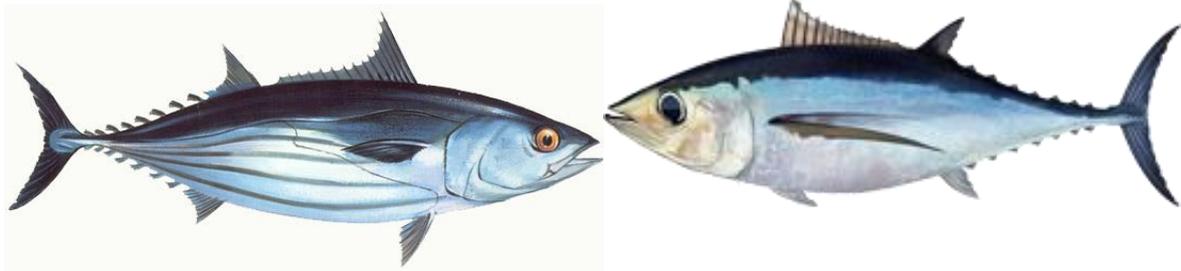


MSC SUSTAINABLE FISHERIES CERTIFICATION

Japanese Pole and Line Skipjack and Albacore Fishery



Public Comment Draft Report

July 2016

Prepared for: **Meihi Gyogyo Co. Ltd**
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1 GLOSSARY

ALB	Albacore tuna
B _{current}	Average total biomass for a range of recent years
B _{current} , F=0	Expected B _{current} in the absence of fishing
B _{latest}	Used by WCPFC to mean Biomass estimated in the latest year
B _{MSY}	Equilibrium total biomass at MSY
B ₀	Unfished biomass
CAB	Conformity Assessment Body
CCMs	Commission Members, Cooperating non-Members, and participating Territories
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMM	Conservation and Management Measure
CoC	Chain of Custody
CPUE	Catch per Unit Effort
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
EEZ	Exclusive Economic Zone
ETP	Endangered, threatened or protected species
EPO	Eastern Pacific Ocean
FAJ	Fisheries Agency of Japan
FAO	Food and Agricultural Organization
F _{current}	Average fishing mortality-at-age for recent years
F _{MSY}	Fishing mortality-at-age producing the maximum sustainable yield
FFA	Pacific Islands Forum Fisheries Agency
FL	Fork length
F _{MSY} (MSY)	Fishing mortality-at-age producing the maximum sustainable yield
FRA	Fisheries Research Agency
HCR	Harvest Control Rule
IATTC	Inter-American Tropical Tuna Commission
IFC	Intertek Fisheries Certification
ISSF	International Seafood Sustainability Foundation
JASTFA	Japan Adjacent Sea Tuna Fishery Association
JDWTFA	Japan Distant Water Tuna Fishery Association
JFSPSFA	Japan Far Seas Purse Seine Fishing Association
JTFCA	Japan Tuna Fisheries Co-operative Association
LRP	Limit Reference Point
MAFF	Ministry of Agriculture Forestry and Fisheries
MCS	Monitoring, Control and Surveillance
MSC	Marine Stewardship Council
NFSFRI	National Far Seas Fisheries Research Institute
NGO	Non-Governmental Organisation
OFP	Oceanic Fisheries Programme of the SPC
PNA	Parties to the Nauru Agreement
RBF	Risk-Based Framework
RFMO	Regional Fisheries Management Organization
SB	Spawning Biomass (also SSB)
SC	Scientific Committee

SICA	Scale Intensity Consequence Analysis
SKJ	Skipjack tuna
SPC	Secretariat of the Pacific Community (formerly South Pacific Commission)
TAC	Total Allowable Catch
TCC	Technical Compliance Committee of the WCPFC
TRP	Target Reference Point
UNCLOS	United Nations Law of the Sea
UNFSA	United Nations Fish Stocks Agreement
UoC	Unit of Certification
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and Central Pacific Ocean
WPFMC	Western Pacific Fishery Management Council
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

This report is the Public Comment Draft Report for the full MSC assessment of the Japanese pole and line skipjack and albacore pole and line fishery by the Conformity Assessment Body (CAB) Acoura Marine¹. Meiho Gyogyo Co. Ltd, the client for this assessment, is based in, Shiogama, Japan.

The fishery under assessment has two pole and line vessels (Meiho Maru and Toyokuni Maru) which fish skipjack tuna in the Western Central Pacific Ocean (WCPO), under the jurisdiction of the WCPFC (Western Central Pacific Fisheries Commission), and North Pacific albacore tuna in the Northern Pacific Ocean which is under the jurisdiction of the Inter-American Tropical Tuna Commission (IATTC) and the WCPFC. The UoC catch is all within the WCPFC Convention area. The target species are therefore subject to both national and regional fisheries management measures and policy. Fish are landed into two ports in eastern Japan, Shiogama and Yaizu.

