and precautionary harvest strategy in place
Score allocated	80
Response to Objection	<p>The reason for the objection is that: <i>The final report does not show evidence that the harvest strategy for the WCPFC is responsive to the state of the stock.</i>” More specifically, ISSF argues that:</p> <p>i) the justification is based on a potential outcome rather than on existing evidence, and ii) scoring this PI is inconsistent with how WCPFC was treated under 1.1.2 or 1.2.2.</p> <p>The scoring justification is not based on a potential outcome. The scoring comment notes that the harvest strategy until 2010 was a response to advice based on assessments that the skipjack stock was only moderately exploited. As an additional pointer to the responsiveness of the harvest strategy, the WCPFC7 decision to explicitly include skipjack in the CMM to replace CMM 2008-01 was itself an additional management action responding to, and linking, the assessments and monitoring information with a change in the management strategy. This is not a potential outcome.</p> <p>There is no inconsistency in the treatment of the WCPFC in this PI and other PIs. The management system for the PNA purse seine skipjack fishery has been consistently treated as including elements relating to PNA, FFA, national administrations and the WCPFC. The WCPFC7 decision was a decision appropriately taken by the WCPFC by a consensus of its Members including all PNA Members. This is consistent with the treatment of the various elements of the management system, including the WCPFC, in other PIs.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>

Effect on Score	No change
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3.4 PI 1.2.2

PI Requirement	There are well defined and effective harvest control rules in place
Score allocated	60
Response to Objection	<p>As ISSF notes, the key issue raised in the objection to this PI is essentially the same as that raised for PI 1.1.2 – specifically whether harvest control rules adopted by PNA can meet the SG80 requirements, or whether these requirements can only be met by harvest control rules set by the WCPFC. The arguments are essentially the same as for PI 1.1.2.</p> <p>The key requirement is that the harvest control rules must ensure that the exploitation rate is reduced as limit reference points are approached.</p> <p>After careful review, the assessors considered the scoring for this PI and the condition set to be appropriate in providing for harvest control rules to be put in place by PNA and/or WCPFC. Given the extent of PNA control over catches of skipjack in the WCPO, it would be feasible for PNA to adopt harvest control rules that would ensure that the exploitation rate over the WCPO skipjack stock as a whole is reduced as limit reference points are approached. This could be achieved in various ways, most obviously by reducing mortality from fishing within PNA waters to ensure that the total exploitation rate over the stock as a whole is appropriately reduced. The assessors note that the condition in fact creates an incentive for PNA to support rules being put in by the WCPFC, because rules put in place by PNA relating to PNA waters would have to be more precautionary than rules adopted by the WCPFC relating to the Convention Area as a whole in order to take into account the uncertainty and impact associated with fishing mortality outside PNA waters.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.5 PI 1.2.3

PI Requirement	Relevant information is collected to support the harvest strategy
Score allocated	90
Response to Objection	<p>ISSF argue that there needs to be good information on all other fishery removals from the stock. Attention is drawn to specific weaknesses in data provided by Indonesia, Philippines and Vietnam which according to WCPFC (Table 4) represent 270,000 tonnes from a total 1.6 million tonnes (16.9%).</p> <p>FAM 6.3.17 states that other fishery removals relate to vessels outside the unit of certification; these require <i>good information but not necessarily the same level of accuracy</i>. The key issue is that uncertainties exist, but work is underway to minimise these, and these uncertainties are taken into account in the stock assessment.</p> <p>Hampton notes that <i>considerable progress has been made in recent years in addressing these gaps</i>, and the report shows that data has been consistently incorporated into the stock assessment models; this has helped to remove some of the uncertainty in assessments, as also acknowledged in the most recent WPEA OFM Steering Committee meeting. There are acknowledged weaknesses in data provided from Vietnam, where</p>

	<p>there are estimates of skipjack catch which are relatively small (around 1%); these data are not currently included in the assessment (WCPFC-SC1-ST-IP5).</p> <p>The assessors take the view that what is available represents <u>good information, and was the case at the time of the assessment</u>, and a weakness in coverage for some countries does not fundamentally affect the outcome of the harvest strategy.</p> <p>We note that the Tosakatsuo assessment gave a similar score of 95 for this PI (with a different assessment team). Awarding a score below 80 for this PI would not, therefore, be a harmonised outcome.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.6 PI 1.2.4

PI Requirement	There is an adequate assessment of the stock status
Score allocated	95
Response to Objection	<p>The objection is directed towards the 1st and 3rd elements of SG100 for this PI and argues that the requirements of these elements can not be met because “<i>there are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment.</i>”</p> <p>The 1st element includes the requirement that “<i>The assessment is appropriate for the stock and for the harvest control rule....</i> The report establishes as noted in the scoring comments on PI 1.2.2 that there are generally understood harvest control rules in place, but these rules are not well defined. The scoring for PI 1.2.2 was reduced accordingly. As noted in the scoring comment on this PI, “<i>the assessment is appropriate for the generally understood harvest control rules that are being applied and for the range of formal HCRs that might be adopted.</i>”</p> <p>The issue then seems to be whether SG100 can be met if harvest control rules are generally understood, rather than well defined. According to the FAM (section 6.3.18) PI 1.2.4 “<i>considers how the fishery assesses information to provide an understanding of stock status and the effectiveness of the harvest strategy.</i>” The information in Section 5.4.1 of the report supports the conclusion that the assessment is appropriate for the harvest strategy. Taking into account that:</p> <ul style="list-style-type: none"> i) the assessment is appropriate for the generally understood harvest control rules; ii) the assessment is appropriate for the harvest strategy; and iii) the lack of well-defined harvest control rules has been taken into account in the scoring of PI 1.2.2; <p>the assessors consider that the fishery meets the requirements of the 1st element of SG100 for PI 1.2.4.</p> <p>The 3rd element is “<i>The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.</i>” There is no link between this issue and whether or not there are harvest control rules in place. The objection does not question that the assessment has been tested and shown to be robust and that alternative hypotheses and assessment approaches have been rigorously explored. The use of MSE is suggested by MSC as guidance only.</p>

	<i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i>
Effect on Score	No change

3.7 PI 2.1.2

PI Requirement	There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species.
Score allocated	80
Response to Objection	<p>There are two issues here – the definition of yellowfin as a Principle 1 (target species for MSC certification) species, and the effectiveness of management measures for bigeye and yellowfin.</p> <p>Regarding yellowfin as a P1 species, the objectors have quoted TAB-D-003 on a number of occasions, but it is here that this Directive actually applies. The client nominates the species which, if successfully assessed and certified, would be eligible to carry the MSC logo. Other retained species are considered under Principle 2 and so may not carry the MSC logo. Therefore, yellowfin would not be ‘MSC-certified’ unless this fishery underwent a separate MSC assessment with Yellowfin as a Principle 1 species.</p> <p>Regarding bigeye, the objection argues that the score of 80 for the 2nd element of SG80 is unreasonable because “It has been clearly established that CMM-2008-01 is not working to end overfishing of the bigeye stock,..”</p> <p>The objection is based on a misunderstanding of the application of the first two elements of SG80 to bigeye tuna as a retained species in the unassociated set fishery. The report establishes in Section 6.2.1 (in accordance with the “marginal contribution” approach in para 7.1.14 of the FAM) that the estimated impact of unassociated sets in reducing bigeye tuna spawning potential is around 1%, which is not significant. On the basis of this information, the assessment concludes that the <u>partial strategy</u> in place, including the purse seine effort limits, are expected to ensure that the PNA unassociated fishery does not hinder the recovery and rebuilding of bigeye tuna.</p> <p>For this reason, the test of whether the unassociated set fishery meets the requirement in the 2nd element of SG80 in respect of bigeye tuna is not related to whether bigeye tuna is within biological limits and therefore whether CMM 2008-01 works to end overfishing of bigeye tuna. Rather the test of whether the unassociated set fishery meets the requirement in the 2nd element of SG80 in respect of bigeye tuna is whether there is some <u>objective basis for confidence</u> that measures in place will continue to ensure that the impact of unassociated sets remains sufficiently low to ensure that the fishery does not hinder the recovery and rebuilding of bigeye tuna. The point raised in the objection - that CMM 2008-01 will not end overfishing of bigeye tuna - is therefore not relevant to the application of the 2nd element in SG80 to the unassociated fishery. This conclusion, that CMM 2008-01 will not end overfishing of bigeye tuna was of course the reason for the failure of the logset fishery under this PI and so was appropriately taken into account in the assessment.</p> <p>In addition, the objection notes that “The scoring comments in the assessment (p. 155) make reference to the fishery impacts on the bigeye stock, but there is no mention of</p>

	<p><i>yellowfin.</i>” This aspect of the objection is based on a misunderstanding of the application of the first two elements of SG80 to yellowfin tuna as a retained species in the unassociated set fishery. The impact of the unassociated fishery on yellowfin tuna is covered in Section 6.2.1 and, more importantly, the report establishes in Section 6.2.3 that the measures in place will maintain the yellowfin tuna stock within biologically-based limits over time.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.8 PI 3.1.1

PI Requirement	<p>The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"> - Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; - Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and - Incorporates an appropriate dispute resolution framework.
Score allocated	95
Response to Objection	<p>There are four scoring issues for this PI. The objection is directed towards the first issue: <i>Scoring Issue 1: The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</i></p> <p>The issue for this PI therefore is whether the management system is compliant with relevant laws or standards aimed at meeting the general requirements of P1 and P2. The objection then repeats most of the arguments raised under PI 1.1.2 – can the PNA implement reference points and harvest controls that would meet the requirements for Principle 1. We believe we have answered this question above under PIs 1.1.2, 1.2.1 and 1.2.2.</p> <p>As the objection does not provide evidence to contradict our findings the legality of the institutions involved in the management of the fishery, nor that these are ‘aimed’ at achieving sustainable fisheries, then we see no reason to change the scoring of this PI.</p> <p>Notwithstanding this, we would offer the following additional observations on the scoring of this PI. A fishery management system’s legal and/or customary framework is considered to be the underlying supporting structure, be it formal or informal, that incorporates all the formal and informal practices, procedures and instruments that control, or have an impact on, a fishery (FAM 8.2.2). The assessment establishes that there is a management system in place which includes as its key elements the legal structure, policies and practices of the WCPFC, the PNA and PNA national administrations, supported by the FFA and the SPC. This system includes a framework for establishing arrangements to control fishing under relevant terms and conditions, monitoring fishing activity and its impacts, with compliance and enforcement including sanctions. The management system is generally consistent with international laws and standards, particularly UNCLOS and the UNFSA and with relevant local and national laws. The management system explicitly establishes standards in the WCPFC Convention (Articles 5 and 10) and national laws and plans (see references in Table 20</p>

	<p>of the assessment report) to avoid over-fishing or depletion, and rebuild depleted stocks of, exploited populations; and to maintain the structure, productivity, function and diversity of the ecosystem (including associated dependent and ecologically related species) on which the fishery depends. The framework also provides explicitly for the application of the precautionary approach (WCPFC Convention, Article 6), including the application of reference points by WCPFC Members, including by coastal State Members within areas under their national jurisdiction (WCPFC Convention, Article 5).</p> <p>The objectors also raise the issue of the IA decision on the Faroese mackerel fishery. As the issue with that (mackerel) fishery was that coastal states had not agreed a TAC allocation key, the combined fisheries were exploiting the stock at levels considerably in excess of the overall TAC. As stated under PI 1.1.2 above, this is clearly not, not would it be, the situation with this fishery.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.9 PI 3.1.2

PI Requirement	<p>The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties.</p>
Score allocated	95
Response to Objection	<p>The reason for the objection is that <i>“The third element of the SG100 is not met for PNA.”</i> The objection also notes that <i>“ISSF cannot understand why the score for this PI was increased from 90 to 95 compared to the draft assessment for public consultation.”</i></p> <p>The 3rd element of the SG100 guidepost is: <i>“The consultation process <u>provides opportunity and encouragement</u> for all interested and affected parties to be involved, and <u>facilitates</u> their effective engagement.”</i></p> <p>In the draft assessment for public consultation the scoring comment 3rd element of SG100 was that <i>“Opportunities are provided for involvement, but the process falls short of facilitating engagement by all affected parties, and the lack of a formal observer status in the PNA system is a particularly significant shortfall”</i> Accordingly, the element was scored at 80 with an associated recommendation based on the mistaken understanding that there was no provision by PNA for observer status. It was subsequently realised that this understanding was incorrect, and that information on PNA practice providing for participation by observers at PNA meetings had been given to the assessment team by Dr Aqorau in an interview on July 23, 2010 (see Stakeholder Interview I14). The 3rd scoring element was therefore rescored to 100, and the score for 3.1.2, with 2 elements scored at 100, and one at 80, was appropriately adjusted to 95. The report was corrected by the inclusion of footnote 38. The Team regrets any inconvenience or misunderstanding caused by this error; this will be clarified further in the Public Certification Report.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these</i></p>

	<i>circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i>
Effect on Score	No change

3.10 PI 3.1.3

PI Requirement	The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.
Score allocated	90
Response to Objection	<p>The reason for the objection is that "PNA management policy does not meet the SG80 requirements for long-term objectives consistent with MSC Principles and Criteria and the precautionary approach."</p> <p>The SG80 requirement is that "<u>Clear</u> long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are <u>explicit within management policy.</u>" where management policy means: "outside the specific fishery under assessment (i.e., at a higher level or within a broader context than the fishery-specific management system)."</p> <p>The assessment shows that there are clear long-term objectives, consistent with MSC Principles and Criteria and the precautionary approach, and these are explicit within: a) applicable WCPFC CMMs and decisions – see in particular the decision by the Commission to establish a measure for tropical tuna fisheries at its 1st meeting (ref WCPFC, 2004b) and CMM 2008-01 (para 4), noting that CMM 2008-01 provides the broad framework for WCPO tropical tuna fisheries management and is therefore outside the specific fishery under assessment; b) the Palau Arrangement - in its preamble c) the national laws and plans of the PNA Members, (except for Kiribati), where long term objectives are explicit within applicable national management plans and are required by national legislation (see Table 20 of the assessment report); d) FFA Strategic Plan 2005 – 2020 (ref FFA, 2005) and the FFA Regional Tuna Management and Development Strategy 2009-2014 (ref FFA, 2009); and e) the WCPFC Convention and UN Fish Stocks Agreement to which all of the PNA are party.</p> <p>However, as noted in the report appropriate long term objectives are not explicit within the Nauru Agreement and within the national legislation or a plan for Kiribati, and so the requirements for SG80 were met but the requirements for SG100 were considered not to be fully met. For these reasons, this PI was originally scored at 80. On review of the scoring following distribution of the draft report for public consultation, it was considered that the requirements for SG 100 were largely met and the PI should be recorded at 90, taking into account the guidance in PA18v1 of 6 September 2010, providing for intermediate scores for PIs where is only a single scoring issue at each SG level.</p> <p>The issue of harmonisation with the Tosakatsuo Suisan fishery is discussed in Section 2 above.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.11 PI 3.2.1

PI Requirement	The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.
Score allocated	80
Response to Objection	<p>The reason for the objection is that: <i>"The fishery-specific short term objectives do not meet the SG80 requirements."</i></p> <p>The SG80 guidepost requires <i>"Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system."</i></p> <p>The 'fishery' under assessment here is the PNA Skipjack tuna purse seine fishery targeting free schools, a fishery which retains bigeye and yellowfin tunas and catches other species, which are largely released or discarded. So, the fishery addresses skipjack tuna under Principle 1 and bigeye and yellowfin as retained species under Principle 2, and both need to be considered.</p> <p>Specific long term objectives for this fishery are included explicitly in the preambular box and in Article 2 (Objective and Description) of the VDS Scheme text, and in para. 1 of CMM 2008-01. Specific short term objectives for this fishery are explicitly set out in para 8 of CMM 2008-01 and include a 30% reduction in fishing mortality on bigeye and a reduction in the risk of overfishing yellowfin tuna. The objectives in these references are consistent with outcomes expressed by MSC's Principles 1 and 2. In addition, projections indicate that the outcomes of measures adopted in accordance with these objectives are likely to maintain the skipjack and yellowfin stocks, further demonstrating the consistency of these objectives with MSC principles (ref SPC-OFP, 2010b). ISSF considers that para 30 in CMM 2008-01 has the potential to cause the skipjack stock to become overfished, but it is the objectives that are assessed under this PI, not the strategies that implement the objectives (FAM 8.3.2) and the strategies are assessed under Principles 1 and 2. ISSF consider that a reference in the report to <i>"management of skipjack explicitly"</i> is <i>"an acknowledgment that current management of the purse seine skipjack fishery is not explicit yet, and is thus inconsistent with the assessment team's conclusion that skipjack management is already addressed explicitly by the CMM under PI 3.2.1"</i>. However, the issue in this PI is not an assessment of the management strategies, but rather whether appropriate short and long term objectives are explicit in the management system. The assessment clearly indicates that they are.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.12 PI 3.2.2

PI Requirement	The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives
Score allocated	70
Response to Objection	This PI addresses the processes for decision-making, not the adoption of reference points, which is dealt with under PI 1.1.2.

	<p>In terms of milestones in the condition, the condition specifies a major milestone for the first annual audit – that effectively deals with the condition. Subsequent audits will prove the effectiveness of the measures implemented to address the condition. Although, in accordance with MSC requirements, the overall timescale is 5 years, the condition could be closed before then, once effective explanation of decision making processes within PNA has been established. Each annual surveillance audit will report on this matter until the condition is closed.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.13 PI 3.2.3

PI Requirement	Monitoring, control and surveillance mechanisms ensure the fishery’s management measures are enforced and complied with.
Score allocated	85
Response to Objection	<p>The assessors demonstrate that the MCS system has been implemented in the fishery. However, ISSF question that the assessment has not demonstrated an ability to enforce relevant management measures by citing a series of reporting inadequacies.</p> <p>The assessors queried the lack of reports (email of Dr. Lara Manarangi-Trott, Coordinator and Policy Adviser - WCPFC, 19 June, 2011), in which it is was revealed that two countries had not reportedly complied with the TCC obligation in 2009 (RMI and Kiribati), and 2 (RMI and Palau) in 2010. However, the assessors considered, not one, but a number of reports, submissions and assessment interviews. These include interviews with RMI (I 3 and I 16), Kiribati (I 7) and Palau (I 8), all of which are relevant compliance and enforcement agencies (FAM 8.3.10). These interviews, with Government organisations, cite an array of MCS tools in place – cross checking catch logs, transshipments and observer coverage and debriefing, as well as references to Operation Bigeye and Island Chief. MRAG 2009b evaluating the effectiveness of the Regional MCS strategy, noted that the reason for purse seine being low risk (relative to long lining) was due to the 100% observer coverage in the PS fishery, as well as the higher VMS polling frequency. Additional supporting evidence of the effectiveness of the MCS system is cited by FFA and WCPFC in various stakeholder submissions.</p> <p>ISSF also refer to evidence of records of the actual percentage of fishing trips covered by observers and observer data sets digitalized. The assessors refer to Paragraph 3 of CMM 2007-01 which requires preparation of an annual report on the Regional Observer Programme. The annual report considered in 2010 was for 2009. The main requirement from the ROP in 2009 was 100% coverage during the 2 month FAD closure and the annual report confirms that this was achieved (http://www.wcpfc.int/meetings/2010/7th-regular-session-commission). The report also refers to a survey of Pacific Island national observer programmes in July 2010 indicated that there are now 551 authorised observers available for ROP trips. The assessors view is that the commitment shown to the observer deployment by the management organisations (the Parties, WCFPC, SPC and FFA, post CMM 2008-01, represents a phenomenal achievement and demonstrates the comprehensive nature of their engagement.</p> <p>All PNA members have authorised release of ROP data to the Commission. PNA have</p>

	<p>also authorised the release of ROP data related to the Federated States of Micronesia Agreement which is held by FFA. As Parties to the US Treaty, PNA have also authorised release of that ROP data. While the data has always been available to SPC in conducting its science work on behalf of WCPFC, these authorisations significantly increase the data formally held by the Commission.</p> <p>ISSF also cite references to bribery. Hindrances to observer functionality are deemed to be few and far between in an industry which demonstrates systematic compliance. A small number of cases were reported from interviews with the relevant compliance and enforcement agencies MIMRA (I 3) and NORMA (I 12). However, the reports also demonstrate a comprehensive debriefing system in place, which has been shown to detect attempts to bribe observers. The PNA competent authorities, as the architect of the 100% observer scheme demonstrate a zero tolerance to bribery, The reference for this report is (http://www.wcpfc.int/meetings/2010/7th-regular-session-commission).</p> <p>Finally reference is made to an interview with WCPFC which cited the problem of access to VMS data within the EEZ. The point of fact here is that the national competent authorities are able to track fishing activities within their respective EEZs for which they have management authority. There are also provisions in the Convention, CMMs and the Commission’s rules for the access to and dissemination of data that allow coastal States to access that data.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

4 Consideration of additional representations

Further submissions to the objection have been received from PNA, the West and Central Pacific Fisheries Commission (WCPFC), the Secretariat of the Pacific Community (SPC) and the Pacific Islands Forum Fisheries Agency (FFA). As these additional representations provide further detail on the findings of the assessment team, and support to the determination, it is not considered necessary to address the issues raised. These submissions, we assume, would be read in conjunction with the responses by the assessment team above.

The PNA submission, as this is the client fishery, does not challenge the determination and scoring decisions made by the assessment team. The submission does provide a PNA perspective on the status of the objectors, the scoring issues, and, most importantly, the PNA position on being able to deliver the Action Plan, and so meet the conditions of certification. WCPFC highlight the progress made by the organisation in establishing reference points, and the amount of work yet to do. The ability of the PNA to influence the harvest of the WCPO stock, and so meet the conditions of certification (the question of such ability is a central position of the objection) is supported by SPC, FFA. In this regard, an initiative by PNA in response to the conditions on reference points and harvest controls appears to be considered by the parties to be an effective step in managing the skipjack fishery.

5 Conclusions

The IA’s Initial decision on admissibility of a notice of objection the objection was allowed to proceed on the grounds of Part 4 and Part 5 of the Objection Process.

In relation to Part 4; we have reviewed our assessment in light of the objection in relation to any procedural or other irregularities which could affect the fairness of the assessment. We have found the assessment to be entirely consistent with MSC scheme requirements and to follow best practice found in other MSC assessments.

In relation to Part 5, we have reviewed the scoring of the PIs cited in the objection. Following review, we consider all scoring to be based on a well founded interpretation of all relevant information, with clear and reasonable scoring decisions. All scores are therefore fully justified and no change to the scoring, or the determination is considered appropriate.



INTERTEK MOODY MARINE LTD

Ref: 82122

**PNA Western and Central Pacific Skipjack Tuna Unassociated Purse-
Seine Fishery**

Client: PNA

Certification Body Response to Notice of Objection:

2. OPAGAC

Certification Body:

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1. Introduction

The following report outlines the Moody Marine's (Certification Body) response to the objections raised under TAB-D-023 v3 (the Objection Process or OP) to the Marine Stewardship Council (MSC) certification of the PNA Western and Central Pacific Skipjack Tuna Unassociated Purse-Seine Fishery.

The objection was submitted by OPAGAC on 1 August 2011.

The objection was reviewed by the MSC appointed Independent Adjudicator (IA). The decision of the IA was that the objection was admissible.

It is noted that most of the OPAGAC objection is identical to that raised by ISSF. In order to minimise repetition, we have therefore referred below to sections where the responses are the same as that to ISSF.

Further submissions to the objection have been received from PNA, the West and Central Pacific Fisheries Commission (WCPFC), the Secretariat of the Pacific Community (SPC) and the Pacific Islands Forum Fisheries Agency (FFA). These are considered in the responses below where appropriate, and in Section 4.

The MSC Objections Procedure allows for the IA to remand the determination to the Certification Body (CB) if he or she determines that:

- a) There was a serious procedural or other irregularity in the fishery assessment process that made a material difference to the fairness of the assessment; or (i.e. Part Four of the Objection)
- b) The score given by the CB in relation to one or more performance indicators cannot be justified, and the effect of the score in relation to one or more of the particular performance indicators in question was material to the outcome of the Determination because:
 - i) The CB made a mistake as to a material fact; or
 - ii) The CB failed to consider material information put forward in the assessment process by the fishery or stakeholder; or
 - iii) The scoring decision was arbitrary or unreasonable in the sense that no reasonable CB could have reached such a decision on the evidence available to it; (i.e. Part Five of the Objection) or
- c) It is necessary to remand the Determination in order to enable the CB to consider additional information described in Section 4.7.5 (b) and described in the notice of objection (i.e. Part Six of the Objection).

The Moody Marine assessment team have therefore responded here, in relation to the above criteria, for each of those elements of the objection which were upheld by the MSC independent adjudicator, i.e.:

Part Five:

2. Response to Objection: Part 5

3.1 PI 1.1.1

As ISSF

3.2 PI 1.1.2

As ISSF

3.3 PI 1.2.1

As ISSF

3.4 PI 1.2.2

As ISSF

3.5 PI 1.2.3

PI Requirement	Relevant information is collected to support the harvest strategy
Score allocated	90
Response to Objection	<p>The objection here was virtually identical to that submitted by ISSF, but with some sections removed. Nevertheless, the response is the same, as follows. OPAGAC argue that there needs to be good information on all other fishery removals from the stock. Attention is drawn to specific weaknesses in data provided by Indonesia, Philippines and Vietnam which according to WCPFC (Table 4) represent 270,000 tonnes from 1.6 million tonnes (16.9%).</p> <p>FAM 6.3.17 states that other fishery removals relate to vessels outside the unit of certification. The assessors take the view that what is available represents <u>good information</u> and does not fundamentally affect the outcome of the harvest strategy.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.6 PI 1.2.4

PI Requirement	There is an adequate assessment of the stock status
Score allocated	95
Response to Objection	<p>The objection is directed towards the 1st and 3rd elements of SG100 for this PI and argues that the requirements of these elements can not be met because “<i>there are no established harvest control rules against which to assess the effectiveness and robustness of the stock assessment.</i>”</p> <p>The 1st element includes the requirement that “<i>The assessment is appropriate for the stock and for the harvest control rule....</i>” The report establishes as noted in the scoring</p>

	<p>comments on PI 1.2.2 that there are generally understood harvest control rules in place, but these rules are not well defined. The scoring for PI 1.2.2 was reduced accordingly. As noted in the scoring comment on this PI, “the assessment is appropriate for the generally understood harvest control rules that are being applied and for the range of formal HCRs that might be adopted.”</p> <p>The issue then seems to be whether SG100 can be met if harvest control rules are generally understood, rather than well defined. According to the FAM (section 6.3.18) PI 1.2.4 “considers how the fishery assesses information to provide an understanding of stock status and the effectiveness of the harvest strategy.” The information in Section 5.4.1 of the report supports the conclusion that the assessment is appropriate for the harvest strategy. Taking into account that:</p> <ul style="list-style-type: none"> i) the assessment is appropriate for the generally understood harvest control rules; ii) the assessment is appropriate for the harvest strategy; and iii) the lack of well-defined harvest control rules has been taken into account in the scoring of PI 1.2.2; <p>the assessors consider that the fishery meets the requirements of the 1st element of SG100 for PI 1.2.4.</p> <p>The 3rd element is “The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.” There is no link between this issue and whether or not there are harvest control rules in place. The objection does not question that the assessment has been tested and shown to be robust and that alternative hypotheses and assessment approaches have been rigorously explored. The use of MSE is suggested by MSC as guidance only.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

3.8 PI 3.1.1

PI Requirement	<p>The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"> - Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; - Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and - Incorporates an appropriate dispute resolution framework.
Score allocated	95
Response to Objection	<p>The assessment team was assured of the adequacy of the management framework and dispute resolution mechanisms operating at the level of the WCPFC and PNA. This described fully in the assessment report and further in the scoring comments. No information is provided by the objectors that supports the contention that there is no existing management framework or dispute resolution mechanism operating within the fishery management framework.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score</i></p>

	<i>allocated is therefore considered to be fully justified.</i>
Effect on Score	No change

3.9 PI 3.1.2

As ISSF

3.10 PI 3.1.3

As ISSF

3.11 PI 3.2.1

As ISSF

3.12 PI 3.2.2

As ISSF

3.13 PI 3.2.3

PI Requirement	Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.
Score allocated	85
Response to Objection	<p>The first part of the objection duplicates that raised by ISSF.</p> <p>OPAGAC also query the ability of observers to discriminate set types and for states to make observer data available to WCPFC.</p> <p>These are not, however, requirements of the PI concerned. Nevertheless, the report draws attention to that fact that observer training includes set differentiation with definitions of these, and these outputs are evaluated as part of the debriefing process.</p> <p>Finally, the consideration of FAD management is not relevant to the current determination, which is for the unassociated fishery only.</p> <p><i>The assessment of this PI was therefore carried out in full accordance with relevant MSC guidance, there were no mistakes as to material facts and the relevant information was considered in the assessment process. We contend that, under these circumstances, any reasonable CB would have reached a similar decision. The score allocated is therefore considered to be fully justified.</i></p>
Effect on Score	No change

4 Consideration of additional representations

Further submissions to the objection have been received from PNA, the West and Central Pacific Fisheries Commission (WCPFC), the Secretariat of the Pacific Community (SPC) and the Pacific Islands Forum Fisheries Agency (FFA). As these additional representations provide further detail on the findings of the assessment team, and support to the determination, it is not considered necessary to address the issues raised. These submissions, we assume, would be read in conjunction with the responses by the assessment team above.

The PNA submission, as this is the client fishery, does not challenge the determination and scoring decisions made by the assessment team. The submission does provide a PNA perspective on the status of the objectors, the scoring issues, and, most importantly, the PNA position on being able to deliver

the Action Plan, and so meet the conditions of certification. WCPFC highlight the progress made by the organisation in establishing reference points, and the amount of work yet to do. The ability of the PNA to influence the harvest of the WCPO stock, and so meet the conditions of certification (the question of such ability is a central position of the objection) is supported by SPC, FFA. In this regard, an initiative by PNA in response to the conditions on reference points and harvest controls appears to be considered by the parties to be an effective step in managing the skipjack fishery.

5 Conclusions

The IA's Initial decision on admissibility of a notice of objection the objection was allowed to proceed on the grounds of Part 5 of the Objection Process.

In relation to Part 5, we have reviewed the scoring of the PIs cited in the objection. Following review, we consider all scoring to be based on a well founded interpretation of all relevant information, with clear and reasonable scoring decisions. All scores are therefore fully justified and no change to the scoring, or the determination is considered appropriate.



INTERTEK MOODY MARINE LTD

Ref: 82122

**PNA Western and Central Pacific Skipjack Tuna Unassociated Purse-
Seine Fishery**

Client: PNA

Certification Body Response to Notice of Objection:

3. EUROTHON

Certification Body:

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Stanier Way
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1. Introduction

The following report outlines the Moody Marine's (Certification Body) response to the objections raised under TAB-D-023 v3 (the Objection Process or OP) to the Marine Stewardship Council (MSC) certification of the PNA Western and Central Pacific Skipjack Tuna Unassociated Purse-Seine Fishery.

The objection was submitted by EUROTHON on 1 August 2011. It is noted that the submission is identical to that provided by ISSF and OPAGAC. In order to minimise repetition, we have therefore referred below to sections where the responses are the same as that to ISSF and/or OPAGAC.

The objection was reviewed by the MSC appointed Independent Adjudicator (IA). The decision of the IA was that the objection was admissible.

Further submissions to the objection have been received from PNA, the West and Central Pacific Fisheries Commission (WCPFC), the Secretariat of the Pacific Community (SPC) and the Pacific Islands Forum Fisheries Agency (FFA). These are considered in the responses below where appropriate, and in Section 4.

The MSC Objections Procedure allows for the IA to remand the determination to the Certification Body (CB) if he or she determines that:

- a) There was a serious procedural or other irregularity in the fishery assessment process that made a material difference to the fairness of the assessment; or (i.e. Part Four of the Objection)
- b) The score given by the CB in relation to one or more performance indicators cannot be justified, and the effect of the score in relation to one or more of the particular performance indicators in question was material to the outcome of the Determination because:
 - i) The CB made a mistake as to a material fact; or
 - ii) The CB failed to consider material information put forward in the assessment process by the fishery or stakeholder; or
 - iii) The scoring decision was arbitrary or unreasonable in the sense that no reasonable CB could have reached such a decision on the evidence available to it; (i.e. Part Five of the Objection) or
- c) It is necessary to remand the Determination in order to enable the CB to consider additional information described in Section 4.7.5 (b) and described in the notice of objection (i.e. Part Six of the Objection).

The Moody Marine assessment team have therefore responded here, in relation to the above criteria, for each of those elements of the objection which were upheld by the MSC independent adjudicator, i.e.:

Part Five:

2. Response to Objection: Part 5

3.1 PI 1.1.1

As ISSF

3.2 PI 1.1.2

As ISSF

3.3 PI 1.2.1

As ISSF

3.4 PI 1.2.2

As ISSF

3.5 PI 1.2.3

As OPAGAC

3.6 PI 1.2.4

As ISSF

3.8 PI 3.1.1

As OPAGAC

3.9 PI 3.1.2

As ISSF

3.10 PI 3.1.3

As ISSF

3.11 PI 3.2.1

As ISSF

3.12 PI 3.2.2

As ISSF

3.13 PI 3.2.3

As OPAGAC

4 Consideration of additional representations

Further submissions to the objection have been received from PNA, the West and Central Pacific Fisheries Commission (WCPFC), the Secretariat of the Pacific Community (SPC) and the Pacific Islands Forum Fisheries Agency (FFA). As these additional representations provide further detail on

the findings of the assessment team, and support to the determination, it is not considered necessary to address the issues raised. These submissions, we assume, would be read in conjunction with the responses by the assessment team above.

The PNA submission, as this is the client fishery, does not challenge the determination and scoring decisions made by the assessment team. The submission does provide a PNA perspective on the status of the objectors, the scoring issues, and, most importantly, the PNA position on being able to deliver the Action Plan, and so meet the conditions of certification. WCPFC highlight the progress made by the organisation in establishing reference points, and the amount of work yet to do. The ability of the PNA to influence the harvest of the WCPO stock, and so meet the conditions of certification (the question of such ability is a central position of the objection) is supported by SPC, FFA. In this regard, an initiative by PNA in response to the conditions on reference points and harvest controls appears to be considered by the parties to be an effective step in managing the skipjack fishery.

5 Conclusions

The IA's Initial decision on admissibility of a notice of objection the objection was allowed to proceed on the grounds of Part 5 of the Objection Process.

In relation to Part 5, we have reviewed the scoring of the PIs cited in the objection. Following review, we consider all scoring to be based on a well founded interpretation of all relevant information, with clear and reasonable scoring decisions. All scores are therefore fully justified and no change to the scoring, or the determination is considered appropriate.

We have reviewed the scoring of the PIs cited in the objection. Following review, we consider all scoring to be based on a well founded interpretation of all relevant information, with clear and reasonable scoring decisions. All scores are therefore fully justified and no change to the scoring, or the determination is considered necessary.

**IN THE MATTER OF AN OBJECTION TO THE FINAL REPORT
AND DETERMINATION ON THE PROPOSED CERTIFICATION OF
THE PNA WESTERN AND CENTRAL PACIFIC SKIPJACK TUNA
(KATSUWONUS PELAMIS) UNASSOCIATED PURSE SEINE
FISHERY IN ACCORDANCE WITH THE MSC PRINCIPLES AND
CRITERIA FOR SUSTAINABLE FISHING**

Decision of the Independent Adjudicator

1. The Marine Stewardship Council (“MSC”) received Notices of Objection from International Seafood Sustainability Foundation (“ISSF”), Organización de Productores Asociados de Grandes Atuneros Congeladores (“OPAGAC”) and Comité Européen Interprofessionnel du Thon Tropical (“EUROTON”) (“the objectors”) to the proposed certification (the “Determination”) by, Intertek Marine Moody Ltd (“the certification body”) of the PNA Western and Central Pacific Skipjack Tuna (*Katsuwonus pelamis*) unassociated purse seine Fishery (“the client fishery”). The unit of certification was as to a particular mode of gear, that is purse seine sets on unassociated/non Fish Aggregation Device free schools, and the geographic area of the economic exclusive zones (“EEZs”) of the Parties to the Nauru Agreement (“PNA”). The PNA member states are the Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu.
2. The oral hearing of the objection to the proposed certification of the unassociated purse seine fishery was held on the 8 & 9 November 2011 at my office, Bates, Wells & Braithwaite London LLP in London.
3. My task, under section 4.8.1 of the Objections Procedure, having heard the objections, is to issue a written decision either confirming the Determination or remanding it for reconsideration to the certification body. Taking into account all written and oral submissions and the evidence put before me, my decision is to remand the Determination in relation to certain of the heads of objection. I set out below my reason for this decision and the matters which I consider the certification body will need to address on remand.

Grounds of Objection

4. The grounds of objection before me at the oral hearing were:
 - (a) there were serious irregularities:
 - i. that there had been a failure of consultation with stakeholders in relation to the conditions raised;

- ii. that there had been a failure to harmonise with an overlapping fishery;
and this had a material effect on the fairness of the Determination.
- (b) various scores given by the certification body were unjustified on the basis of a material mistake of fact and that this had a material effect on the Determination; and
- (c) various scores could not be justified on the basis that the scoring decisions were arbitrary or unreasonable (unreasonable in the sense that no reasonable certification body could have reached such a decision on the evidence available to it) and that the effect of this had been material to the outcome of the Determination.

Role of the Independent Adjudicator

- 5. It is not the role of the Independent Adjudicator to substitute his or her own view on scoring for that of the certification body. Under the Objections Procedure my task is therefore a limited one. It consists of reviewing whether there are any serious irregularities and whether the scores awarded were based upon material mistakes of fact or were arbitrary or unreasonable. It is worth repeating that the Objections Procedure sets the threshold for unreasonableness as so unreasonable that no certification body could, on the information available to it, have come to that conclusion. That means that even if I, or a different certification body might have come to a different conclusion, I would not intervene unless the decision was irrational or outside the range of any reasonable decision.
- 6. A restriction on my role, highly relevant to these objections, is my inability when considering the objections under paragraphs 4.8.2(b), to consider the terms of conditions. The express wording of this paragraph of the Objections Procedure is such that I may only consider scoring – taking a strict interpretation this does not include the terms of conditions.
- 7. I am also limited in my role in that, pursuant to paragraph 4.7.6 of the Objections Procedure, I may only consider matters/issues raised in the Notices of Objection and in carrying out this task I must only consider the information set out in paragraph 4.7.5 of the Objections Procedure. In this regard, I ruled, as a preliminary matter, that insofar as none of the objectors had sought to raise as a head of objection that additional information should be considered further to paragraph 4.8.2(c), information not considered by the certification body and documents created after the date of the Final Report were inadmissible.

Background

- 8. The PNA represents 8 of the 32 members of the Parties to the Nauru Agreement. The Western and Central Pacific Fisheries Commission (“WCPFC”) is the intergovernmental regional fisheries management organization responsible for managing skipjack tuna throughout its Convention Area, which includes the PNA region subject to the Determination. The management and scientific advice to the WCPFC is provided by the Secretariat to the Pacific Commission (“SPC”).

9. The 2010 skipjack stock assessment concluded that the skipjack stock in the Western and Central Pacific Ocean (“WCPO”) is neither overfished nor in an overfished state and continues to provide a very high level of confidence the stock remains highly productive. Nevertheless, there are some substantial changes from the 2008 assessment and fishing is now seen to be impacting stock size to a significant degree. The advice has, however, consistently indicated that measures to conserve skipjack tuna have not been required thus far, although it was recognised that conservation measures adopted in relation to other species, in particular bigeye tuna and yellowfin tuna, have been beneficial for skipjack conservation and management.

Overarching issue

10. There is an overarching issue in this matter which runs through the majority of the heads of objection. The certification body has proposed conditions for Performance Indicators (“PI”) 1.1.2 and 1.2.2. Critically, these require that “PNA and/or WCPFC” set formal limit and target reference points and put in place well defined harvest control rules. The fundamental assumption of the certification body underlying this Determination is that it would be sufficient for either PNA *or* the Regional Fishery Management Organisation (“RFMO”), WCPFC, to take the necessary management steps; that PNA’s share of the total catch of skipjack tuna in the western and central Pacific ocean (“WCPO”) is sufficiently large and the management actions open to it are sufficiently developed and responsive that the sustainability of the total stock could be assured by virtue of its influence. I have referred to this assumption in this decision as the ‘leverage assumption’.
11. The objectors assert that, whilst in theory this assumption may be well founded, it is currently not based on any scientific analysis or modelling. In the absence of this, the objectors argue, it cannot rationally be concluded that any body other than the RFMO should set the limit and target reference points and formalise the harvest control rules. Moreover, it is argued that the absence of a scientific basis for this assumption makes it wholly inappropriate for the Determination to be based on the untested ability of the PNA to deliver sustainable management, in the absence of action by the WCPFC.
12. The WCPFC is not in anyway precluded from adopting or developing compatible measures for the stock and indeed the PNA states that this is encouraged. However, in the PNA’s view, distant water nations will look to block consensus and in PNA’s words, this could have the effect of “*undermining us and holding PNA MSC certification to ransom. [PNAs] compromise being "PNA and/or WCPFC implement"*”. It is argued by the client fishery that a failure by WCPFC to achieve best practice should not deprive the fishery of its certification.

Objections as to serious procedural and other irregularities under section 4.8.2 (a) of the Objection Procedure

Failure to consult with relevant entities

13. ISSF’s first head of objection is the Determination is unfair on the basis that the certification body failed to consult with all “relevant entities” when setting conditions as required under the Fisheries Certification Methodology (“FCM”) v6.1 section 3.4.8.

14. FCM v6.1 section 3.4.8 provides that:

The certification body shall consult with all relevant entities when setting conditions, if those conditions are likely to require investment of time or money by these entities, or changes to management arrangements or regulations, or re-arrangement of research priorities by these entities, in order to satisfy the certification body that the conditions are both achievable by the certification client and realistic in the time frame specified.