The assessment team was made up of Jo Akroyd (Team Leader, P3) and Kevin Stokes (P1 and P2). The site visit took place in Tokyo and Yaizu in June 2015, with participation from the client, the Fisheries Agency of Japan (FAJ), the National Far Seas Fisheries Research Institute (NFSFRI) and World Wildlife Foundation (WWF), Japan.

During pre-assessment and full assessment, the assessment team was supported by Intertek Japan. During the main assessment visits, the team was accompanied by Kohei Nagano from Intertek Japan, who provided excellent translation and interpretation. The client also provided excellent interpretation through Mr. Andreas Hermawan. The many documents translated and used in the assessment are available from Acoura Marine.

The fishery was assessed using CR v1.3 except at PI 1.2.2. Following the MSC Notice, “*Scoring of ‘available’ Harvest Control Rules (HCRs) in CRv1.3 fisheries*” of 24th November, PI 1.2.2 si(a) and si(c) have been scored using CR v2.0 provisions for SG60 scoring both target species. Harmonisation with other certified and in-assessment overlapping fisheries took place during July-October 2015 and at a pilot harmonisation process organized by the MSC, with a meeting of all CABs, Independent Experts and peer reviewers, and stakeholders involved in WCPO-related tuna conformity assessments held in Hong Kong during April, 2016.

In general, the key strengths of the fishery are the small footprint, on either of the two target species but especially on the marine environment. The target species impact is small because of the size of the UoC in comparison to the stocks and other fisheries. The impact on the ecosystem is small due both to the scale of the UoC and to the nature of fishing. Fishing is by pole and line, using barbless, unbaited hooks. Targeting is highly specific, with only small amounts of non-target, retained species and low bait (as chum) usage. No retained species, including the single bait species, are considered to be main species in MSC terms. There are no bycatch or ETP species caught and habitat and ecosystem impacts are negligible. The governance and management of the fisheries, both at nation and international level is well documented and well implemented.

Skipjack and North Pacific albacore are target species/stocks in already MSC certified fisheries. Skipjack is also the target species in two other “in assessment” fisheries. Harmonisation has therefore been complex. Harmonisation has taken place in total with two other CABs and four other assessment teams.

¹ This fishery entered assessment with Intertek Fisheries Certification (IFC) and during assessment transferred to Acoura Marine. Any reference to IFC within this report should be read as Acoura Marine.

The Acoura Marine assessment team has provisionally recommended that the fishery should be certified, because no performance indicator (PI) scored <60 and all the Principles have an average weighted score of 80 or above. Skipjack had two PIs (1.2.1 and 1.2.2) score between 60 and 80, albacore also had two PIs (1.1.2 and 1.2.2) score between 60 and 80. Therefore four conditions of certification, all for Principle 1 and all consistent with harmonisation requirements have been set. This recommendation is subject to client, peer and stakeholder review.

The conditions are as follows:

Condition 1: skipjack tuna PI 1.2.1

By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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.

Condition 2: Skipjack tuna PI 1.2.2

By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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; b) The selection of the harvest control rules shall take into account the main uncertainties; c) 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.

Condition 3: North Pacific albacore tuna PI 1.1.2

By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: b) The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity; c) 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.

Condition 4: North Pacific albacore tuna PI 1.2.2

By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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; b) The selection of the harvest control rules shall take into account the main uncertainties; c) 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.

2 AUTHORS AND PEER REVIEWERS

This assessment and report was produced by Jo Akroyd and Kevin Stokes

A brief summary of their experience and qualifications is included below.

Jo Akroyd: Expert Advisor Principle 3 (P3) and Lead Assessor: Jo is a fisheries management and marine ecosystem consultant with extensive international and Pacific experience. She has worked at senior levels in both the public and private sectors as a fisheries manager and marine policy expert. Jo was with the Ministry of Agriculture and Fisheries in New Zealand for 20 years. Starting as a fisheries scientist, she was promoted to senior chief fisheries scientist, then Fisheries Management Officer, and the Assistant Director, Marine Research. She was awarded a Commemoration Medal in 1990 in recognition of her pioneering work in establishing New Zealand's fisheries quota management system. Among her current contracted activities, she is involved internationally in fishery certification of offshore, inshore and shellfish fisheries as Fisheries Management Specialist and Lead Assessor for the Intertek Fisheries Certification audit team. She has carried out the Marine Stewardship Councils' (MSC) certification assessment for sustainable fisheries. Examples include NZ (hoki, southern blue whiting, albacore, hake, scallops), Fiji (longline albacore) Japan (pole and line tuna, flatfish, snowcrab, scallops), China (scallops), Antarctica (Ross Sea toothfish fishery).