15. It was said that the certification body had failed to consult all member governments of the WCPFC. Clearly since the conditions potentially involve WCPFC setting the limit and target reference points and formalising the harvest control rules in addition or as an alternative to the PNA, it was argued, its member governments should have been contacted and directly consulted (not just via consultation with WCPFC).
16. The certification body responded that its assessment process was open to all affected stakeholders. The certification body had placed an advert in the Fishing News International when the assessment was announced in April 2010, drawn up a list of stakeholders which were notified and invited to comment at all key stages of the assessment process (including when the assessment team was announced, the MSC FAM Standard Assessment Tree was selected, assessment visits and peer reviewers were announced and when the Public Draft Report was released). Moreover, the certification body had direct consultations with the WCPFC itself.
17. The certification body stressed the MSC assessment is a voluntary undertaking on behalf of client fishery, and that it is equally voluntary for stakeholders to participate in the process. The test of fairness here, it was argued, is therefore whether all stakeholders were given the opportunity to participate, not whether they took the opportunity. It was also pointed out that directly engaging with all member governments of the WCPFC ran the risk of embroiling the certification body in difficulties which could have unreasonably delayed the assessment and that there would have been no hope of obtaining a consensus of view on key issues raised by the assessment.
18. The question before me it seems is what level of consultation is required under the Scheme. The member governments, through their membership of the WCPFC, are in my view likely to be required to make “*changes to management arrangements*” in that the conditions have the “and/or” approach to WCPFC involvement. It appears that not all member governments were directly approached. However, I am not convinced that this is required by the Scheme or that a failure to do so made a material difference to the fairness of the Determination. I accept it is inherently unlikely there would have been a consensus view from the different member governments such that the attributing of weight to their responses would have been problematic. Moreover, the WCPFC was directly consulted and could have been expected to provide a response reflective of the range of views of its members. I am not persuaded therefore that failing to consult member governments directly was materially unfair.
19. This head of objection is not upheld.

Harmonisation

20. ISSF argued the certification body failed to harmonise its assessment with overlapping fisheries as required under MSC Tab Directive D-015 v2.1.
21. Paragraph 2.1 of Tab Directive D-015 v2.1 requires the “*achievement of consistent conclusions with respect to evaluation, scoring and particularly scoring*”. The PNA fishery overlaps with the Tosakatsuo Suisan Pole and Line Skipjack Fishery (part of the western and central pacific skipjack stock). Importantly, the conditions imposed for the latter fishery had not been on an “and/or” basis, they required action by the fishery client and the WCPFC.
22. The certification body, in its response to this head of objection, argued that harmonisation had been achieved since the two fisheries had achieved the same passing scores and the conditions were harmonised in that they both had the same objective of passing SG80 within 5 years. It pointed out that further to TAB 033 v.1, *Condition setting and reporting*, which amended section 3 of FCM v6.1, the certification body was required to specify the outcomes, not the means of delivery, when setting conditions. The PNA had, in its view, delivered a credible unilateral Action Plan option to achieve the required outcome to achieve the SG80 performance level over the time period of the condition and this had been accepted by the certification body. It was said that although the Action Plans for meeting conditions were different between client fisheries this did not effect the harmonisation of the outcome. The reason for this difference was that the client fishery in the Tosakatsuo Suisan Pole and Line Skipjack Fishery was significantly smaller in operation and did not have the leverage of the PNA to impact upon the majority of the skipjack stock in the region.
23. What is required under the Tab Directive D-015 v2.1 is “*consistent conclusions*”. I interpret this as requiring the same outcome/condition where the relevant considerations are the same or similar. Thus I would not expect the process of harmonisation to require a slavish application of identical scores and conditions where there are material differences. Given the large difference in the scale of operation (and therefore ability of the client fishery to have influence over the management of the stock), and I note a year and half between the two assessments, I accept there were material distinctions to be made. As such, I do not consider that there has been a failure to harmonise this assessment with the certification of the Tosakatsuo Suisan Pole and Line Skipjack Fishery.
24. This head of objection is not upheld.

Objections as to scoring under section 4.8.2 (b)(i) and (iii) of the Objection Procedure

Mistake of Fact

25. Firstly, I consider the assertion that various scores are unjustified on the basis that they were based upon a mistake of fact which was material to the Determination.
26. The particular mistake made was said to be as to the PNA’s share of the skipjack catch in the WCPO. Initially ISSF had alerted me to a mistaken reference in the Final Report to the PNA having 70% of the skipjack stock. The certification body explained and the objectors accepted that this was a simple error and this had not

informed its decision making. Instead, the certification body had meant to state that the 2010 scientific advice reported that it had 70% of the skipjack tuna catch within waters controlled by member nations to the PNA Agreement (possibly in response to the application of the closure of the High Seas pockets).

27. It was accepted that, when scoring, the certification body had used the figure of 58%, not 70%, of the WCPO skipjack catch in PNA waters for 2009 (see Table 4 of the Final Report). The 70% figure had been provided by the SPC late in the assessment process (see page 507 Final Report) and, albeit not relied upon, had been referred to in various places in the text. The certification body informed me that they did not alter the scores to reflect growing PNA dominance in the fishery suggested by the increase from 58% to 70%, as they considered that 58% in itself was already sufficient to justify the scoring.
28. Even after this clarification, it was still argued by the objectors that the certification body had been working on an incorrect figure for percentage of catch in the region.
29. The objectors pointed out that the 58% of catch was an erroneous figure as this did not take into account fishing by other forms of gear (eg pole and line) nor did it take into account that it was likely that 25% of the catch was from Indonesia, Philippines and Vietnam (not 11% as indicated). Also it was noted the 58% figure excluded removals from Archipelagic waters.
30. In the objectors view the PNA share was more likely to be closer to 48% of catch. Thus, it argued that if PNA alone was taking management action, there was nothing stopping the countries outside PNA exploiting the remaining 52% of the catch. The objectors argued that it was not possible from the Final Report to identify an exact percentage of the catch which needed to be under the management of the fishery to justify the conclusions reached. However, the objectors expected there to be some scientific modelling underpinning the assertion that any particular fishery has sufficient control to affect the fishery management outcomes.
31. Indeed, it was noted that with just 48% of the catch, any management action taken by PNA would have to be at a disproportionate level with significant restraint being exercised in its waters by its members to offset what may be happen elsewhere. It was to be noted that nowhere in the Final Report (as opposed to submissions made during the proceedings) was there anything indicating a commitment from PNA to, if necessary, carry this disproportionate burden.
32. In support of its arguments that a mistake of fact had been made, the objectors produced evidence that more than 45% of the stock had moved more than 100 nautical miles since spawning as an indication that a significant proportion of the stock was not resident in waters where hatched. Whilst accepted that most skipjack tuna tend to be caught or otherwise die close to their spawning grounds, are not the most migratory of tuna and that tagging data may be subject to the vagaries of efficiency of data collection, it is beyond doubt that they are capable of migrating a long way and that a significant proportion do so. Thus, even though most skipjack tuna were to be found in region 2, the region containing the PNA EEZs, the degree of non PNA fishery waters habited by skipjack tuna and therefore PNA's non-influence was significant.

33. Unarguably, one of the most fundamental MSC certification principles (MSC Tab Directive D-003 v1.1) is that a “*fishery [can] only pass if the whole fish stock(s) meet th[e] standard.*”. Clearly, it is critically important to the certification body in its Determination that this principle is capable of being met in circumstances where one of the bodies charged with the necessary management action (bearing in mind the “and/or” nature of the conditions) has less than 100% influence over those fishing the stock. Perhaps more difficult is the minimum level of influence is required. The objectors indicated during the hearing that it may be the case that some degree less than full coverage could suffice. Indeed it became clear during the hearing that their concern was not only what the actual percentage catch was but also, and perhaps more importantly, that there had been no scientific assessment or modelling of PNA’s ability to maintain the sustainability (taking into account all uncertainties and critically the actions of those exploiting the resource outside of PNA waters).
34. The certification body remained confident that the extent of PNA control over catches from the stock would allow PNA to establish appropriate reference points, and to manage the extractions from the stock (taking account of catches both within PNA waters, and outside of PNA waters), at levels which would meet the requirements of the MSC standard.
35. As WCPFC could alternatively provide stock-wide management measures, Condition 1 provides alternatively or additionally for reference points to be established by the WCPFC. The certification body was clear that WCPFC involvement was not, necessarily, essential for effective management of the stock as a whole.
36. The PNA pointed out that the Fish Stocks Agreement recognises that RFMOs are not the only bodies which can govern stocks. Article 10 of WPFPC Convention was moreover without prejudice to sovereign rights. The WCPFC is a modern RFMO, being one of the first regional fisheries agreements to be adopted since the conclusion in 1995 of the UN Fish Stocks Agreement. It was opened for signature in 2000 and entered into force on 19 June 2004. In particular, the Convention protects the rights of island nations to manage and conserve, in the long term, the highly migratory fish stocks in the Western and central Pacific Ocean. It is important to bear in the mind the obligation under the Convention for others to put in place compatible measures. In this way, the PNA is in a position to lead and to positively influence the region. Importantly, it argued that the PNA-managed area is the centre of the range of the Western Pacific skipjack tuna, and is the area where catch-rates are highest and where purse-seine fishing is most economically feasible. Also of importance, it was said, was that there is limited mixing between populations of this short-lived target species across the WCPFC convention area. The PNA will, via whole stock assessments for the WCPO, take into account fishing by other nations in other parts of the regions and adjust its management actions accordingly. It is thus entirely feasible, it was argued, for an arrangement covering the PNA combined EEZs and adjacent high seas to effectively and sustainably manage the stock of skipjack tuna in this area.
37. It transpired however that PNA was already in the process of engaging a consultancy to carry out scientific analysis/modelling as to their share of the catch and their ability to manage thereby the sustainability of the entire stock. Tellingly, the certification body stated in its closing submissions that if this exercise proved that the PNA did have sufficient leverage it would engage with WCPFC to undertake the work (ie identifying and setting formal reference points, establishing well defined harvest

control rules etc.). Quite simply the objectors argued that this work should have been done prior to the decision to propose certification, not after.

38. The first issue for me to consider is whether there has been a mistake of material fact. It seemed to me that the certification body could not with certainty point to the actual percentage of catch attributable to the PNA. Moreover it had taken an erroneous figure (the 58%) into account by interpreting this as including all skipjack catch, not just non purse seine catch. Additionally, the figures attributable to the Philippines, Indonesia and Vietnam were materially incorrect. These particular figures underpin the certification body's leverage assumption.
39. It was argued by the certification body that PNA's share of catch was not relevant to scoring, rather it was only relevant to the conditions imposed for PIs 1.1.1 and 1.2.2 (which are strictly beyond my jurisdiction). However, judging by the scoring comments in the Final Report, I find that the leverage assumption and thereby this mistake of fact was operative in relation to PIs 1.2.1, 1.2.2, 1.2.3 and 3.1.1 (harvest strategy, harvest control rules, information and monitoring, legal and customary framework).
40. Given the fundamental importance of the leverage issue to this Determination, I find this mistake to have been material. On this basis I remand the above PIs for reconsideration by the certification body.

Scoring arbitrary or unreasonable

41. The remainder of this decision considers the objectors' claims that particular scores are not justified on the basis of being arbitrary or unreasonable.

Principle 1 – Overall 84.4 PASS

P.I 1.1.1 Stock Status – score 100

42. The objectors argue that the second element of SG100 is not met, vis "*[t]here is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.*"
43. As WCPFC has not adopted target and limit reference points, the assessment states that Bmsy serves as a default target (see page 37 of the Final Report) and a score of 100 was given because the stock assessment indicates there is a high certainty that biomass is above Bmsy.
44. The objectors point out the assessment also notes that according to Article 6 of the WCPFC Convention, stock-specific reference points need to be determined according to the guidelines set out in Annex II of UNFSA. Those UNFSA guidelines set Fmsy as the default limit, which it was argued is contradictory with Bmsy being treated as a target as the biomass that would result from managing the stock using Fmsy as a limit may be greater than Bmsy. Therefore, the default target biomass reference point chosen by the assessment team was, it was argued, inconsistent with the WCPFC Convention. In addition, while the FAM v2 at 6.2.2 allows for Bmsy to be used as a target, it also allows for the target to be a higher biomass level. In the absence of

knowing what this higher biomass target is, the objectors argue that SG100 cannot be met.

45. The certification body counter that the use of BMSY is consistent with guidance in the FAM v2 at section 6.2.10 which states:

“There may be situations where well-managed stocks do not have target reference points or do not have limit reference points. The stock will still need to be assessed in terms of the overall outcome objectives, i.e. for SG80 that the stock status is highly likely to be above the point at which there is an appreciable risk that recruitment is impaired, and will be at or around a level consistent with BMSY.”

This establishes that a stock without a target reference point can meet SG80.

46. Since the additional requirement for SG100 is essentially the high degree of certainty involved, it was argued that there is no reason why a stock without a target reference point could not meet SG100 where there is a high degree of certainty that the stock has been fluctuating around BMSY, or has been above BMSY over recent years. The certification body also points out there is a high degree of certainty the stock has been more than double BMSY over recent years as shown in Section 5.2 of the Final Report and therefore has been above target reference point levels likely to be adopted by the WCPFC. The certification body also argued that nothing in the WCPFC Convention precludes the use of Bmsy as a target reference point and that using Bmsy as a target reference point does not necessarily preclude the use of Fmsy as a limit reference point which UNFSA recommends.
47. Finally, the certification body pointed out that FAM v2 6.2.2 relates specifically to the trophic status of the target stock and given that skipjack tuna is not considered a low trophic level species, this is not relevant.
48. I acknowledge the force of the points raised by objectors. However, the question is whether the scoring by the certification body can be regarded as arbitrary or so unreasonable that no certification body would have come to the same conclusions. Given the particular provisions of FAM and the wide margin of appreciation that I must give to the certification body in carrying out its functions, I cannot accept that the score awarded for the PI is arbitrary or unreasonable.
49. This head of objection is not upheld.

PI 1.1.2 Limit and target reference points – score 75 Condition no. 1

50. The objectors have argued an anticipation the PNA will someday be in position to set target and limit reference points for catch quantities in PNA member jurisdictions is not sufficient for any passing score under PI 1.1.2.
51. The relevant PI Scoring Guidepost at SG60 is “[g]eneric limit and target reference points are based on justifiable and reasonable practice appropriate for the species category”.

52. The assessment team acknowledged the lack of formal reference points and based their scoring on implied reference points. The Final Report states that in the absence of formally adopted reference points, the UNFSA Annex II guidelines, incorporated in the Convention, are taken as constituting implicit target and limit reference points. The WCPFC has endorsed work designed to enable the SPC to recommend provisional limit reference points for target species.

53. The relevant guidance in FAM v2 is as follows:

“6.2.21 The Assessment Team should first establish whether the reference points, or implied reference points, are appropriate for the stock. It is assumed that all management systems will have reference points. Even if these are not stated explicitly they should be implicit within the decision rules or management procedures, and the fishery should be assessed on these implicit reference points. For example, an explicit use of only a target reference point should include some implicit consideration of a limit reference point, and likewise a management system that uses only a limit reference point will have some implicit acknowledgement of targets.

6.2.22 In these situations, both explicit and implicit reference points need to be consistent with the scoring guideposts. For example, if a management strategy is based solely around a target reference point, the harvest control rule, when combined with the target reference point shall ensure that the stock will remain well above the level where there is an appreciable risk that recruitment would be impaired and ensure that the exploitation rate is reduced as this point is approached. This is an implied limit reference point. Equally, a management strategy based solely around a limit reference point shall imply that there is a target reference point close to or at BMSY (or some other measure or surrogate that maintains the stock at high productivity), and at a level that is well above the limit reference point.”

54. In light of these provisions it is clear that implied reference points are acceptable for a passing score for the MSC standard. Clearly, to reach SG80 it is necessary for formal reference points to be established. Condition no. 1. states: *"Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met."*

55. In light of the FAM provisions, the application of Annex II guidelines to the WCPFC as implied reference points and that the lack of formal reference points has been taken into account in the score being reduced to 75, I do not consider that the score for this PI is arbitrary or unreasonable.

56. This head of objection is not upheld.

57. It seems to me that the real issue, under this PI, is the condition and, as noted above, this is strictly beyond my jurisdiction. Nevertheless, the certification body may wish to consider whether a variation in the conditions will go some to satisfying the objectors' concerns.

PI 1.2.1 Harvest Strategy – score 80

58. The objectors have challenged the first element of PI Scoring Guidepost 80 “[t]he harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives” reflected in the target and limit reference points.”
59. It is argued this is an irrationally high score on the basis that, despite there being many components of a harvest strategy which should properly be taken into account by the certification body, it ought not to be considered a ‘harvest strategy’. Primarily, it was argued that the PNA itself cannot meet the PI requirements for an established harvest strategy on its own, without WCPFC and the twenty four other nations and territories responsible for managing the whole stock. Secondly, the objectors argue that the certification body has placed inappropriate reliance on the decision to replace CMM 2008-01 as this is a potential outcome rather than on existing evidence and reliance on Commission action in this regard is inconsistent with how WCPFC is treated under PI 1.1.2 or 1.2.2.
60. The certification body countered that given that the 2008 advice was that the stock was only lightly exploited the priority was therefore focused towards bigeye tuna and yellowfin tuna conservation measures. Since 2008, greater priority has been given to skipjack. To illustrate the responsiveness of the harvest strategy, the PNA pointed to the proposed replacement of CMM 2008-01, the more frequent assessments and increased priority placed on skipjack tuna monitoring. The certification body argued that the decision to revise the CMM 2008-01 was a management action itself, not a potential outcome. In any event, it was argued that excluding that consideration in itself would not change the scoring given.
61. The certification body point to the FAM v2 definition of a harvest strategy (FAMv2 6.3. 3) as “the combination of monitoring, stock assessment, harvest control rules and management actions” and advice from Peer Reviewer B on the approach to this PI. In the absence of explicit harvest control rules, the assessment found the harvest strategy to include WCPFC, PNA and national and archipelagic management actions, supported by a robust stock assessment and extensive monitoring frameworks. These elements of the strategy are said to work together and the robust state of the skipjack stock and stock projections provide evidence that the strategy is achieving its objectives.
62. The harvest strategy that has been adopted is currently based upon input controls (ie: the limitation of effort). It was acknowledged the application of capacity limits has the potential to provide beneficial management controls for skipjack tuna. However, the objectors argue that these limits have not been formally specified or formally linked to actions at the national level.
63. The objectors criticisms are however essentially challenges to whether SG100, which concerns harvest strategy design, is made out. The certification body has scored this PI at 80 such that the lack of design has already been taken into account. Thus, bearing in mind the margin of appreciation which I must give to the certification body (and I accept in particular on this basis that the decision to replace CMM 2008-01 to expressly deal with skipjack tuna is reasonably viewed as a management action in itself), I do not find that the score is arbitrary or unreasonable. However, on account of the importance of the mistake as to fact which underpins the leverage assumption, this PI falls to be reconsidered on remand.

PI 1.2.2 Harvest Control Rules and Tools - score 60

64. The objectors claim that there should be no passing score as the first element of PI Scoring Guidepost 60 is not met “[g]enerally understood harvest control rules are in place that are consistent with the harvest strategy and act to reduce the exploitation rate as limit reference points are approached”.
65. The objectors argue the current harvest strategy employed in the WCPFC is at best rudimentary and does not contain any harvest control rules. The primary management action involves limiting fishing effort via an array of input controls such as the PNA’s VDS, closure of high seas pockets, FAD closures, and implementation of capacity limits (driven by concerns for bigeye tuna and yellowfin tuna).
66. As mentioned above, the objectors expressed concern over a lack of clarity and openness in PNA decision-making with respect to the establishment and operation of the VDS Total Allowable Effort, particularly with respect to links to the requirements of WCPFC 2008-01 and the scientific advice. This was reflected in the Final Report, which states, at pages 93 and 94, that “*whilst PNA positions and decision are often explained in media releases and statements to WCPFC meetings, the assessors could not find evidence of information from PNA clearly indicating the basis for key decisions, especially on VDS*”.
67. In summary, the objectors argue there should be evidence that there is a decision control framework designed to ensure that the exploitation rate is reduced as limit reference points are approached. The need for this, it is said, becomes acute when one considers the underlying leverage assumption. Thus PNA may, if it is to be expected to take management action to ensure the sustainability of the entire stock, need to take measures that are disproportionately disadvantageous to those fishing in its waters (given that it cannot be sure without the involvement of the WCPFC that equivalent action/self-restraint would be taken elsewhere in the region). The objectors also raise the assertion that harvest control rules should not be left to PNA alone but should be set by WCPFC instead or in addition.
68. It appears that overall caps on effort and vessel day limitations have served to maintain adequate catch levels, however it is unclear how vessel days are allocated and how they relate to fishing mortality targets. The objectors’ concerns are understandable therefore in that the main point of formal harvest control rules is to develop objectives and contingencies for timely actions should conditions in the fishery change.
69. It is right to say however that these concerns and the lack of formal harvest controls have been taken into account in the Final Report. Indeed, in the Final Report, at page 41, it is stated that:

“*There has been no formal development of harvest control rules for skipjack in PNA waters of the WCPO that ensure that the exploitation rate is reduced as limit reference points are approached because there has been a general view that they are not necessary given the positive state of the stock.*”

The report goes on to state:

“PNA and the Commission have demonstrated a capability of applying measures to reduce the exploitation rate for bigeye tuna on the basis of scientific advice that fishing mortality exceeding FMSY, although the response has fallen short of that estimated to be necessary to maintain the bigeye tuna stock at a level consistent with MSY in future. These actions support an expectation that measures would be adopted to reduce the exploitation rate for skipjack if fishing mortality exceeded Fmsy with such measures aimed at maintaining the stock at or above Bmsy and ensuring that the stock will remain well above the level that would be associated with an appreciable risk of impaired recruitment.”

70. The certification body state there is a general understanding that actions would be taken to reduce the exploitation rate of skipjack tuna if necessary to achieve management objectives which would include adoption of measures by the WCPFC in accordance with the Convention provisions and PNA adjustments to the Total Allowable Effort under the VDS. It is useful to note the MSC definition of harvest control rules as including **actions** (“a set of well-defined pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points (Glossary: MSC, 2009)).
71. Again, in my view, the objectors’ concerns relate more to an SG80 level (“The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objective reflected in the target and limit reference points”), which the certification body has already concluded has not been reached. The certification body have acknowledged that formal harvest control rules have not been designed and the score of 60 was expressly on this basis and the need for action under a condition to meet the SG80 level. It is hard to see what more would be required to meet the SG60 level of “general understanding” and “some evidence” that there are actions that could reduce exploitation levels if the status of the fishery changed.
72. In this regard, I note that past certifications have been on the basis of a similar rationale (which in summary may be described as containing the following elements: the status of the stock is healthy; well-defined harvest control rules are not yet in place; appropriate actions have been taken in relation to similar species with a consequent general understanding that action would be taken in relation to the target species as and when required). The SG60 being met, conditions are raised in order to bring the fishery to the SG80 level, failing which it will have its certification withdrawn.
73. In my view, the score for this PI cannot be said to be unreasonable or arbitrary at the SG60 level. However, the mistake as to fact set out above goes to the weight given by the certification body to the role of the PNA as part of the harvest strategy and therefore this PI is remanded. The objectors’ points also properly relate to the nature of the condition. As noted above whilst this is beyond my jurisdiction I would encourage the certification body to consider whether any relevant changes might go some way to assuage the objectors’ concerns.

PI 1.2.3 Information and Monitoring - score 90

74. The third element of PI scoring guidepost 80 requires that “[t]here is good information on all other fishery removals from the stock.”

75. The objectors argue that the quality of information from fisheries in Indonesia, Philippines and Vietnam does not meet the requirement for good information on fishery removals - indeed, in the case of Vietnam catches of skipjack tuna are not known at all.
76. The last WCPFC stock assessment was conducted in 2010 using data up to 2009. Data deficiencies and their impacts on the assessments were addressed during the 2010 Commission meeting. For example: *"FFA members ... drew attention to the continuing advice from the SC that data deficiencies are affecting the quality of the scientific analysis and advice, and the WCPFC7 working papers that demonstrated the implications of incomplete, late or inaccurate data for the production of timely and reliable stock assessments. FFA members requested WCPFC7 record its concern regarding the continuing failure of CCMs to provide timely complete and accurate data and the effect of this failure on the Commission's scientific advice."*
77. The Final Report notes the improvements made in data collection but fails to recognise the potentially temporary nature of these improvements. The score given by the assessment team is based, it is said, on a potential outcome rather than on existing practice.
78. The certification body drew my attention to the FAM v2 6.3.17 guidance that other fishery removals require good information but not necessarily the same level of accuracy. I note also the advice from SPC on the improved quality of data from these fisheries. The information available from these fisheries, albeit deficient in some regards may reasonably characterised as currently at a good level, and a weakness in coverage for some countries does not, in my view, fundamentally affect the outcome of the harvest strategy. Indeed, deterioration in this position would be picked up on the annual surveillance audits.
79. In all the circumstances, I do not consider that even if the score might be seen as somewhat generous, it can be said that it is arbitrary or unreasonable. However, as the mistake as to fact set out above goes to the weight given by the certification body to the importance of data collection for Indonesia, Philippines and Vietnam, this PI is remanded.

PI 1.2.4 Ability to Assess Stock Status – score 95

80. This PI requires scoring based on a determination that the assessment is appropriate for the stock and for the harvest control rule. The first PI Scoring Guidepost 100 is challenged is that *"[t]he assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery"* Also the third PI Scoring Guidepost 100 *"[t]he assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored"* is challenged.
81. The objectors argue that because there is no established harvest control rule, it was both unreasonable and arbitrary for the certification body to assess any passing score for this PI. They draw my attention to FAM v2 Guidance at 6.3.19 which explains that *"particularly under SG100, it may be useful to consider whether MP/MSE approaches were used to test the robustness of the stock assessment to uncertainty and alternative hypotheses."*

82. The certification body responded that the assessment uses the widely respected MULTIFAN-CL programme, which takes into account the major features of the species and fishery, the main uncertainties and “*evaluates stock status relative to MSY-based reference points in a probabilistic way*” (see scoring comments in Final Report).
83. With regard to the first scoring guidepost, it pointed out that the lack of well-defined harvest control rules has already taken into account in reduced scoring (and the raising of a condition) for PI 1.2.2. I also note the SPC objection submission which confirmed that the assessment “*has been designed to be used in a reference point / harvest control rule framework as required*”.
84. In the light of the certification body’s comments and the widely respected nature of the assessment programme used, even if the FAM guidance was not followed (and I make no finding on that), I do not consider that the score can be said to arbitrary or unreasonable.
85. This head of objection is not upheld.

Principle 3 – Overall 85.5 PASS

P.I 3.1.1 Legal and/or customary framework – score 95

86. The objectors have argued that the fishery should not be awarded a passing score under this PI and, in particular, argued before me that the first element of PISG of 60, “*[t]he management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principle 1 and 2.*” is not met.
87. They assert that there should be no passing score for this PI on the basis that the management system does not include an authority that is shown to have the power to establish target references and limits for the Western and Central Pacific skipjack stock. WCPFC, the only regional fishery management organization with the ability to manage the sustainability of the whole stock, has not, it is said, demonstrated that it can achieve the necessary consensus, and has failed hitherto to establish target and limit reference points or harvest control rules for skipjack stock management, leaving the stocks subject to unilateral and unlimited catch, and therefore essentially unmanaged.
88. In addition, the objectors raise again the lack of evidence for the conclusions reached by the certification body on the influence/leverage PNA has over the skipjack stock and therefore whether it can be relied upon to take appropriate management action were the scientific advice to call for this. PNA itself, the objectors argue, is not a fishery management body with demonstrated or established authority over the whole stock and it is said not to have a history establishing any target and limit reference points or harvest control measures.
89. They query whether there are any binding mechanisms as between PNA and its member states. Member nations retain sovereignty and indeed the Nauru Agreement is expressly subject in key provisions to safeguarding the sovereign rights of the parties.

90. The relevant provisions in FAM v2 are:

"8.2.5 Scoring this part of the indicator means focussing on the existence of a framework itself and whether it is capable of delivering sustainable fisheries. This may be determined by examining the presence or absence of the essential features of an appropriate and effective structure within which management takes place, and whether those features are hard (formal laws, regulations, etc) or soft (accepted practice, tradition or custom), whether the framework has a focus on long term management rather the short term and how it manages risk and uncertainty....."

91. The certification body counters that the legal and/or customary framework includes as its key elements the legal structure, policies and practices of a range of bodies vis the WCPFC, the PNA itself and PNA national administrations, supported by the FFA and the SPC.

92. It seems to me that there is an inconsistency in the objectors arguments with regard to the role of the WCPFC and whether the fishery should fail on account of the fact that neither the Commission nor the PNA are in sufficient control or have sufficient track record to justify certification or whether certification may proceed but with conditions raised that require WCPFC to set stock wide reference points and harvest control rules. I take into account that the WCPFC has not hitherto, for whatever reason (and I did not receive any evidence on this) set rules for skipjack tuna. However, it is a body which has shown itself capable of taking management action in relation to a related species, such as bigeye tuna and yellowfin tuna, and in my view therefore, there is a reasonable assumption that when CMM 2008-01 is replaced it will, as intended, set specific limits for skipjack tuna. On the evidence before me, there is nothing to indicate that it may not set appropriate reference points for skipjack tuna.

93. As for the PNA's own track record, I note that PNA is a long-established management arrangement operating since 1982, and has been behind many of the tuna fisheries management measures that have been implemented across the region, including through the WCPFC. The measures it has implemented include minimum Terms and Conditions for the operation of purse-seine and other fishing operations harmonised across the FFA membership; the purse-seine vessel number and now effort limitations implemented under the Palau Arrangement Vessel Days Management Scheme and the three Implementing Arrangements of the Nauru Agreement (which include high seas closures, seasonal FAD closures, purse-seine mesh-size limits, bans on setting around whale sharks, observer coverage of purse-seine fishing trips and tuna catch retention).

94. Acknowledgement should be given, in my view, to these efforts and the ways in which it might be said to have led the WCPFC by example towards appropriate sustainability measures. The rights of coastal States in the sustainable management and conservation of the resources of their EEZs are recognised in the PNA Convention, and the principle of compatibility is important in this regard. Thus, under the WCPFC principle of compatibility it is the highest standard that should be applied, not the lowest common denominator as occurs in other RFMOs.

95. Ultimately, the issue before me under this PI is as to the appropriate weight to be given to the track record and management roles played by both WCPFC and the PNA. I have heard little evidence or submission in relation to the former and I am therefore not prepared to question the conclusions reached by the certification body as to the

Commission's capability and efficacy. With regard to PNA, it appears that a sufficient management framework is in place such that I do not consider that this score can be said to be arbitrary or unreasonable.

96. However, as I agree with the objectors that the leverage assumption, and therefore the PNA's ability to fulfil its management role across the whole stock under this PI is unsupported by scientific analysis, the mistake as to material fact set out above requires that I remand this PI for reconsideration.

PI 3.1.2 Consultation, Roles, and Responsibilities – score 95

97. It is the third element of PI scoring guidepost 100 that is challenged vis “[t]he consultation process provides opportunity and encouragement for all interested and affected parties to be involved and facilitates their effective engagement”.
98. The third element was initially scored by the certification body at 80 on the ground that “the process falls short of facilitating engagement by all affected parties, and the lack of a formal observer status in the PNA system is a particularly significant shortfall”. However, following representations from the client fishery, the certification body raised the score to the 100 level having realised it failed to take into account relevant information on the PNA practices relating to participation of observers at PNA meetings which has previously been provided to the assessment team during Stakeholder Interviews, in particular at Stakeholder interview 14.
99. The objectors maintained that the ability for observers to participate in the PNA meetings is formally limited to non-PNA members of FFA and the fishery does not warrant a score of 100.
100. The fishery clarified that observer participation is not limited to non-PNA members of FFA. There was some discussion at the oral hearing as to the exact terms of the PNA agreement in this regard. I was informed that there are procedures for observers to attend the meetings with requests needing to be sent in advance. Indeed, recent meetings have received observers from NGOs and the scientific community. Nevertheless, this is a matter which the certification body or fishery may wish to clarify in light of the discussions which took place at the oral hearing..
101. It appears ,that with the clarifications provided during the assessment process and to the objectors at the oral hearing this ground of objection falls away.
102. This ground of objection is not therefore upheld.

PI 3.1.3 Long Term Objectives – score 90

103. ISSF have argued the PNA management policy does not meet the PI scoring guidepost 80 requirements for long-term objectives. SG80 requires “[c]lear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy”. The essential point here is made in the Final Report at page 181, that the Nauru Agreement, the “core PNA instrument does not explicitly require objectives

consistent with the precautionary approach and the other important principles required to be applied by the WCPFC Convention". My attention was also drawn to FAM v2 guidance (8.2.26), "this performance indicator forms an important part of the overall understanding of the use or otherwise of a precautionary approach in the fishery under assessment."

104. The certification body argued there were appropriate long term objectives explicit within management policy at regional, sub-regional and national levels (WCPFC Convention, WCPFC CMMs, national laws and plans, the Palau Arrangement and the VDS text). It is accepted however that the requirement to apply long term objectives was missing at sub-regional level and at national level in 1 of 8 PNA Members (Kiribati).
105. PNA point out that the Nauru agreement actually pre-dated the development internationally of the precautionary approach but note that the fishery was scored at 80 level taking into account lack of objectives in the Nauru Agreement
106. In accordance with Policy Advisory 18 v1, which was issued during the course of the assessment in September 2010, since long term objectives were found in most but not all parts of the management policy this PI was rescored below the 100 level, to 90.
107. Bearing in mind that the precautionary approach appears to be adequately reflected in the WCPFC Convention, conservation and management measures and decisions, the Palau Arrangement, national laws and plans of most of the PNA Members and UN Fish Stocks Agreement to which all PNA Members are party, I do not find that this score can be said to be arbitrary or unreasonable.
108. This head of objection is not upheld.

PI 3.2.1 Fishery-Specific Objectives – score 80

109. The objectors challenged the PISG80 *"Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system."*
110. The assessment found specific objectives included explicitly in the VDS Scheme text, and in WCPFC CMM 2008-01, which are consistent with outcomes expressed by MSCs Principles 1 and 2. The CMM objectives are designed to meet MSC Principle 2 for bigeye tuna and yellowfin tuna and it was argued the scientific projections indicate that the application of these objectives will also meet Principle 1 requirements for skipjack tuna (WCPFC-2010/15 rev 1).
111. The objectors point out however that CMM 2008-01 did not make explicit statements about a consequence or aim of the measure being that skipjack tuna would be maintained above levels associated with Bmsy. This was a perceived outcome of the measure and was no more than the assessment teams opinion (albeit widely shared). It should be noted moreover that paragraph 30 of CMM-2008-01 allowed for further development of purse seine fisheries that target skipjack tuna.
112. I see merit in this head of objection as CMM 2008-01 is not expressly concerned with skipjack tuna and the Final Report casts doubt on the linkage between the VDS

Scheme and the scientific advice (noting also that there is a lack of openness with regard to the decision making processes in this regard). I have considered the Palau Agreement, which I take to be the so-called “VDS text” and specifically, article 2 objectives. There is no mention there of objectives consistent with the outcomes required under Principles 1 & 2 of the MSC Standard. For these reasons, I consider the score to be arbitrary or unreasonable.

113. The question then is whether this is material to the Determination. I take the view that the materiality of this issue must be considered cumulatively with any other changes which may result from the mistake as to fact. Given that the mistake potentially impacts upon a range of performance indicators, I proceed on the basis that any change in relation to this PI will be material.
114. I consider it appropriate therefore to remand this PI to the certification body for reconsideration.

PI 3.2.2 Decision Making Processes – 70 (condition no. 5)

115. The objectors argue that this PI does not exceed the first scoring element at SG80 for a fishery-specific management system that “*there are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives*” and that the scoring for this PI is therefore arbitrary and unreasonable.
116. The principle argument of the objectors is that Condition 5 does not comply fully with TAB Directive 033 and 015 in that it needs to require that both PNA and WCPFC adopt appropriate target and limit reference points. As noted elsewhere my jurisdiction does not extend to the consideration of the content of conditions (although as this issue is closely related to the mistake as to fact/leverage assumption this is dealt with earlier in this decision).
117. In any event, I agree with the certification body that this PI is about decision-making and not the setting of reference points, which have already been considered. The certification body explained the need for the condition arises from weaknesses in PNA provision of explanations for actions and I note that this has already been taken into account in the lowering of the score for this PI.
118. I consider the evidence supports the score, the reasoning provided adequate and further that the mistake as to fact will not have been operative in relation to this PI.
119. Accordingly, this head of objection is not upheld.

PI 3.2.3 Compliance and Enforcement – score 85

120. The objectors challenge the first element of PI scoring guidepost 100 that “[a] *comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.*”.
121. The objectors’ primary submissions relate to the question of observer coverage and whether the evidence arising from the two months data is sufficient to underpin the assessment teams’ conclusions there is 100% observer coverage (I note that from

January 2010 it is a term of the fishing licence that there be 100% observer coverage). The 100% conclusion is based upon the FAD closure period in 2009 and is said to be questionable given statements made in 2010 Technical and Compliance Committee (see TCC6 (p. 10-11)).

122. In particular it appears that only four countries had given permission for the SPC to use their observer data for that period. It was said therefore that the observer coverage achieved during the 2009 FAD closure by the countries that did not report is essentially unknown. It was further said that, generally, there had been patchy provision of data to the WCPFC and that government officials' assertions are not sufficient to form the conclusion reached. It was argued that the assessment team should have required other evidence, for example in the form of records of the actual percentage of fishing trips covered by observers, and of how many of those observer data sets were actually digitised and analysed.
123. A point stressed by OPAGAC was whether observers really had the ability to accurately identify and report set types. Vessels commonly fish using a variety of types of gears. It was for this reason incidentally that OPAGAC argued that this was an 'artificial' fishery, which I took to be a questioning of the unit of certification. That had not however been explicitly argued in the Notice of Objection and I considered the points underlying this therefore in the context of this PI.
124. OPAGAC further pointed to the reporting of a significant move in set type towards unassociated sets in PNG waters in 2010 and argued that this could be the result of spurious reporting rather than a real change.
125. Further concerns were raised that observers had been bribed and intimidated, further questioning the assessment teams reliance under this PI of 100% coverage. Given these considerations, the observer program has not, it was argued, demonstrated a consistent ability to enforce management measures as required by SG100. It was asserted by the objectors that observer coverage was more like 40-50%.
126. The certification body argued the observers were only one component of compliance and enforcement measures relevant to this PI. It was said that there is a consistent and continually improving MCS system demonstrated by high levels of coverage (FAM v2 8.3.1) system independence and a system of internal checks and balances (e.g strategic assessments, VMS verifications and debriefing processes).
127. My attention was drawn to A report on Analytical Projects to Support the Development of a Regional MSC Strategy for the Pacific Oceanic Fisheries, MRAG 2009b, evaluating the effectiveness of the Regional MCS strategy, noting that the reason for purse seine being low risk (relative to long lining) was due to the 100% observer coverage in the fishery, as well as the higher VMS polling frequency. I accept that this evaluation constitutes independent information that the system is effective. Moreover, my attention was drawn to the annual report to WCPFC (WCPFC 7 2010/26) confirming the comprehensive nature of 100% of observer coverage for the two month August/September FAD closure in 2009, and an available pool of observers of 551 persons.

128. With regard to the large increase in use of unassociated sets in 2010, SPC has stated that *“certainly there was a large change, which is consistent with the overall regional pattern. This was largely driven by the 3 month FAD closure in 2010 at a time when most of the fleet were operating in and adjacent to PNG waters because of the La Nina event in play at the time. In contrast, during the 2009 WCPFC FAD closure, most of the fleet operated to the east thus the impacts of the FAD closure would not have been very apparent in PNG.”*
129. The certification body argued the available evidence was there were low levels of hindrances (*‘a small number of vessels’* (WCPFC-TCC6-2010/08)) to observer functionality and that these were viewed as few and far between in an industry which otherwise demonstrates systematic compliance. The certification body pointed to the comprehensive debriefing system that was in place, which has been shown to detect attempts to bribe observers.
130. Whilst acknowledging the force of the objectors’ points and their evidence undermining the 100% conclusion, I note the countervailing evidence produced by the certification body and fishery. On balance, the score appears to be within the margin of appreciation allowed to the certification body given that the observer coverage is just one relevant factor in relation to this PI. Even if below 100%, I consider that it was reasonable for the certification body to have proceeded on the basis of a significantly high level of observer coverage.
131. This head of objection is not upheld.

Conclusions

132. I am very grateful for the parties for the diligence with which the issues in this objection have been presented and argued. In particular, I would wish to thank those who travelled a long way to attend an oral hearing in London.
133. For the reasons set out above, I have not upheld the heads of objection as to serious procedural and other irregularities under section 4.8.2(a) of the Objection Procedure (vis failure to consult with relevant entities and to harmonise the assessment with overlapping fisheries).
134. I have concluded that, due to a mistake of fact identified by the objectors, PIs 1.2.1, 1.2.2, 1.2.3 and 3.1.1 should be remanded, under paragraph 4.8.2(b)(i) of the Objection Procedure to the certification body for reconsideration in relation to the matters and for the reasons set out above. Additionally, I uphold the head of objection in relation to P1 3.2.1 under paragraph 4.8.2(b)(iii) of the Objection Procedure and remand this PI to the certification body for reconsideration.
135. I have not upheld the challenges to PIs 1.1.1, 1.1.2, 1.2.4, 3.1.2, 3.1.3, 3.2.2 and 3.2.3 for the reasons set out above.
136. The procedure going forward is governed by sections 4.9.2-4 of the Objection Procedure:

“4.9.2 Within 10 days after receipt of the remand instructions, unless the Independent Adjudicator has granted the certification body a specific amount of additional time, the certification body shall respond in writing to the matters specified in the remand, with copies sent to the MSC Chief Executive, the subject fishery and the objecting party. The response of the certification body either

(a) shall include a statement of “no change” in relation to the scoring of performance indicators; or

(b) shall indicate any proposed changes to the justification for a score or indicate a change in the score in relation to any of the performance indicators, and shall give reasons for its decision under either (a) or (b).