Dr. Kevin Stokes: Expert Advisor Principles 1 and 2 (P1 and P2): Kevin is a fisheries science, management, and policy consultant with extensive international and Pacific experience. He has worked at senior management levels in both the public and private sectors as a fisheries scientist, manager, and advisor. Kevin worked for the Ministry, Agriculture, Fisheries and Food and the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) in the UK for 15 years. He was responsible for all finfish monitoring, assessment and advice and worked extensively in Europe, serving as chair of the EC Scientific, Technical and Economic Committee for Fisheries (STECF) and as UK representative on the International Council for the Exploration of the Sea (ICES) advisory Committee for Fisheries Management (ACFM), as well as chairing working groups and committees. He served on multiple UK research councils, led the UK scientific delegation to the International Whaling Commission (IWC) and served as UK Alternate IWC Commissioner for many years. He served for many years as an *ad hominem* member of the UK Special Committee on Seals. Kevin worked as Chief Scientist for the New Zealand Seafood Industry Council (SeafIC) for 9 years, responsible for science policy and process as well as leading a consulting group drawing on diverse international expertise. He has worked on a wide range of marine shellfish and finfish, and environmental issues and has provided advice nationally and internationally at senior governmental and ministerial levels, as well as to fishing, processing and retail industries, and to NGOs. For nine years he chaired the New Zealand National Rock Lobster Management Group (NRLMG). Kevin was for many years a member of the New Zealand Institute of Directors and has worked on governance and strategy development projects, particularly in New Zealand. For the past 6 years, Kevin has worked as a private consultant in the general area of fisheries but extending to governance and wider advisory matters. He has worked extensively across the globe as well as in New Zealand, doing technical reviews; certification programme review and design work as well as certification assessment; governance review and design; and sustainability advice to retailers and processors. He has worked on Ecological Risk Assessment (ERA) design and implementation. In 2007 Kevin participated in the MSC Quality and Consistency work, reviewing advice on development of the new P1 CR, and as part of the group that led development of the new P2 and P3 CR. He has undertaken more than 60 MSC pre-assessments as well as acting as an assessor, auditor, and peer reviewer for multiple certification assessments, ranging from prawns to tunas. He has carried out work for a number of Certification Assessment Bodies (CABs). From late 2013 for one year, Kevin

worked exclusively to Conservation International, leading development work on the Global Tuna Initiative, with a focus on the Western Central Pacific. Among his current, contracted activities relevant to this assessment, he is involved in MSC certification and surveillance of tuna fisheries in the Indian Ocean. He previously undertook surveillance on the certified PNA non-associated purse seine fishery for skipjack in the WCPO.

Peer Reviewer 1 – Tim Huntington

Tim Huntington is a fisheries biologist with over 30 years' industry and consulting experience. His qualifications include a BSc (Hons) in Biological Sciences and MSc in Applied Fish Biology. He has worked in capture fisheries and aquaculture in over 60 countries worldwide, with a particular focus on Europe, the Middle East, Africa and Asia (including the Indian and Pacific Ocean countries). Following a number of industry and consulting posts, Tim has specialised in promoting sustainability in fisheries and aquaculture. This initially included working on a number of fisheries development projects for the Global Environment Facility, FAO and other agencies before focusing on the roles that eco-labelling can play in driving improved fishing practises and management. He has worked extensively with the MSC responsible fisheries programme, including leading pre-assessments, full assessments as well as chain of custody audits for a number of certification bodies including Acura, Intertek, MacAlister Elliott and SCS. He has participated as lead auditor or a team member on a number of UK, NE and NW Atlantic, Indian Ocean and Pacific Ocean fisheries and specialises in contributing to the Principle 2 elements. He also works with fisheries on fisheries improvement planning, using the MSC standard as a benchmark for baseline and incremental assessments. In addition to his work for the Certification Bodies, Tim has also worked direct for MSC, where his contributions have included a number of studies on chain of custody methodologies, looking at including aquaculture in the MSC fisheries standard and the 2011 review of environmental benefits of MSC certification. Tim is also the co-author of a number of reports published by the UN's Food and Agriculture Organisation (FAO) on the costs and benefits of fisheries certification for small-scale fisheries.