4.9.3. Any party to the objection may make written submissions on the matters specified in the remand or on the response thereto by the certification body under Section 4.9.2. Such submissions must be received by the Independent Adjudicator no later than 5 days following the response by the certification body.

4.9.4. The Independent Adjudicator shall, within 10 days of the response by the certification body, either

(a) accept the response as adequate to meet the matters raised in the remand and confirm the original or amended Determination, as the case may be, by the certification body; or

(b) after reviewing the response of the certification body, determine that the objection shall be upheld on one or more of the grounds specified in Section 4.8.2.”

137. In order to ensure that the objection process is completed before the Christmas/New Year holiday period the parties will need to slightly expedite the remand process. I therefore ask that the certification body respond to this remand decision by 5pm GMT 1 December 2011 and that any submissions by other parties under section 4.9.3 be made by 5pm GMT 7 December 2012. If the parties are unable to meet these deadlines, I would ask that they contact me immediately, with reasons for the requested delay, so that I consider directing a different timetable.

Melanie Carter

Independent Adjudicator

22 November 2011



Date: 30 November 2011

Ref: 82122

Melanie Carter
Independent Adjudicator
For PNA Tuna Fishery

Dear Melanie

**OBJECTION TO FINAL REPORT AND DETERMINATION
PNA WCP SKIPJACK TUNA UNASSOCIATED PURSE SEINE FISHERY
DECISION OF THE INDEPENDENT ADJUDICATOR**

Further to your decision of 22 November 2011, we have noted the ‘mistake of fact’ in relation to the share of the total West and Central Pacific skipjack catch under PNA control (PNA leverage) and that five Performance Indicators (PIs) were subject to remand (four due to this mistake of fact):

- PIs 1.2.1, 1.2.2, 1.2.3 and 3.1.1 have been remanded under OP 4.8.2 (b) (i). The material fact in dispute is the distribution of catches of WCP skipjack, particularly the proportion under control of PNA (PNA leverage). Intertek Moody Marine must therefore clarify the distribution of catches between relevant sectors and review the scoring of these PIs in relation to the corrected figures.
- PI 3.2.1 has been remanded under OP 4.8.2 (b) (iii) as there are not explicit fishery-specific objectives specifically relating to skipjack tuna related to meeting the requirements of MSC Principles 1 and 2.
- We also note comments in relation to the wording of Conditions 1 and 2.

1. Mistake of Fact

On the distribution of catches, SPC have advised as follows:

The percentages of total skipjack catch in the WCPFC Convention Area that that were caught by all gears in PNA EEZs, including archipelagic waters, in 2009 and 2010 were as follows:

2009	55.2%
2010	68.0%

These percentages were computed for retained catches by all gears. The catch estimates are based on fishery data submitted to SPC and subsequent statistical analyses of catch species composition conducted by SPC scientists. The total catches for the WCPFC Convention Area are as per the WCPFC Tuna Fishery Yearbook 2010 Table 74. Catches for PNA EEZs, including archipelagic waters, were taken from databases maintained by SPC on behalf of the WCPFC.

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If we include estimates of skipjack discarded by purse seiners (2.7% and 1.8% of the catch for 2009 and 2010, respectively, as per Table 18 of WCPFC-SC7-2011-ST-IP-01) in purse seine catches in both PNA and non-PNA waters, and assume zero discarding of skipjack by non-purse seine gears, the percentages change very little and are:

2009	55.4%
2010	68.1%

The actual catch estimates used are shown below.

PNA RETAINED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	926,986 t
2010	1,094,431 t

WCPFC CONVENTION AREA RETAINED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	1,679,165 t
2010	1,610,431 t

PNA RETAINED AND DISCARDED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	951,977 t
2010	1,113,988 t

WCPFC CONVENTION AREA RETAINED AND DISCARDED SKIPJACK CATCH, ALL GEARS, INCLUDING ARCHIPELAGIC WATERS

2009	1,718,709 t
2010	1,635,437 t

These officially estimated PNA shares of the WCPO skipjack catch of 55% for 2009 and 68% for 2010 compare with the estimates of the PNA share of the WCPO purse seine only skipjack catch of 58% for 2009 and 70% for 2010 (based on preliminary data) that were discussed at the hearing.

On the related issue of the Indonesia, Philippines and Vietnam share of the catch referred to in para 29 of the Decision, noting that the estimate of 11% was referred to wrongly in one response to a stakeholder comment on the PCDR and was not used in the analysis or the scoring, SPC advise that “*Catches of skipjack in the waters of Indonesia and Philippines are estimated to have been 418,162 tonnes in 2009 and 388,699 tonnes in 2010. These catches represent 24.9% and 24.1%, respectively, of the total retained skipjack catches in the WCPFC Convention Area in those years. Including purse seine discards in the WCPFC Convention Area catches and assuming no discards in Philippines and Indonesia, the percentages are 24.3% in 2009 and 23.8% in 2010*”.

The assessors had taken the figure of 17% as used in Table 4 of the report to determine these ‘other catches’.

The assessors had previously confirmed that catches by Vietnam accounted for 1% of the total WCPFC-SC1-ST-IP5).

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Therefore the estimation of the extent of PNA 'leverage' used during the assessment were approximately correct – the small differences (up to 3%) are not significant in affecting the assessment team's decision making. Catches by Indonesia and Philippines are taken into account in determining this leverage. These are higher than estimated during the assessment (actually around 25%, plus 1% Vietnam, versus 17% referred to in the assessment report) but, as PI 1.2.1 scoring commentary notes, "...the WCPFC management arrangements cover in excess of 75% of the catch". This variation is therefore also not significant in affecting the scoring decisions made.

2. PI 1.1.2

Paras 57 and 73 of the IA Decision suggest amending the wording of Conditions 1 and 2. In response, the assessors propose to amend the two Conditions to clarify the responsibilities of PNA under the Conditions as follows:

Reference points (1.1.2) requires that reference points are implemented

Condition 1: Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the following SG80 requirements have been met:

- Reference points are appropriate for the stock and can be estimated.
- The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.
- The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome.
- For low trophic level species, the target reference point takes into account the ecological role of the stock.

To this end:

1. PNA and/or WCPFC shall establish and adopt explicit and appropriate target and limit reference points for skipjack;
2. PNA vigorously pursue the adoption of reference points in the WCPFC.

Milestones in achieving this end are:

1. Year 1 identification and development of appropriate reference points initiated by PNA
2. Year 2 explicit and appropriate target and limit reference points for skipjack adopted by PNA, and adoption of appropriate target and limit reference points for skipjack promoted by PNA within WCPFC;

Harvest control rules and tools (1.2.2) requires that there are well-defined and effective harvest control rules in place

Condition 2: Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met:

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- Well defined harvest control rules shall be in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.
- The selection of the harvest control rules shall take into account the main uncertainties.
- Evidence shall be available that indicates that tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules

Milestones in achieving this end are:

1. Plans for the development and adoption of appropriate HCRs for skipjack, including scientific analysis to assess the scope for SG80 requirements applying to the whole stock to be met by PNA actions and consideration of the main uncertainties, should be in place by the first surveillance audit.
2. If the analysis to be undertaken in Year 1 demonstrates that adoption of appropriate HCRs for the WCPO skipjack stock by PNA will be effective, proposals for adoption of appropriate HCRs by PNA should be prepared and under consideration by PNA by the second annual surveillance audit. PNA should also promote the adoption of appropriate HCRs for skipjack by the WCPFC.
3. By the third surveillance audit, PNA should either adopt appropriate HCRs for the WCPO skipjack stock or support specific proposals for adoption of appropriate HCRs by the WCPFC.
4. HCRs within PNA (and/or WCPFC) should be in place by the fourth surveillance audit.

Accordingly, PNA has proposed the following amendments to the Client Action Plan:

Condition 1 (Decision Para 57)

- notwithstanding that WCPFC may introduce reference points independently of PNA action, PNA have the option of meeting Conditions 1 and 2 independently; or through the option to call on WCPFC to develop compatible measures; or PNA may propose these are set through WCPFC
- PNA have commissioned work to clarify the actions necessary by PNA to meet these conditions in the setting of target and limit reference points through current contracts with SPC and CLS.
- PNA has demonstrated previously that it is prepared to take a disproportionate burden for conservation of bigeye as a bycatch in the skipjack purse seine fishery [3IA, and actions under CMM 2008-01- FAD and high seas closures],
- PNA also confirm that PNA would be prepared to take the burden of accounting for skipjack catches outside of PNA waters in setting reference points, which are currently reflected in the SPC scientific advice being considered in PNA management decisions (refers to Decision para 31)
- Depending on the results of this work, PNA may proceed independently or through influencing WCPFC. This decision would be taken within the first year of certification, on receipt of results from SPC and CLS.

Condition 2 (Decision Para 73)

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- The PNA is a very significant player in the Western and Central Pacific and has demonstrated its capacity to drive management interventions in the wider regional context. PNA have already commissioned work towards the development of limit and target reference points for skipjack tuna (**Condition 1**). This will set the basis for adopting a harvest control strategy linking the exploitation rate to the LRPs, taking note of our commitment to account for catches outside PNA waters. The VDS is PNA's main tool for regulating fishing for skipjack and will therefore be central in responses to any approach to a limit reference point. However additional management measures are under continual evaluation and may also be relevant in the future to compliment the governance.
- PNA have established a formal VDS Committee under the Palau Arrangement to consider the various information available and to provide advice on *inter alia* the setting of the annual TAE. The harvest control rules, and information on the status of the fishery against the reference points will become a key consideration of the VDSC when making recommendation to the formal meeting of the Parties in this regard.
- In terms of accounting for external influences in the design of the harvest control rules, PNA notes that while the majority of catch and effort occurs in PNA EEZs, there are significant levels of fishing mortality in other areas, including archipelagic waters, and waters outside of PNA. As custodians of the resource, and in compliance with international law, PNA remain committed to ensuring sustainable management of the stock as a whole, but recognizes that in the areas beyond the control of PNA, it is the Commission and respective non PNA states that need act. PNA will continue to support the WCPFC in this and will implement as necessary our commitment to account for catches outside PNA waters.
- In order to ensure that the management of fisheries in PNA EEZs can adequately detect and respond to changes regardless of their origin, it is anticipated that the overall harvest strategy will rely on both empirical and model based reference points. This will be coupled with regular reporting against those reference points to guide management deliberations. Clearly there are numerous factors to be considered in this significant undertaking, but PNA remain committed to meeting the requirements and timeframes in the Condition.
- Decisions on governance in PNA EEZ will take account of the exploitation rates achieved in Archipelagic waters and territorial waters, and will make its best endeavors to ensure that equivalent compatible measures are adopted under the framework of WCPFC. PNA Parties will collectively press WCPFC through its annual meetings to set Harvest Control Rules which should be extended to all skipjack related fisheries in the Western and Central Pacific.
- The PNA Parties also commit to commissioning an independent review of the Harvest Control Rules set to ensure that the rules and tools applied, are effective and more specifically are consistent with the VDS text, and that parties comply with the PAE restriction set. This will include an evaluation of the effectiveness of the tools applied to skipjack (as well as to yellowfin and bigeye). This may include an assessment of appropriate support tools such as a restriction on vessel capacity. This commitment represents part of a continuous and ongoing review of management systems within the PNA, in which experts are engaged at regular intervals to explore all aspects of tuna fisheries management. In the event that there are changes to the harvest control tools, PNA will also engage experts to evaluate the effectiveness of any changes made.

3. PI 1.2.1

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We note that the score awarded was not considered arbitrary or unreasonable (Para 63) and that harmonisation with the Tosakatsuo skipjack fishery was effected (Para 23). The IA has, however, questioned to what extent the consideration of PNA leverage has influenced this scoring decision. We have clarified the distribution of catches in Section 1 above.

The rationale for the objection against this PI is that the final report does not show evidence that the harvest strategy for the WCPFC is responsive to the state of the stock. The objectors considered that the scoring justification was based on a WCPFC decision that was a potential outcome rather than existing evidence.

In reconsidering the score allocated to this PI in light of these catch distributions, we note the following

- The Adjudicator’s Decision did not find that the score to be arbitrary or unreasonable, noting in particular that the WCPFC7 decision was reasonably viewed as a management action in itself.
- The scoring rationale states “While the WCPFC management arrangements cover in excess of 75% of the catch, it is not clear that coherent management actions are applied throughout the range of the stock, particularly in Indonesia and the Philippines; hence the score for this element is only 80.” And “the different sets of management actions are not fully integrated, and it is not clear that coherent management actions are applied throughout the range of the stock, which limits the score to only 80.”
- The harvest strategy for the stock is characterised as having several components, with WCPFC, PNA and national and archipelagic management actions, supported by a robust stock assessment and extensive monitoring frameworks. The roles of the WCPFC, PNA and other actors in these components vary.
- The assessment is largely a matter for the WCPFC. In-zone monitoring is largely undertaken by coastal states and also flag states; high seas monitoring is largely undertaken by flag states and the WCPFC. Management actions are taken at all levels and are related.
- In scoring this PI, relatively higher weight was attached to management actions by the WCPFC (as noted in the scoring comments and by the objectors in their Notice of Objection, page 15), particularly because of the requirement to consider the extent to which the harvest strategy responded to stock status. This also considered the fact that the recent change in stock status was being reflected initially in changes at the WCPFC level to the priority for skipjack assessment, attention to monitoring of skipjack catches and management action to address skipjack stock status.
- There was, therefore, no assumption in the scoring of this PI relating to PNA leverage across the range of the stock.

Therefore the scoring of this PI was not affected by the mistake in the PNA share of WCPO skipjack catches.

We shall include the text above as additional justification for the score awarded to this PI. We do not propose to change the score of this PI. The score is confirmed at 80.

4. PI 1.2.2

Again, we note that the score awarded was not considered arbitrary or unreasonable (Para 63) and that harmonisation with the Tosakatsuo skipjack fishery was effected (Para 23). The IA has, however, questioned to what extent the

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consideration of PNA leverage has influenced this scoring decision. We have clarified the distribution of catches in Section 1 above.

In reconsidering the score allocated to this PI in light of these catch distributions, we note the following:

- The basis for the objection was that the objectors consider that SG80 requirements for the entire stock cannot be met if only PNA adopts a harvest control rule. The adjudicator's decision finds that the requirements for SG60 were not disputed and have been met.
- With respect to the weight given to the role of PNA in scoring this PI, the PNA and WCPFC were considered in parallel under this PI. The report determined (as noted in Section 5.4.2) that "*There has been no formal development of harvest control rules for skipjack in PNA waters or the WCPO*" (noting that para 69 of the Adjudicator's Decision has referred to "*in PNA waters of the WCPO*"). The Report also determined in Section 5.4.2 as noted in para 69 of the Decision that "*PNA and the Commission have demonstrated a capability of applying measures to reduce the exploitation rate for bigeye tuna on the basis of scientific advice that fishing mortality exceeding FMSY*".
- On this basis, the assessment found a general understanding that actions would be taken to reduce the exploitation rate on skipjack if necessary to achieve management objectives, including adoption of measures by the WCPFC in accordance with the Convention provision and the application of the precautionary approach and adjustments by PNA to the total allowable effort (TAE) under the VDS consistent with SG60, but did not find the well defined harvest control rules required for SG80 to have been formally developed by either PNA or WCPFC.
- In this sense, the scoring for this PI did not assign any weighting to the role of PNA in putting place harvest control rules, but rather considered the status of harvest control rules in both the PNA and the WCPFC in parallel.
- Therefore the mistake in the PNA share of the WCPO skipjack catch did not affect the scoring of this PI.

We shall include the text above as additional justification for the score awarded to this PI. We do not propose to change the score of this PI. The score is confirmed at 60.

5. PI 1.2.3

Again, we note that the score awarded was not considered arbitrary or unreasonable (Para 63) and that harmonisation with the Tosakatsuo skipjack fishery was effected (Para 23). The PI is remanded because the mistake as to fact set out in Section 1 above goes to the weight given by the certification body to the importance of data collection for Indonesia, Philippines and Vietnam.

In reconsidering the score allocated to this PI in light of these catch distributions, we note the following:

- The objectors argued that the 3rd element of SG80 is not met because the quality of information from fisheries in Indonesia, Philippines and Vietnam does not meet the requirement for 'good information on other fishery removals'.

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- The Decision noted that data from these other fisheries, albeit deficient in some regards, may reasonably be characterised as currently at a ‘good’ level, noting also advice of improvement in the quality of data from these fisheries.
- Therefore the requirements for the 3rd scoring issue of SG80 are met and this scoring issue is appropriately scored at 80.
- The quality of information for PNA skipjack fisheries was assessed under the 2nd scoring issue and also scored at 80.
- Since the quality of information for the Indonesia, Philippines and Vietnam fisheries was scored separately and against a different scoring issue from the quality of information for PNA skipjack fisheries, the mistake of fact on PNA leverage and the associated share of catches by Indonesia, Philippines and Vietnam did not affect the scoring of the quality of information from fisheries in Indonesia, Philippines and Vietnam. The improvements in the quality of information in these countries and the latest data provided from SPC, confirms our judgement that this remains appropriate at the ‘good’ level of data provision

Reviewing the scores, we confirm that 1 SG achieves the 100 level and 2 SGs meet the 80 level. On this basis, the score is reduced to 85 (noting the IAs comments in para 79).

We shall include the text above as additional justification for the score awarded to this PI. We propose to change the score of this PI to 85.

6. PI 3.1.1

The objectors considered that there should be no passing score as the first element of PI SG60 is not met. The Decision finds that the score for this PI cannot be said to be unreasonable or arbitrary at the SG60 level. However, the PI is remanded because the leverage assumption, and therefore the PNA’s ability to fulfil its management role across the whole stock under this PI is unsupported by scientific analysis.

In reconsidering the score allocated to this PI in light of these catch distributions, we note the following:

- The requirement for the first scoring issue of SG 60 is that the management system is generally consistent with laws or standards that are aimed at achieving sustainable fisheries.
- The approach used in the assessment for this PI was the same as for other PIs in the P3 Governance and Policy Component – applying the requirements for sustainable fisheries separately at the WCPFC, PNA and national levels, noting that the same approach has been used in other MSC assessments on WCPO tuna stocks. On this basis, the assessment found the legal and policy framework was generally consistent with relevant international laws and standards, particularly because the WCPFC Convention and national laws and plans (with some exceptions noted in the CB response to objections on PI 3.1.3) include the key principles from UNCLOS and the UN Fish Stocks Agreement, including the precautionary approach.
- In addition, sections 7.1.1, 7.1.2 and 7.1.5 with section 7.2 of the Final Report, describe sets of arrangements to control fishing under relevant terms and conditions and to monitor fishing activity and its impacts, with compliance and enforcement including sanctions, at the WCPFC, PNA (with FFA and SPC) and national levels, thus providing the essential features for effective management.

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- With respect to the query in para 89 of the Decision, PNA advise that the various PNA Implementing Arrangements are binding instruments on PNA Parties.

Taking into account the extent of control over fishing for the WCPO skipjack stock through the WCPFC and its Members, together with the extent of control by PNA, it is reasonable to conclude that the fishery can be managed to meet the requirements of Principles 1 and 2, recognising that there will likely be a range of appropriate harvest strategies and harvest control rules attaching different relative roles to the WCPFC and PNA in meeting management objectives.

Therefore the scoring of this PI was not affected by the mistake in the PNA share of WCPO skipjack catches.

We shall include the text above as additional justification for the score awarded to this PI. We do not propose to change the score of this PI. The score is confirmed at 95.

7. PI 3.2.1

The objectors consider that the short term objectives do not meet the SG80 requirements, that ‘short term objectives which are consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2 are explicit within the fishery’s management system’. The Adjudicator’s Decision was that the score awarded is considered arbitrary or unreasonable.

Factors contributing to this finding include:

- i) CMM 2008-01 is not expressly concerned with skipjack tuna
- ii) the Final Report casts doubt on the linkage between the VDS Scheme and the scientific advice (noting also that there is a lack of openness with regard to the decision making processes in this regard); and
- iii) the lack of mention in the Palau Agreement, taken to be the “VDS text”, of objectives consistent with the outcomes required under Principles 1 & 2 of the MSC Standard.

There is some misunderstanding on this issue in that the Palau Arrangement is not the VDS Text, (which is a separate document). The VDS Text does include more specific objectives in Article 2 than the Palau Arrangement. However these objectives in the VDS Text are also more general and longer term, contributing to meeting the requirement of SG80 in respect of explicit long term objectives, but not short term objectives.

Regarding the reference to para 30 of CMM 2008-01 in para 111 of the decision, WCPFC documentation (see WCPFC6-2009/IP06 (Rev.1), page 7) reports that this applies only to Australia.

Accepting the IAs decision in this matter, we consider that the rationale provided in the Final Report meets the SG60 requirement for this PI, that appropriate objectives are implicit within the fishery’s management system. and goes some way to meeting the SG80 requirement for appropriate explicit short and long term objectives in that long term objectives are explicit but short term objectives are not. We therefore consider a score of 70 to be appropriate.

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We shall include the text above as additional justification for the score awarded to this PI. We propose to change the score of this PI to 70.

A condition will be raised with PNA and/or WCPFC to establish explicit short term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, within the fishery's management system within the term of the certification.

Initial Client responses to such a condition are that *"PNA will formerly incorporate into the Palau Arrangement, and VDS text, Short and long term objectives, which are specific to the management of the skipjack stocks. These objectives will incorporate elements of Condition 1 and 2; through the adoption of fishery specific reference points and a harvest strategy that also take account of catches outside PNA waters, and interactions with other retained species. As a result, management measures that reflect principles 1 and 2 will be explicitly incorporated the fishery's management system"*.

The effects of these changes in scoring on Overall Scores for Principle 1 and Principle 3 (Principle 2 is not challenged) are:

P1: 83.8

P3: 84.5

The Determination is therefore unchanged.

We believe we have correctly interpreted the intent of the remands and comments made in the IA Decision; however should there be misunderstandings in our interpretation, we remain ready to reconsider these.

Should these responses be acceptable, we shall include all of the above amendments in the Public Certification Report.

If I can be of any further assistance, please do not hesitate to contact me.

Yours sincerely

Dr Andrew Hough
For Intertek Moody Marine

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Date: 7 December, 2011

Ref: 82122

Melanie Carter
Independent Adjudicator
For PNA Tuna Fishery

Dear Melanie,

**OBJECTION TO FINAL REPORT AND DETERMINATION
PNA WCP SKIPJACK TUNA UNASSOCIATED PURSE SEINE FISHERY
DECISION OF THE INDEPENDENT ADJUDICATOR**

I write with respect to your decision to remand a number of elements of the Assessment of the PNA WCP Skipjack Tuna Unassociated Purse Seine Fishery. In particular, I write to clarify a number of points raised by the Objectors with respect to the Rules of Procedure of the PNA and also to respond to the Certifying Body's Response to Remand circulated by the MSC on 5 December, 2011.

With respect to the CB's Response to Remand, we are pleased with the additional information provided by the CB and the conditions attached to the Assessment. As you will see from the Client Action Plan (CAP), we have reflected these proposals in the revised CAP and are prepared to work as PNA separately and/or with the WCPFC on these conditions.

We had already taken the initiative by engaging CLS of France to undertake simulation modeling on the impact of PNA measures on skipjack stocks in the WCPO and also entered into a Memorandum of Understanding (MoU) with the Oceanic Fisheries Programme (OFP) of the Secretariat of the Pacific Community (SPC) to assist PNA in the analytical work necessary for the development of reference points.. The specific terms of reference for the CLS study are: -

Terms of Reference

- 1. Use a high resolution model of skipjack tuna in the western and central Pacific Ocean (SEAPODYM-SKJ) to determine the proportion of the total skipjack tuna population in the WCPO that occurs on average in the EEZs of PNA members under both recent levels of fishing and under unexploited conditions.*
- 2. Conduct a series of simulations using the SEAPODYM-SKJ model to estimate the connectivity of the skipjack stock occurring in PNA EEZs with the Philippines – Indonesian EEZs, southern and eastern borders and the North-western Pacific, in order to provide information on the likely levels of interaction with the fisheries occurring in these areas.*
- 3. Conduct a series of simulations using the SEAPODYM-SKJ model to determine the extent to which management of fisheries in the PNA EEZs can achieve stock-wide performance measures, e.g. if PNA maintain a biomass target of [40%] of unfished levels in their EEZs (through restrictions on purse seine effort), what levels of stock-wide biomass would this effectively guarantee under plausible levels of exploitation in non-PNA areas.*

4. *The following baseline management measures would be incorporated into the PNA management strategy:*
 - a) *Ongoing closure of the western high seas pockets and eastern adjacent high seas*
 - b) *A three month FAD closure (1 Jul – 30 Sep) in the EEZs of PNA members and impact of extended closures*
 - c) *Limits on vessel days in PNA waters such that the target reference point specified in 3 above is met.*

5. *Present a preliminary report on the results of the work to PNA (target December 2011) and submit for publication in a peer-reviewed journal such as Marine Policy.*

With respect to the additional Condition relating to PI 3.2.1 raised as a result of the remand, PNA will be developing both short and long term objectives for the skipjack tuna which will inform the ongoing review and augmentation of the Vessel Day Scheme. The key elements of the MoU with the SPC that articulate support for the development of reference points and harvest control rules are as follows:

Advice to address the MSC PNA PS fishery certification Condition on harvest control rules	Development of appropriate limit and target reference points for skipjack
	Options for harvest control rules consistent with the harvest strategy, which reduce exploitation as the limit reference point is approached.
	Working paper on performance testing of the HCR for robustness in the face of the main uncertainties within the fishery
	Report on the appropriateness and effectiveness of the tools available to achieve the HCR-defined exploitation levels
Advice to address the MSC PNA PS fishery certification Conditions on retained, discarded and ETP species	Provision of bigeye and yellowfin catches within the fishery and implications for overall stock status
	Examination of the incidence of silky shark in purse seine unassociated set catches from observer data
	Summary of stock status of silky shark and other shark species of interest for the fishery (related to WCPFC work) and advice on appropriate mitigation measures to reduce mortality where necessary
	Summary of stock status of blue marlin (see related to WCPFC work) and advice on appropriate mitigation measures to reduce mortality where necessary
	Review of the level of whale shark interactions within the fishery following the prohibition of sets on whale sharks

The technical collaboration with, and support of the SPC and CLS will facilitate the development of harvest control rules, establishment of long and short-term objectives for skipjack tuna, and establishment of reference points both by the PNA and through the WCPFC.

On the issue of the PNA leverage, we note the more recent submission by SPC as outlined in the CB's Response to Remand of the proportion of skipjack catch in PNA waters relative to total fishing mortality throughout the range of the stock. This further demonstrates PNA's leverage and its proven ability to influence management of skipjack stocks in the WCPO.

On the Rules of Procedure, as you had dismissed this objection in paragraph 100 of your Ruling, it may not be necessary to dwell on this issue save to clarify the nature of text of the PNA Rules of Procedure referenced by the CB.

The Rules of Procedure of the PNA were adopted by the Parties at their 25th Annual Meeting in May 2005. A copy of the Rules of Procedure is attached hereto for ease of reference. When the Parties established the PNA Office on 1 January 2010, it was decided that the Rules of Procedure would need to be amended to reflect the change from the FFA Secretariat to the PNA Office. It was proposed that the proviso on guest status be amended so that anyone who wanted to attend a PNA Meeting could simply apply to participate as an Observer, as opposed to a Guest. These changes have not been formally adopted by the Parties. It is instructive to note that apart from the substantive change to remove references to Guest Status, all other changes are to the nomenclature from “FFA Secretariat” to “PNA Office”, and “Director-General of the FFA” to “Director of the PNAO”. The text referenced by the CB, and objected to by ISSF reflect the proposed changes which have not been formally adopted by the Parties. In essence, however, and as affirmed by your decision, the PNA Rules of Procedures does allow for stakeholders to observe PNA Meetings.

In almost every meetings of the PNA, there have been Observers. These include FFA, SPC, Greenpeace, WWF, and Pew Trust Foundation, and recently Tokelau. Furthermore, industry representatives are often attached to national delegations.

Sincerely,



Dr. Transform Aqorau
Director

PARTIES TO THE NAURU AGREEMENT
RULES OF PROCEDURE
(Adopted by PNA25, Nadi, Fiji, 10 May 2005)

REPRESENTATION

1. Meetings of the Parties to the Nauru Agreement may be attended by any number of delegates nominated by the Parties. Each Party shall identify the head of its delegation who shall be responsible for obtaining the floor for any member of the delegation and responding on behalf of that Party in plenary sessions.
2. The Director General, the Deputy Director General and other officers of the Pacific Islands Forum Fisheries Agency (FFA) and advisers and consultants to the FFA, shall also be eligible to attend meetings. However, at the discretion of the Parties, deliberations in the meetings may be restricted to the representatives of the Parties only and such other persons as the Parties may invite.

CHAIRMAN

3. The delegations shall appoint a Chairman from among the heads of delegations. The chairmanship should normally rotate annually in alphabetical order of the Parties. If a Party declines the chairmanship, the next Party in alphabetical order shall be nominated to take the Chair. In the event that the incumbent Chairman is not able to attend a meeting, the Vice Chairman shall assume the Chair.
4. The Chairman shall hold office from one annual meeting to the next. The Chair shall pass from the out-going to the incoming Chairman following the beginning of each annual meeting.
5. The Chair shall also chair the meetings of other sub-regional arrangements of the Parties to the Nauru Agreement.

VICE CHAIRMAN

6. The Vice Chairman shall be the representative of the Party which is alphabetically next in line to the chairmanship.

QUORUM

7. In general each meeting will commence only when all Parties entitled to attend that particular meeting are either present or have sent an apology. However, half of the Parties entitled to attend a particular meeting shall constitute a quorum.

SECRETARIAT SERVICES

8. The Parties shall seek the services of the FFA Secretariat in providing secretariat services, in accordance with Article V (1) of the Nauru Agreement.
9. The FFA Secretariat will be responsible to the meetings and will act on specific instructions from the meetings concerning major activities to be undertaken between meetings.
The FFA Secretariat will be responsible for the duplication and circulation of materials and coordinating the meetings, at the direction of the Parties. The FFA Secretariat will not directly initiate actions for or on behalf of the Parties without instructions.

MEETINGS

10. In accordance with Article V (2) of the Nauru Agreement, Parties shall convene an annual meeting immediately preceding or following the regular annual session of the Forum Fisheries Committee.

11. Special meetings may be convened at the request of three or more Parties. Such requests are to be communicated through the Official Contacts of the Parties to the Director General. The Director General shall notify all Parties when at least three Parties have officially indicated their desire to hold a special meeting.

MEETING DOCUMENTS

12. The provisional agenda, together with working papers, shall be distributed by the FFA Secretariat through the Director General, no less than 15 days prior to the annual meeting. Items proposed by Parties for inclusion in the provisional agenda, together with supporting papers, must reach the FFA Secretariat through the Official Contacts of the Parties, not later than 30 days prior to the annual meeting.

13. Documentation for special meetings should be made available by the FFA Secretariat not later than 15 days before the meeting. In exceptional circumstances, a special meeting may be convened without the requirement for prior circulation of documentation being met, provided all Parties agree.

CONDUCT OF MEETINGS

14. Meetings of the Parties shall be closed to the public unless the Parties decide otherwise by consensus.

15. The Parties shall make every effort to reach decisions by consensus and voting shall take place only when consensus cannot be reached and when a decision is urgent and essential. When voting is necessary, each Party shall have one vote and decisions shall be taken by a simple majority of the Parties present and voting.

16. Each Party representative is entitled to speak on any item under discussion, as are the Director General and the Deputy Director General. At his discretion, the Chairman may allow other FFA officers and any advisor, observer or guest present at a meeting to address the meeting when appropriate.

INTER SESSIONAL ACTIVITIES

17. In the period between the annual meetings, the Chairman will coordinate all activities relating to the Parties as follows:

- chair any special session
- act as focal point for information and public relations
- provide general oversight and coordination of activities by the Parties.

18. The Parties may, between meetings, engage in continuing dialogue concerning the implementation of initiatives reached in meetings, to promote the principles and objectives of the Nauru Agreement. The FFA Secretariat shall be responsible for monitoring the dialogue in order to determine when a consensus has been reached so that all Parties may be appropriately notified.

OBSERVERS

19. Pursuant to Article V (3) of the Nauru Agreement, FFA members not Parties to the Nauru Agreement may attend annual meetings as observers.

20. Members of the Council of Regional Organisations of the Pacific (CROP) may attend the annual meetings as observers.

21. The FFA Secretariat shall notify FFA members not Party to the Nauru Agreement and CROP members, of the date and venue of meetings of the Parties and indicate that the Parties would be happy for them to attend.

22. All other requests for observer status, at specific meetings by interested parties, shall be directed to the FFA Secretariat who shall be responsible for canvassing and assessing the views of Parties about whether there is concurrence concerning approval (or otherwise) of the request and for notification of Parties that a request for approval has received the concurrence of all Parties.

23. Any observers may take part in discussions upon approval of the Chair but will not be entitled to vote or take part in decision making processes.

24. Any observers shall receive documents generally available to Parties except documents deemed confidential.

GUESTS

25. The Parties may allow any person or organisation who is not a member of either the FFA or CROP, to attend particular sessions of a meeting as a guest. Attendance under this rule shall be subject to such conditions as the Parties may see fit to impose. In accordance with Rule 16, guests may address the meeting upon request by the Parties.

26. Applications for guest status shall normally be made at least 30 days before the meeting for which the guest status is requested. Applications shall be in writing and shall be made through the Director General. Upon receipt of an application the Director General shall send a copy of the application to all Parties for consideration. If an affirmative response is received from all Parties the application shall be regarded as accepted. In the event that it is not possible for the Parties to reach a decision on an application before the meeting to which the application relates, the application shall be placed on the agenda for consideration before the main business of the meeting commences.

27. There shall be no assumption of permanency about guest status.

28. Any guest shall receive documents generally available to Parties and relevant to the matter of specific interest except documents deemed confidential.

RECORD OF PROCEEDINGS

29. A draft summary report of a meeting, which records significant interventions and discussions, as well as decisions adopted by the Parties, shall be prepared by the FFA Secretariat and approved by the Parties at the conclusion of each meeting. The FFA Secretariat will send the final version of the report to all Parties and observers as soon as possible after the conclusion of each meeting.

AMENDMENT OF RULES

30. These Rules may be amended by consensus decision of the Parties.

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December 7, 2011

Ms. Melanie Carter
Independent Adjudicator

Re: IN THE MATTER OF AN OBJECTION TO THE FINAL REPORT AND DETERMINATION ON THE PROPOSED CERTIFICATION OF THE PNA WESTERN AND CENTRAL PACIFIC SKIPJACK TUNA UNASSOCIATED PURSE SEINE FISHERY IN ACCORDANCE WITH THE MSC PRINCIPLES AND CRITERIA FOR SUSTAINABLE FISHING: SUBMISSION ON THE MATTERS SPECIFIED IN THE REMAND AND IN RESPONSE TO THE CERTIFICATION BODY

Dear Ms. Carter

Pursuant to your November 22, 2011, remand decision and Section 4.9.3 of the Objections Procedure, ISSF appreciates the opportunity to submit this reply regarding the response by Intertek Moody Marine ("Moody"). On remand, Moody indicates that its mistake of fact had no impact on its fundamental conclusion that PNA can manage the whole Western Central Pacific Ocean ("WCPO") skipjack stock. Moody did not change its scoring in any material way. Nor did it reconsider the Conditions regarding WCPFC involvement, as the remand decision had invited. Accordingly, the Determination now again before the Independent Adjudicator ("IA") is materially no different than the certification previously remanded.

Succinctly and more specifically, Moody failed to meet the objections or address the "leverage assumption" that PNA's control over a percentage of the catch is sufficient to manage sustainability of the whole stock. Moody still has no scientific (or any) basis for this critical predicate. Moody also left unchanged its Conditions that rest whole stock management solely with PNA.

The certification body has, therefore, failed to address the critical underpinning of the remand and the IA should, accordingly, uphold the objection and deny certification pursuant to 4.8.2(b)(i).

1. Mistake of Fact

At the oral hearing on this matter held on November 8 and 9, 2011, all parties agreed that Moody made a mistake as to the PNA Purse Seine Fishery's share of the skipjack catch in the WCPO. The figure that Moody used failed to account for significant variables: fishing by other forms of gear; the proper percentage of fish caught in Indonesia, the Philippines and Vietnam; removals from archipelagic waters; and discards.

Moody's mistake was material, and in fact, permeated four of the Performance Indicators ("PIs") assessed by Moody, because the percentage of the catch under PNA control affects the "leverage assumption" highlighted in the IA's remand. See Remand, ¶¶ 10-12. The "leverage assumption" is Moody's reliance on the fundamental tenet that PNA's share of the total catch of skipjack in the WCPO is sufficiently large that PNA alone can manage and guarantee the sustainability of the entire stock. ISSF does not dispute the principle that control over some portion of the stock short of 100% can be sufficient for management of the whole stock. But precisely what percentage is not appropriate for guess work or gut feelings.

In its response to the remand, Moody revised its findings regarding PNA's leverage percentages to somewhere between 58% and 68% of the catch, with all parties understanding that these figures will fluctuate significantly according to high seas closures, the unpredictable behavior of fisheries in other coastal states and ecological changes.¹ Still, assuming for the sake of argument that these figures are accurate and static, the critical question posed by Dr. Restrepo at the oral hearing remains unanswered and ignored: **what percentage is enough for management of the entire stock?** This question is the leverage principle ISSF emphasized at the hearing, that all parties agreed could be answered by accepted scientific modeling and that the IA remanded for consideration, because it is the essential predicate to the Moody certification, scoring and Moody conclusions that its conditions will yield scoring at or above SG80.

Moody's recalculations of its prior mistakes may improve the accuracy of the data, but neglect to address the remand's crux. Not only must Moody accurately determine what percentage of the catch the PNA Fishery controls, but it must also find, **before** certification, that based on marine science the percentages are enough to allow PNA to exercise fishery management and harvest control measures sufficient for the entire stock. MSC certification principles plainly require that the client fishery be capable of managing the entire stock. See TAB D-003 v1. It is not the case that a fishery can obtain certification and assess this question as an afterthought; it is the certification body's job to do the appropriate scientific modeling and answer this question affirmatively as a prerequisite to certification in these circumstances. See TAB D-003 v1.1 ("MSC is an outcome standard, and so MSC would not certify a fishery that did not meet its Principles – irrespective of whether the candidate fishery was responsible for the failure of the stock...to meet those principles.").

The dispositive importance of this bedrock requirement is underscored most sharply by asking the simple question: what if the marine science shows that PNA's leverage is insufficient? Nowhere addressed on remand, that event would render the certification in direct contravention to the most basic MSC principles.

As long as the sufficiency of PNA's leverage is a conclusion that Moody assumes rather than addresses through reason and science, the precautionary approach requires Moody's assumption to be regarded as wholly arbitrary and potentially incorrect. Further, it requires that the fishery not be certified.

2. Conditions 1 and 2 – PI 1.1.2 *Limit and Target Reference Points* & PI 1.2.2 *Harvest Control Rules*

On remand the certification body offered no scientific basis for its otherwise wholly arbitrary determination that PNA has the basic ability to set target and limit reference points or design harvest control rules ("HCRs") sufficient for sustainable management of the whole stock, nor has it revised its Conditions to require whole stock management with the WCPFC. The stock remains unprotected and the Determination cannot stand. This record in this material respect is the very same record remanded in the first place.

Instead, Moody attempts to improve its Conditions with more descript policies and processes regarding what PNA **might** do **if** it turns out it has whole stock management capability. These improvements, however, largely disregard the objectors' concerns regarding Conditions 1 and 2 as well as the IA's

¹ ISSF notes, furthermore, that the certification and PNA management measures, such as its Vessel Day scheme, relate **only** to the free school pursue seine fishery. Leverage should also be measured on the basis of the fishery being certified.

suggestion that a variation of the Conditions could improve the portions of the assessment about which objections were lodged. See Remand, ¶ 57 and 73.

ISSF appreciates that Moody made adjustments to the language of Condition 1 placing greater responsibility for initiating harvest controls on PNA where the impetus was previously unclear. Additionally, Moody elaborated the milestones associated with Condition 2. These cosmetic changes, however, fail to address the heart of the matter. The Conditions are still addressed to “PNA **and/or** WCPFC”; this language continues to assume that PNA has the **ability** to manage the entire stock on its own. Had Moody offered a marine science basis for this assumption, its decision not to mandate WCPFC involvement in the setting of target and limit reference points and the development of harvest controls would not offend MSC principles. But Moody has still neglected to anchor this conclusion to any scientific data. The amended Client Action Plan is similarly misguided. PNA’s promises to “consider” HCRs and commission work to explore the setting of target and limit references are meaningless in the absence of a scientific basis for the leverage assumption. Even if these non-binding promises were firm commitments, they would be rendered useless by a negative answer to the question of whether PNA has the necessary leverage for sustainable management of the whole stock. Consequently, MSC principles and the precautionary approach require involvement by PNA **and** WCPFC.

Amended Condition 2 does now indicate that PNA will perform scientific analysis in the future and **if** the analysis indicates PNA’s leverage is sufficient, PNA will design an appropriate HCR for the stock. Moody’s logic is still through the looking glass: a plan for analysis that may or may not show PNA has enough leverage for whole stock management is **not** support for the conclusion that it does.

In fact, the possibility that the scientific analysis will reveal PNA is incapable of adopting HCRs for the entire stock is inherent in the amended text of Condition 2. See Condition 2 (“**If** the analysis undertaken in Year 1 [Year 1 milestone mandates ‘scientific analysis to assess the scope for SG80 requirements applying to the whole stock to be met by PNA actions’] demonstrates that adoption of appropriate HCRs for the WCPO skipjack stock by PNA will be effective, proposals for adoption...should be prepared...”). Surprisingly, while this Condition itself acknowledges the possibility that scientific analysis will show PNA cannot implement HCRs sufficient for management of the entire stock, it does not provide a contingency whereby WCPFC will be required to participate. Instead, the “and/or” language will remain controlling and no one will be responsible for the protection of the stock. It is difficult to understand how Moody can defend the “and/or” provision in the Conditions that acknowledges the possibility PNA could lack the ability to manage the stock on its own, yet fail to require WCPFC stock management. This approach flouts the foundational principles of MSC certification.

Under MSC precedent, moreover, the IA can consider Conditions imposed by the certifying body in connection with ability to achieve scoring at or above the required SG80 threshold. In fact, previous MSC adjudications indicate that remand and denial of certification on the basis of faulty Conditions is appropriate and sometimes necessary; this matter presents such a circumstance.

The *Decision of the Independent Adjudicator in the Matter of an Objection to the Final Report and Determination on the Proposed Certification of the Denmark North Sea Plaice Fishery* illustrates the rule that an IA can upset a certification body’s Determination on the basis of inadequate Conditions. In that matter, the objectors opposed a Condition set by the certification body on the basis that the content of the Condition, even if achieved, would not have the effect of raising the performance of the fishery to the SG80 level. The objectors pointed out that Fishery Certification Methodology Section 3.4.2 requires that

“any condition shall improve performance to at least the 80 level within the term of certification....” The IA agreed with the objectors that an ineffective Condition can constitute an irregularity requiring remand, explaining, “for the purposes of this Determination I have assumed...that failure to establish a condition in compliance with the relevant provisions of the MSC scheme is capable of amounting to a serious procedural or other irregularity in the fishery assessment process within the meaning of OP § 4.8.2.(a).” See Denmark North Sea Plaice Fishery, ¶ 38.²

The Conditions imposed by Moody present essentially the same problem, but with graver potential consequences – even if PNA satisfies Conditions 1 and 2, it will not necessarily be in compliance with basic MSC requirements regarding the sustainability of the stock. This error rises to the level of an irregularity resulting in a dispositive, let alone material, difference to the assessment. Thus, the objections to certification must be upheld.

Report of the Marine Stewardship Council Objections Panel on the Gulf of Alaska Pollock Fishery also supports IA jurisdiction to remand or upset a certification body’s report where the conditions imposed on a fishery are inadequate. In this dispute, one of the objectors’ primary contentions was that the Conditions raised did not go far enough to ensure that the fishery would satisfy MSC Principle 2. The Objections Panel identified three main questions for its consideration, the third of which was “[a]re the Conditions for continued certification adequate?” See *Gulf of Alaska Pollock Fishery*, ¶ 3.9.³ The Panel went on to elaborate: “the real issue for our consideration is...whether the Conditions applied to the fishery...are consistent with the precautionary approach.” *Id.*, ¶ 4.11. The objectors maintained that given the existing scientific uncertainties, the Conditions should require additional constraints on the fishery. In response, the Panel reasoned: “We could agree with this point if the evidence were such to suggest a reasonable likelihood that additional constraints...would have a significant prospect of achieving improved performance against MSC Principle 2. On balance, however, we consider that the level of risk involved does not warrant such additional constraints.” *Id.*, ¶ 4.26.

The level of risk associated with the Conditions imposed on PNA, by contrast, not only warrants but requires additional constraints; it is highly possible that PNA does not have sufficient leverage to ensure sustainability of the whole stock. Moody should have imposed additional constraints on PNA and its failure to do so requires that the objections to certification be upheld under *Gulf of Alaska Pollock Fishery*.

² The Objections Procedure referenced in this Decision is OP v3, appearing in TAB D-023, the same Objections Procedure in force for the purpose of the PNA objections process. Ultimately, the IA declined to remand because the defect in the Condition did not rise to the level of an irregularity resulting in a material difference to the fairness of the assessment, as required for an IA to upset a certification body’s Determination.

³ The Alaska Pollock Fishery matter was decided in 2005 under an earlier version of the Objections Procedure. The purpose and substance of the Objections Procedure remains substantially the same for the purposes of comparison in this context.

3. PI 1.2.1 *Harvest Strategy*

The IA remanded this PI for reconsideration because the mistake of fact which underpinned the leverage assumption is relevant to the determination that there is an appropriate harvest strategy in place. See Remand, ¶ 63. Moody dismissed the remand of this PI and maintained its original score claiming it made “no assumption in the scoring of this PI relating to PNA leverage across the range of the stock.” See Moody Submission at 6. ISSF understands that Moody construed the harvest strategy as involving an amalgamation of actions from various parties, including but not limited to PNA. Still, it is unclear why, as Moody claims, the extent of PNA’s authority and control is not highly relevant under this PI. It is in fact critical – the question presented by the leverage assumption is not merely what PNA may do, but what it can do – its ability to alone draw a HCR that can manage sustainability of the whole stock. Without the appropriate marine science to substantiate its theory regarding PNA’s leverage, Moody’s conclusion under this PI is wholly arbitrary, potentially incorrect and requires that the fishery be denied certification.

4. PI 1.2.2 *Harvest Control Rules and Tools*

The IA remanded this PI for reconsideration because the mistake of fact which underpinned the leverage assumption is relevant to the weight Moody assigned to PNA’s role in the harvest strategy currently in existence. See Remand, ¶ 73. Moody denied that the scoring of this PI involved any weighing of PNA’s role in the implementation of harvest control rules, maintaining that instead it considered the status of harvest control rules in PNA and the WCPFC in tandem. Therefore Moody declined to change the score of this PI.

Because Moody is not claiming that PNA has enacted harvest control rules of its own, the leverage assumption may not be as critical under this PI as others. However, the remand of this PI provided a valuable opportunity for Moody to address the objectors’ concerns, discussed at the hearing, that PNA does not meet the first element of SG60 because the current HCRs fail to “reduce the exploitation rate as limit reference points are approached.”

The immediate implementation of a rule of this nature, such as the one Dr. Restrepo described and demonstrated at the hearing, is critical if the leverage assumption is to have any force. Not only must PNA be able to affect management of the entire stock, but it must also be willing to disproportionately reduce its own exploitation rates in response to fishing mortality outside its waters. In the Final Report, Moody loosely suggested that PNA would do so, but failed to require a commitment from PNA. Moody’s failure to overcome this fatality on remand further undermines the integrity of the proposed Public Certification Report.

5. PI 3.1.1 *Legal and/or Customary Framework*

The IA remanded this PI for reconsideration because the leverage assumption, specifically PNA’s ability to exert management authority across the whole stock, was unsupported by the appropriate scientific analysis. See Remand, ¶ 96. Rather than perform the admittedly feasible scientific modeling, Moody simply repeated its unfounded conclusion that the extent of PNA’s control over the fishery, when supplemented by management measures enacted by other parties in the region, allows for fishery management in compliance with MSC Principles 1 and 2.

The problems with the scoring of this PI remain the same now as at the time of the hearing: Moody has failed to offer any scientific support for its assumption that PNA's control over the catch is sufficient to allow it to manage the whole stock. This assumption is not enough without some marine science underpinning.

Additionally, Moody declined the opportunity to propose changes addressing the problematic lack of binding mechanisms between PNA and its members. There is a dangerous potential that, if certified, PNA member states, who have expressly reserved their sovereignty, could defect from unpopular PNA decisions. Quite simply, ISSF asked at the hearing: what will happen if PNA members do not wish to follow PNA measures? This is a particularly salient question in light of Moody's contention that PNA will make commercially damaging and disproportionately burdensome decisions within PNA waters in order to compensate for events outside PNA waters. Measures enacted by PNA will only be as good as the compliance of PNA's member states, which is why the objectors requested some form of assurance that PNA members will comply with PNA decisions. Moody's continuing failure to address this issue further undermines the soundness of its Determination.

6. PI 3.2.1 *Fishery-Specific Objectives*

The IA remanded this PI on the ground that the scoring was arbitrary and unreasonable given the dearth of explicit short term objectives within PNA's management system. In response, Moody admitted that short term objectives were lacking and promised to raise a condition with PNA and/or WCPFC to establish such objectives.

This acknowledgement and the raising of a new Condition are movements in the right direction. But the unsubstantiated leverage assumption again undermines the utility of Moody's efforts. Because the Condition permits PNA alone to implement the lacking short term objectives and there is no scientific basis for the assumption that PNA's objectives will be capable of impacting the whole stock, the Condition is not guaranteed to serve its purpose. Accordingly, the proposed Condition does not remedy PNA's acknowledged problems under this PI and Moody's response to the remand is therefore deficient.

7. Conclusion

Simply put, Moody could have overcome the arbitrary nature of its scoring by establishing the scientific basis for its leverage assumption – marine science all parties agreed exists and can be modeled. It also could have accepted the remand's invitation to alternatively reconsider Conditions positioning PNA with sole management and remedial responsibility for the highly migratory WCPO skipjack stock. Mysteriously and without any explanation in its response, it did not.

By neglecting to offer scientific evidence for, or even respond to, the remand's most basic and central inquiry about the sufficiency of the leverage actually exercised by PNA, Moody has rendered the majority of its response meaningless. For, without a scientifically-supported understanding of whether PNA can implement measures to sustainably manage the whole stock, PNA's best efforts at fishery management still fall short of the MSC's most basic whole stock tenet. It remains unclear, moreover, why Moody ignored this question after acknowledging at the oral hearing that such scientific analysis was both feasible and appropriate.

Ms. Melanie Carter
December 7, 2011
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In light of the ongoing uncertainty about whether PNA has the requisite leverage for whole stock management, ISSF respectfully requests that the Independent Adjudicator uphold its objection pursuant to Section 4.9.4(b) of the Objections Procedure. The fishery can perform the requisite scientific modeling with stakeholder input and even assistance as appropriate and invited, and proceed again with certification on an evidentiary rather than arbitrary basis, designing appropriate harvest control rules and metrics based on data, not conditional guesswork, *if* the leverage proves sufficient. And if not, the fishery can seek the appropriate and required assistance of the RFMO for this important migratory world stock.

Sincerely,

Michael P. A. Cohen
of PAUL HASTINGS LLP
COUNSEL FOR ISSF

MPC

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1.1 APPENDIX D: CLIENT ACTION PLAN

1.1.1 Background

It is our understanding that :

- Under MSC assessment, if there are areas of concern to the assessors they provide non negotiable terms as conditionalities which must be implemented within specified time frames. They also make non binding recommendations which are non conditional but should be incorporated into PNA Strategy.
- Following are the conditionality's, each with the PNAO draft response.
- Responses will form part of the final published report.
- All the conditions are within our intended programs, and at least two [whale sharks and observers] are already implemented and compliance with all other conditions are in progress.

1.1.2 Condition 1 : Reference Points (1.1.2)

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met:

- Reference points are appropriate for the stock and can be estimated.
- The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.
- The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome.
- For low trophic level species, the target reference point takes into account the ecological role of the stock.
- To this end:
 1. the PNA and/or WCPFC shall establish and adopt explicit and appropriate target and limit reference points for skipjack;
 2. the PNA vigorously pursue the adoption of reference points in the WCPFC.

Milestones in achieving this end are:

Year 1 identification and development of appropriate reference points initiated by PNA

Year 2 explicit and appropriate target and limit reference points for skipjack adopted by PNA, and adoption of appropriate target and limit reference points for skipjack promoted by PNA within WCPFC :

PNA Response:

- notwithstanding that WCPFC may introduce reference points independently of PNA action, PNA have the option of meeting Conditions 1 and 2 independently; or

through the option to call on WCPFC to develop compatible measures; or PNA may propose these are set through WCPFC

- PNA have commissioned work to clarify the actions necessary by PNA to meet these conditions in the setting of target and limit reference points through current contracts with SPC and CLS. [Appendix 1]
- PNA has demonstrated previously that it is prepared to take a disproportionate burden for conservation of bigeye as a bycatch in the skipjack purse seine fishery [3IA, and actions under CMM 2008-01- FAD and high seas closures],
- PNA also confirm that PNA would be prepared to take the burden of accounting for skipjack catches outside of PNA waters in setting reference points, which are currently reflected in the SPC scientific advice being considered in PNA management decisions (refers to Decision para 31)
- Depending on the results of this work, PNA may proceed independently or through influencing WCPFC. This decision would be taken within the first year of certification, on receipt of results from SPC and CLS

This will set the basis for adopting a harvest control strategy linking the exploitation rate to the LRPs.

1.1.3 Condition 2: Harvest Control Rules & Tools (1.2.2)

Within 5 years of certification, PNA and/or WCPFC must be in a position to demonstrate that the SG80 requirements have been met:

- Well defined harvest control rules shall be in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.
- The selection of the harvest control rules shall take into account the main uncertainties.
- Evidence shall be available that indicates that tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules

Milestones in achieving this end are:

1 Plans for the development and adoption of appropriate HCRs for skipjack, including scientific analysis to assess the scope for SG80 requirements applying to the whole stock to be met by PNA actions and consideration of the main uncertainties, should be in place by the first surveillance audit.

2. If the analysis to be undertaken in Year 1 demonstrates that adoption of appropriate HCRs for the WCPO skipjack stock by PNA will be effective, proposals for adoption of appropriate HCRs by PNA should be prepared and under consideration by PNA by the second annual surveillance audit. PNA should also promote the adoption of appropriate HCRs for skipjack by the WCPFC.

3. By the third surveillance audit, PNA should either adopt appropriate HCRs for the WCPO skipjack stock or support specific proposals for adoption of appropriate HCRs by the WCPFC.

4. HCRs within PNA (and/or WCPFC) should be in place by the fourth surveillance audit.

In achieving this outcome, PNA (and/or WCPFC) may consider the following:

- adopt defined harvest control rules for the exploitation of skipjack tuna in their waters that are consistent with the harvest strategy and act to reduce the exploitation rate appropriately, as limit reference points are approached).
- assessment of the main uncertainties should include the fishing mortality in archipelagic waters and territorial waters in order to ensure that the exploitation rate is appropriately reduced as limit reference points are approached.

In demonstrating that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules, PNA (and/or WCPFC) should consider demonstrating that effort is effectively limited within overall PAE levels established in accordance with the VDS text, Implementing Arrangements and appropriate WCPFC conservation and management measures. In the event that these tools were to substantially change, then their effectiveness should be re-evaluated .

PNA Response:

- The PNA is a very significant player in the Western and Central Pacific and has demonstrated its capacity to drive management interventions in the wider regional context. PNA have already commissioned work towards the development of limit and target reference points for skipjack tuna (**Condition 1**). This will set the basis for adopting a harvest control strategy linking the exploitation rate to the LRPs, taking note of our commitment to account for catches outside of PNA waters.
- The VDS is PNA's main tool for regulating fishing for skipjack and will therefore be central in responses to any approach to a limit reference point. However additional management measures are under continual evaluation and may also be relevant in the future to compliment the governance...
- PNA have established a formal VDS Committee under the Palau Arrangement to consider the various information available and to provide advice on *inter alia* the setting of the annual TAE. The harvest control rules, and information on the status of the fishery against the reference points will become a key consideration of the VDSC when making recommendation to the formal meeting of the Parties in this regard.
- In terms of accounting for external influences in the design of the harvest control rules, PNA notes that while the majority of catch and effort occurs in PNA EEZs, there are significant levels of fishing mortality in other areas, including archipelagic waters, and waters outside of PNA. As custodians of the resource, and in compliance

with international law, PNA remain committed to ensuring sustainable management of the stock as a whole, but recognizes that in the areas beyond the control of PNA, it is the Commission and respective non PNA states that need act. PNA will continue to support the WCPFC in this.

- In order to ensure that the management of fisheries in PNA EEZs can adequately detect and respond to changes regardless of their origin, it is anticipated that the overall harvest strategy will rely on both empirical and model based reference points. This will be coupled with regular reporting against those reference points to guide management deliberations. Clearly there are numerous factors to be considered in this significant undertaking, but PNA remain committed to meeting the requirements and timeframes in the Condition.
- Decisions on governance in PNA EEZ will take account of the exploitation rates achieved in Archipelagic waters and territorial waters, and will make its best endeavors to ensure that equivalent compatible measures are adopted under the framework of WCPFC. PNA Parties will collectively press WCPFC through its annual meetings to set Harvest Control Rules which should be extended to all skipjack related fisheries in the Western and Central Pacific.
- The PNA Parties also commit to commissioning an independent review of the Harvest Control Rules set to ensure that the rules and tools applied, are effective and more specifically are consistent with the VDS text, and that parties comply with the PAE restriction set. This will include an evaluation of the effectiveness of the tools applied to skipjack (as well as to yellowfin and bigeye). This may include an assessment of appropriate support tools such as a restriction on vessel capacity. This commitment represents part of a continuous and ongoing review of management systems within the PNA, in which experts are engaged at regular intervals to explore all aspects of tuna fisheries management. In the event that there are changes to the harvest control tools, PNA will also engage experts to evaluate the effectiveness of any changes made.

1.1.4 Condition 3: Management Strategy (Bycatch) (2.2.2)

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (second and third scoring issues) have been met:

- There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or the species involved.
- There is some evidence that the partial strategy is being implemented successfully.

Milestones in achieving this are:

1. By the first annual surveillance audit, PNA should review available data (e.g. observer, logsheet) to provide the necessary level of confidence that the current management measure (CMM 2010-07) for sharks will work. The review should be initiated by the first annual surveillance audit, with a specific focus on silky sharks.
2. The review of available information should be completed by the second annual audit.

3. If the above should indicate that this fishery has a significant impact on shark populations, then implementation of those elements of the Pacific Islands RPOA for sharks that have “a high likelihood, in aggregate, of delivering improved conservation outcomes for sharks” should be instigated by the third surveillance audit, and completed by the fourth. . These may include (i) the release of all live sharks, (ii) that sharks to be landed with fins naturally attached, allowing for fins to be partially severed and folded back against the carcass for storage; and (iii) the prohibition of dumping carcasses after landing.

PNA Response:

- PNA Parties will support a review of all available data (observer and logsheet), and to determine whether the strategy to properly manage sharks is effective. The review should be completed within two years of certification.
- The Pacific Islands RPOA for sharks was prepared by three regional agencies to act as a guide for PICs to implement sustainable shark management. It is worth noting that PNA Parties did not have direct input into the development of the RPOA and therefore did not conduct any in depth review of the practicality or effectiveness of its recommendations at the time of its development. Nevertheless, PNA Parties commit to the implementation of an aggregate package of appropriate measures, consistent with the Condition in the event that the Review indicates that the fishery has a significant impact.
- Recommendation 3 is closely related to this Condition. PNA fully supports all efforts towards stock assessment. PNA have always supported the work on ecological risk assessment in the WCPFC and were strongly supportive of the shark stock assessment programme that was adopted by WCPFC7. PNA will continue to support all such undertakings and look to contribute where possible.

1.1.5 Condition 4: ETP Status (2.3.1)

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements have been met for whale sharks:

- The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.
- Direct effects are highly unlikely to create unacceptable impacts to ETP species.
- Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.

Milestones in achieving this outcome are:

PNA should adopt both the RPOA for Shark’s recommended prohibition on schools associated with whale sharks as well as the subsequent PNA decision to prohibit sets on whale sharks. This should be validated by written and agreed rules to implement this by the first annual surveillance audit.

1. Reviews of the level of whale shark interactions should be begun by the second annual surveillance audit and published by the third annual audit.
2. Any necessary actions in response to the above should be initiated by the fourth surveillance audit.

PNA Response:

- PNA has already advanced the measure to ban sets on whale sharks. This has now been introduced as an amendment to the Third Implementing Arrangement and has been in force since 1st January 2011 and applies to all PNA EEZ, the high seas pockets also closed to purse seine fishing.
- PNA will review the existing measure to ensure that the activities listed are consistent with best practice
- It is also worth noting that FFA members tabled a proposal to WCPFC7 to implement compatible measures in the high seas and non-PNA EEZs. This was based solely on the PNA rules. PNA was disappointed that other WCPFC members did not support the measure. PNA remain committed to implementing these requirements on a regional basis and has through FFA re tabled the paper for consideration at WCPFC8.

1.1.6 Condition 5 : Fishery-Specific Objectives (3.2.1)

PNA and/or WCPFC to establish explicit short term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, within the fishery's management system within the term of the certification.

PNA Response

- PNA will formerly incorporate into the Palau Arrangement, and VDS text, Short and long term objectives, which are specific to the management of the skipjack stocks.
- These objectives will incorporate elements of Condition 1 and 2; through the adoption of fishery specific reference points and a harvest strategy that also take account of catches outside PNA waters, and interactions with other retained species. As a result, management measures that reflect principles 1 and 2 will be explicitly incorporated the fishery's management system.

1.1.7 Condition 6 : Decision making process (3.2.2)

Within 5 years of certification, PNA must be in a position to demonstrate that the SG80 requirements (third and fourth scoring issues) have been met:

- Decision-making processes use the precautionary approach and are based on best available information.
- Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.

1. By first annual surveillance audit, provide a description of decision making processes and their relation to scientific advice
2. Subsequent meeting output should then explain decision making processes in relation to scientific information.

PNA Response :

- As described above, the harvest control rules (Condition 1) and reference points (Recommendation 1) will form a fundamental basis of the deliberation of TAEs in the future.
- Decisions taken on adjustment to the VDS scheme shall be based on best available information. This will be derived largely from SPC scientific advice, SPC logsheet data, information compiled by the PNA Office and FFA as well as any additional work commissioned through PNA or other management organisation. Explanations on recommendations made and decisions taken, or lack of action, will be clearly documented by the PNA Office, through minutes of meetings. These minutes will be publically available on the PNA Office website.
- At the same time, the WCPFC Convention itself requires that the Commission and its members also account for a range of socio-economic factors when deciding conservation and management measures. These factors are of high importance to PNA as small island developing states and will continue to be considered in line with the provisions of the Convention and UNCLOS.

1.1.8 Recommendation 1: Harvest Control Strategy (1.2.1)

1. PNA to draw up a harvest strategy for PNA which integrates existing elements to apply specifically to the skipjack harvest and is linked to limit and target reference points established as per Condition 1; and
2. PNA vigorously pursue the adoption of an appropriate harvest strategy for WCPO skipjack in WCPFC.

PNA Response:

- PNA will conduct an annual internal review on the monitoring, management and implementation of the VDS scheme, encompassing the performance of the PNAO and the Parties implementation performances. This process will be strengthened through the application of internal and external reviews. The latter to be held within **3 years** of Certification and may cover a range of factors and issues that are important to PNA in addition to those listed above.

1.1.9 Recommendation 2: Information (1.2.3)

Encouragement of, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.

PNA Response:

- PNA has and will continue to encourage, and support through the WCPFC to, Indonesia, Philippines and Vietnam to further develop their fisheries information systems, largely within the framework of ongoing initiatives.

1.1.10 Recommendation 3: Management Strategy (2.1.2)

PNA provide documented evidence that the partial strategy *continues* to be implemented successfully for bigeye and yellowfin tuna.

PNA Response:

- PNA continually assesses the interaction with retained species to ensure that the levels of bycatch are maintained to a level that does not contribute to the decline stock status, and to report on the implementation of the technical conditions (CMM 2009-02) associated with the FAD closure. SC7 has shown this projected to achieve targets.

1.1.11 Recommendation 4: Stock assessment (2.2.3)

Stock assessments of both silky shark (IATTC, under way) and blue marlin (ISC, 2012) will provide greater understanding of the status of these stocks as will planned shark assessments for WCPFC. Results of these should be reviewed and if necessary appropriate mitigation measures taken to reduce mortalities of these species. Mitigation action would have to be implemented in 2013, if required.

PNA Response:

- Following the ISC stock assessment of silky shark and blue marlin, the PNA will also seek to implement the recommendations relating to the monitoring and management for blue marlin in 2012 and will further support WCPFC in the implementation of a management strategy for this species if required.

1.1.12 Recommendation 5: Long Term Objectives (3.1.3)

The PNAO will also review the Nauru agreement and related instruments to ensure that the appropriate principles including the precautionary approach are required to be applied.

PNA Response:

- The PNAO will also review the Nauru agreement and related instruments to ensure that the appropriate principles, including the precautionary approach, are required to be applied

1.1.13 Recommendation 6: Compliance (3.2.3)

A biennial review of MCS arrangements in the purse seine fishery should be undertaken, using the MRAG national/regional study as a benchmark.

PNA Response:

- PNA is a proactive participant in the review of MCS arrangements, and a supporter of the Strategy for strengthening MCS support within the region. FFA has initiated a support programme which will seek to implement MCS strengthening needs.

1.1.14 Recommendation 7: Performance Review process

The PNA should establish a system of regular internal and external reviews monitoring and evaluating the VDS (focusing on monitoring & management); the performance of the PNA Office relating to the VDS and management of the purse seine fishery more generally; and national implementation of the VDS and other PNA processes related to the purse seine fishery. The Internal review should comprise an annual administrator's report prepared **annually** (as opposed to on an *ad hoc* basis) summarising the uptake of VDS across the sectors, the PAE shares and transfers and developments and concerns. The document must be at a level consistent with the existing PNAO report (2010) but also including details of PAE transfers and lessons learned. The external review should be undertaken within **3 years** of Certification.

PNA Response:

- PNA has already initiated a process of regular monitoring of VDS reporting, uptake and exchanges between the Parties. Two reports have been prepared and presented for 2009 and 2010 and regular reviews will be made for an external review.

**IN THE MATTER OF AN OBJECTION TO THE FINAL REPORT AND
DETERMINATION ON THE PROPOSED CERTIFICATION OF THE
PNA WESTERN AND CENTRAL PACIFIC SKIPJACK TUNA
(KATSUWONUS PELAMIS) UNASSOCIATED PURSE SEINE
FISHERY IN ACCORDANCE WITH THE MSC PRINCIPLES AND
CRITERIA FOR SUSTAINABLE FISHING**

Final Decision of the Independent Adjudicator post Remand

1. This is the second and final decision on the objections made by the International Seafood Sustainability Foundation (“ISSF”), Organización de Productores Asociados de Grandes Atuneros Congeladores and Comité Européen Interprofessionnel du Thon Tropical (“the objectors”) to the proposed certification (the “Determination”) by Intertek Marine Moody Ltd (“the certification body”) of the PNA Western and Central Pacific Skipjack Tuna (*Katsuwonus pelamis*) unassociated purse seine Fishery.

Summary of decision

2. My task, under section 4.8.1 of the Objections Procedure, having heard the objections, is either to confirm the Determination or remand it for reconsideration to the certification body. Taking into account all written and oral submissions and the evidence put before me my initial decision dated 22 November 2012 (available on the MSC website) was to remand the Determination in relation to certain of the heads of objection. My final decision, having taken into account the responses of the certification body, client fishery and the objectors on remand, is to confirm the Determination for the reasons set out below.

Background

3. The unit of certification is as to a particular mode of gear, that is purse seine sets on unassociated/non Fish Aggregation Device free schools, and the geographic area of the economic exclusive zones (“EEZs”) of the Parties to the Nauru Agreement (“PNA”). The PNA member states are the Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu.
4. The Western and Central Pacific Fisheries Commission (“WCPFC”) is the intergovernmental regional fishery management organisation responsible for managing skipjack tuna throughout its Convention Area, which includes the PNA region subject to the Determination. The management and scientific advice to the WCPFC is provided by the Secretariat to the Pacific Commission (“SPC”).

Overarching issue

5. It will be recalled from the previous decision that there is an overarching issue in this matter. The fundamental assumption of the certification body underlying this Determination is that it would be sufficient for either PNA *or* the regional fishery management organisation, WCPFC, to take the necessary management steps premised on the assumption that PNA's share of the total catch of skipjack in the WCPO is sufficiently large and the management actions open to it are sufficiently developed and responsive that the sustainability of the total stock could be assured by virtue of its influence. I referred to this assumption in my previous decision as the 'leverage assumption'. Relevant to this assumption also, is that the certification body has proposed conditions for PIs 1.1.2 and 1.2.2. These offer the option that "*PNA and/or WCPFC*" set formal limit and target reference points and put in place well defined harvest control rules.
6. The objectors point to the absence of a scientific basis for the leverage assumption. They argue this makes it wholly inappropriate for the Determination to be based on the untested ability of the PNA to deliver sustainable management, in the absence of action by the WCPFC. Whilst in theory they accept that this assumption may be well founded, it is currently not based on any scientific analysis or modelling. In the absence of this, the objectors argue, it cannot rationally be concluded that any body other than the regional fishery management organisation should set the limit and target reference points and formalise the harvest control rules. At the same time however they call into question the ability and effectiveness of the WCPFC to take this action.

Objections under section 4.8.2 (b)(i) and (iii) of the Objection Procedure

Mistake of Fact

7. In my decision of 22 November 2011, I considered the assertion that various scores are unjustified on the basis that they were based upon a mistake of fact which was material to the Determination. I remanded the scoring in relation to PIs 1.2.1, 1.2.2, 1.2.3 and 3.1.1 (harvest strategy, harvest control rules, information and monitoring, legal and customary framework) for reconsideration.
8. The particular mistake made was as to the PNA's share of the skipjack catch in the WCPO. Initially ISSF had alerted me to a mistaken reference in the Final Report to the PNA having 70% of the skipjack stock. The certification body explained and the objectors accepted that this was a simple error and this had not informed its decision making. Instead, the certification body had meant to state that the 2010 scientific advice reported that it had 70% of the skipjack tuna catch within waters controlled by member nations to the PNA Agreement (possibly in response to the application of the closure of the High Seas pockets).
9. It was accepted by all that, when scoring, the certification body had used the figure of 58%, not 70%, of the WCPO skipjack catch in PNA waters for 2009 (see Table 4 on page 29 of the Final Report). The 70% figure had been provided by the SPC late in the assessment process (see page 507 Final Report) and, albeit not relied upon, had been referred to in various places in the text. The certification body informed me that they did not alter the scores to reflect growing PNA dominance in the fishery

suggested by the increase from 58% to 70%, as they considered that 58% in itself was already sufficient to justify the scoring. Nevertheless there was still significant doubt as to the correct figure for PNA's share of the catch as the 58% figure in fact related to catch by purse seine only (it did not consider pole and line and other forms of gear), did not take into account discard rates and in all likelihood had understated the catch in the Philippines, Indonesia and Vietnam.

10. The certification body have argued in their response to the remand of 30 November 2011, that the figures are to a degree mistaken but that this is not material to the Determination. They report SPC advice as follows: the percentages of total skipjack catch in the WCPFC Convention Area caught by all gears in PNA EEZs, including archipelagic waters, in 2009 and 2010 are:

2009 55.2%

2010 68%

My attention was further drawn to WCPFC Scientific Committee advice as to skipjack discarded by purse seiners, being 2.7% for 2009 and 1.8% for 2010. Taking these estimates into account and assuming zero discarding of skipjack by non-purse seine gears, it is said that the revised figures are:

2009 55.4%

2010 68.1%.

11. Although it is not entirely clear to me how these figures have been reached, I note that they have not been challenged by the objectors. Based upon the revised figures for PNA's share of the WCPO skipjack catch, I accept that the mistake as to fact was not material. It cannot sensibly be argued that the variation from 58% to 55.4% is sufficiently large so to lead to a clear conclusion that the mistake would have had a material effect on the Determination. Whilst the variation in relation to the Indonesia, Philippines and Vietnam share of the catch is more significant (vis, the certification body accept that the true figures are more likely 26% rather than 17% - see Table 4 on page 29 of the Final Report), this does not clearly indicate that such a mistake would have been material. I remind myself that I am bound to afford the certification body a margin of appreciation and not, in the absence of compelling evidence or argument, to seek to substitute my judgement on a factual matter for theirs.
12. Further points made by the certification body in relation to the specific PIs on remand are as follow. In relation to PI 1.2.1 (harvest strategy) it was pointed out and I accept that in scoring this PI, relatively higher weight had been attached to management action by WCPFC. Thus, insofar as the assessment of this PI related largely to the actions of WCPFC, the leverage assumption, if in play at all, was of lesser importance.
13. Furthermore, in relation to PI 1.2.2 the certification body point out that it did not, in awarding a 60 score, place upon any weight on the ability of the PNA to put in place formal harvest control rules for skipjack, going forward. Rather it found that there was the capacity for applying measures and a general understanding that actions

would be taken. Given my analysis in paragraphs 69-72 of the previous decision, I accept that the future role to be played by PNA, and therefore the leverage assumption, is not strictly relevant to the score of 60 (as opposed to the related condition, which I consider below).

14. With regard to PI 1.2.3 (information and monitoring) the certification body have responded that “*since the quality of information for the Indonesia, Philippines and Vietnam fisheries was scored separately and against a different scoring issue from the quality of information for PNA skipjack fisheries, the mistake of fact on PNA leverage and the associated share of catches by Indonesia, Philippines and Vietnam did not affect the scoring of the quality of information from fisheries in those countries.*” The certification body, whilst maintaining the scores for the first scoring issue at 100 and the second and third at SG80 level, has decided to reduce the score for this PI from 85 to 80. Taking into account FAMv2 paragraph 4.2.7f, this seems appropriate. I accept that the mistake of fact, in relation to these countries, even if material, will not have had a bearing on the question whether the third scoring issue for SG 80 is met vis “*there is good information on all other fishery removals from the stock*”.
15. From the certification body comments in relation to PI 3.1.1 (both in the Final Report and in response to the remand), I understand that the extent of control by PNA is only one element of the components considered. In any event, I have found that the mistake is not sufficiently significant to be material to the Determination.

Lack of scientific analysis

16. MSC Tab Directive D-003 v1.1 states that a “*fishery [can] only pass if the whole fish stock(s) meet th[e] standard.*” Clearly, it is critically important to this Determination that this principle is capable of being met in circumstances where one of the bodies charged with the necessary management action (bearing in mind the “and/or” nature of the conditions) has less than 100% influence over those fishing the stock. The objectors have indicated that some degree less than full coverage could suffice. They state in their response of 7 December 2011, that “*assuming for the sake of argument that these figures are accurate and static, the critical question posed by Dr Restrepo at the oral hearing remains unanswered and ignored: what percentage is enough for management of the entire stock?*”.
17. In fact, PNA is already in the process of engaging a consultancy to carry out scientific analysis/modelling as to their share of the catch and their ability to manage thereby the sustainability of the entire stock. This is now set out clearly in the milestones for the conditions, which I address below. The objectors call however for the necessary scientific modelling to be conducted prior to certification, not after.
18. In my view, it was not strictly necessary for this work to have been carried out prior to certification. The SG60 requirements for PIs 1.1.2 and 1.2.2 were met and the lack of such modelling is properly an issue for the fishery taking action over the next 5 years to reach SG80. What matters for the purposes of the conditions is that one or other body has the sufficient leverage and is capable of taking the necessary management action. As to which body that is, in my view, is a matter that may reasonably be resolved over the period of certification.

Conditions 1 & 2

19. During the hearing I invited submissions from the parties as to my jurisdiction with regard to conditions. The objectors helpfully drew my attention, in their response dated 7 December 2011, to the *Decision of the Independent Adjudicator in the Matter of an Objection to the Final Report and Determination on the Proposed Certification of the Denmark North Sea Plaice Fishery*, in which a different Independent Adjudicator considered conditions under paragraph 4.8.2(a). As will be recalled, in paragraph 6 of my previous decision I stated that my jurisdiction does not, under paragraph 4.8.2(b) the Objections Procedure, extend to the content of conditions. I agree however with the approach taken in the Denmark North Sea Plaice objection and am of the view that I do have jurisdiction to consider conditions under paragraph 4.8.2(a) (“*serious procedural and other irregularities*”) where a condition will clearly not be sufficient to raise a fishery from SG60 to SG80 within the 5 years of certification or put alternatively where the condition is one which no certification body could reasonably have raised.
20. In this respect, given that Conditions 1 & 2 were challenged in the Notices of Objection I have decided that these matters are properly before me. It would, in my view, be inappropriately restrictive to refuse to consider the objectors’ points simply because these were raised in the part of the prescribed form that relates to paragraph 4.8.2(b) of the Objections Procedure, rather than 4.8.2(a).
21. Material changes to Condition 1 raised in relation to PI 1.1.2 (reference points) are as to the Client Action plan which now states that:

“PNA have commissioned work to clarify the actions necessary by PNA to meet these conditions in the setting of target and limit reference points through current contracts with SPC and CLS.

.....

PNA also confirm that PNA would be prepared to take the burden of accounting for skipjack catches outside of PNA waters in setting reference points, which are currently reflected in the SPC scientific advice being considered in PNA management decisions

Depending on the results of this work, PNA may proceed independently or through influencing WCPFC. This decision would be taken within the first year of certification, on receipt of results from SPC and CLS”.

22. I note, in particular the second paragraph above that PNA “*confirms that [it] is prepared*” to, in effect, disproportionately reduce its own exploitation rates in response to fishing mortality outside its own waters. It would perhaps have been better if this had been worded in such a way as to indicate that PNA will formally adopt such an approach so as to be binding at member state level, but given that this is an Action Plan, some action will be required to make good this confirmation and will accordingly be subject to annual surveillance. I note also in this regard that PNA have confirmed that Implementing Agreements are binding on member states.
23. The proposed changes to Condition 2, PI 1.2.2 (harvest control rules and tools) and the Client Action Plan include that there is to be a milestone of “*scientific analysis to*

assess the scope for SG80 requirements applying to the whole of the stock to be met by PNA actions and consideration of the main uncertainties” to be undertaken in year 1. Year 2 milestone is “if the analysis to be undertaken in Year 1 demonstrates that adoption of appropriate HCRs for the WCPO skipjack stock by PNA will be effective, proposals for adoption of appropriate HCRs by PNA should be prepared and under consideration by PNA by the second surveillance audit.”.

24. It is notable that the Year 2 milestone for Condition 2 proceeds on the basis that if the scientific analysis to be carried out by CLS and SPC substantiates the ‘leverage assumption’ and therefore that management action by PNA for the whole stock would be effective, strictly speaking WCPFC need not take action and PNA need do no more than to promote the adoption of appropriate HCRs by WCPFC. What is absent, a point picked up by the objectors, is any mention of what is to happen if that analysis does **not** indicate that PNA determined HCRs will be effective for the whole stock.

25. However, whilst I would encourage the certification body and the client fishery to make final changes to expressly deal with this, I consider it implicit from the commitment to carry out the necessary scientific analysis and to take a decision on the basis of that analysis how to proceed that, if the results are not in favour of PNA being able to effectively manage the whole stock, it would necessarily fall to WCPFC to do so. If it becomes clear that PNA does not have sufficient leverage, it is clear that the following scoring guideposts at SG80 could not, in the absence of WCPFC management action, be met:

“well defined harvest control rules shall be in place thatensure that the exploitation rate is reduced as limit reference points are approached”

“evidence shall be available that indicates that tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules”.

26. It should be borne in mind moreover that if the analysis does not find that PNA is in a position to take the necessary action, this is a matter which the objectors can expect to be picked up by the certification body on surveillance audit. If the fishery is not taking the appropriate steps to promote/support HCRs by WCPFC by year 2 and 3 or by year 4 appropriate HCRs had not been put in place by WCPFC, then no doubt FCMv2 paragraph 6.7.3 would be invoked vis *“If progress against an interim milestone is judged to be behind target, the certification body shall specify the remedial action required, and if relevant, further milestones and scores to be achieved, and the time frame by which the milestone shall be achieved.”* Failing this, there is the possibility that the certification would be suspended or withdrawn.

27. In all the circumstances, I have concluded that Conditions 1 & 2 and associated Client Action Plans are sufficient to bring the fishery upto SG80 for PI 1.1.2 and 1.2.2 over the period of certification. In these circumstances, there is no irregularity in the terms of the conditions as revised.

Scoring arbitrary or unreasonable

PI 3.2.1 Fishery-Specific Objectives - score 80

28. In my decision of 22 November 2012, I remanded the score for PI 3.2.1 for reconsideration on the basis of being arbitrary or unreasonable. The objectors challenged the PISG80 *"Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system."*
29. The assessment found specific objectives included explicitly in the VDS Scheme text, and in WCPFC CMM 2008-01, which are consistent with outcomes expressed by MSC's Principles 1 and 2. The CMM objectives are designed to meet MSC Principle 2 for bigeye tuna and yellowfin tuna and it was argued that the scientific projections indicate that the application of these objectives will also meet Principle 1 requirements for skipjack (WCPFC-2010/15 rev 1).
30. The objectors point out however that CMM 2008-01 did not make explicit statements about a consequence or aim of the measure being that skipjack tuna would be maintained above levels associated with Bmsy. This was a perceived outcome of the measure and was no more than the assessment team's opinion (albeit widely shared).
31. In my previous decision I noted that CMM 2008-01 is indeed not expressly concerned with skipjack tuna and the Final Report casts doubt on the linkage between the VDS Scheme and the scientific advice (noting also that there is a lack of openness with regard to the decision making processes in this regard).
32. I mistakenly took the VDS text to be the same as the Palau Agreement. This is not the case and they are separate documents. I am told that the VDS text does include more specific objectives than those to be found in Article 2 of the Palau Agreement, but that these are general and longer term. Thus, albeit relevant as to long term objectives, the certification body acknowledged the shortfall in terms of short term objectives. Accordingly, the PI is rescored from 80 to 70 – on the basis that appropriate short term objectives are implicit rather than explicit within the fishery's management system. A condition is raised with *"PNA and/or WCPFC to establish explicit short term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, within the fishery's management system within the term of certification."*
33. The objectors accept that the rescoring and the raising of the new condition are movements in the right direction. However, on account of the untested leverage assumption they argue that the fact that the new condition permits PNA alone to implement the required short term objectives is insufficient. Given however my conclusions above as to the mistake of fact (being immaterial) and the adequacy of conditions 1 & 2, I am satisfied that the certification body's response to this aspect of the remand is acceptable.

Conclusions

34. In my previous decision of 22 November 2011, I concluded that PIs 1.2.1, 1.2.2, 1.2.3, 3.1.1 and 3.2.1 should be remanded to the certification body reconsideration. I am satisfied that the certification body has adequately dealt with the matters raised in my decision. Even with the proposed rescoring the fishery achieves a pass for all three Principles.

35. I confirm the Determination, in line with the amendments proposed by the certification body in its original response to the objections and its later response dated 30 November 2011. As all parties will be aware, the post-objection certification decision “*shall be made with reference to the decision of the Independent Adjudicator*” (see paragraph 4.9.6 of the Objections Procedure).

Melanie Carter

Independent Adjudicator

13 December 2011