Peer Reviewer 2 – Kevin McLoughlin

Kevin McLoughlin is a specialist fisheries consultant based in Australia with more than 30 years' experience across a wide range of international and domestic fisheries science issues, with close links to government policy. He represented the Australian Government on many committees and groups such as fishery assessment groups, providing advice on a diverse range of fisheries and species (including tuna, shark, various finfish, scallop and prawn). Work in assessment groups involved assessment of target species, development of bycatch action plans and ecological risk assessments. Mr McLoughlin was responsible for the production of annual status reports for Australian government managed fisheries for a number of years. Mr. McLoughlin was Australia's delegate on scientific issues at the Indian Ocean Tuna Commission and was Chair of the IOTC Working Party on Bycatch for several years. Mr McLoughlin was also a delegate at meetings of the Commission for the Conservation of Southern Bluefin Tuna led Australia's delegation to 2006 scientific meetings of the Commission. Mr McLoughlin has worked predominantly on Principle 1 aspects of MSC assessments but has also undertaken Principle 2 and 3 work, as well as peer review and surveillance audits for several fisheries. Kevin was a team member for the full assessment of the Fiji albacore longline fishery, Australia's blue

grenadier fishery, as well as the Western Australia Exmouth Gulf and Shark Bay prawn trawl fisheries. He was a peer reviewer for the New Zealand albacore troll fishery and for the North and South Pacific American Albacore Fishing Association fisheries and has undertaken surveillance audits for a number of fisheries. Kevin is currently a member of teams assessing the North-eastern Tropical Pacific Purse Seine Yellowfin and Skipjack Tuna Fishery, and the Tri Marine Western and Central Pacific Skipjack and Yellowfin Tuna Fishery.

3 DESCRIPTION OF THE FISHERY

3.1 Unit(s) of Certification (UoC) and scope of certification sought

a. Scope

Acoura Marine confirms that the fishery under assessment is in conformity with Principle 3, Criterion A1 and Principle 3, Criterion B14 of the MSC Certification Requirements v1.3:

- Criterion A1: A fishery shall not be conducted under a controversial unilateral exemption to an international agreement.
- Criterion B14: Fishing operations shall not use destructive fishing practices such as fishing with poisons or explosives.

The client has not been successfully prosecuted for a forced labour violation in the last 2 years.

Therefore, Acoura Marine concludes that the fishery is within the scope of the MSC certification process.

b. The UoC for the assessment

The MSC Certification requirements (MSC 2013, v1.3) defines Unit of Certification (UoC) as “*The target stock(s) combined with the fishing method/gear and practice (including vessel/s) pursuing that stock*”.

The fishery under assessment the Japanese Pole and Line Skipjack and Albacore fishery comprises two UoCs

UoC 1:

Species	Skipjack tuna (<i>Katsuwonus pelamis</i>)
Geographical range	0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones <ol style="list-style-type: none"> 1. Southern quarter: 0- 25 degrees north in latitude, 145- 175 degrees east in longitude 2. Eastern off shore: 35 -45 degrees north in latitude, 165-176 degrees east in longitude 3. Adjacent Sea of Japan (from near Tanegashima to the southern quarter).
Fishing Method	Pole and Line
Stocks	Western and Central Pacific Ocean
Management System	Japan and Western and Central Pacific Fisheries Commission (WCPFC)
Client Group	Meiho Gyogyo Co. Ltd Vessels: Meiho Maru and Toyokuni Maru

UoC 2

Species	Albacore tuna (<i>Thunnus alalunga</i>)
Geographical range	0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones <ol style="list-style-type: none"> 1. Southern quarter: 0- 25 degrees north in latitude, 145- 175 degrees east in longitude 2. Eastern off shore: 35 -45 degrees north in latitude, 165-176 degrees east in longitude

	3. Adjacent Sea of Japan (from near Tanegashima to the southern quarter).
Fishing Method	Pole and Line
Stocks	Western Central and Eastern Pacific Ocean
Management System	Japan, WCPFC and Inter-American Tropical Tuna Commission (IATTC)
Client Group	Meiho Gyogyo Co. Ltd Vessels: Meiho Maru and Toyokuni Maru

c. Eligible fishers

There are other pole and line vessels licenced in Japan that fish the same species method and area. The client has confirmed they do not intend to certificate share at this stage.

3.1.1 Scope of assessment in relation to enhanced fisheries

This fishery is not an enhanced fishery

3.1.2 Scope of assessment in relation to Introduced Species Based Fisheries (ISBF)

This fishery does not include Introduced species

3.2 Overview of the fishery

The area of certification specified is 0-40 degrees north and 140-175 degrees East. This area is entirely within the Western Central Pacific Ocean (WCPO) and encompassed by the Western and Central Pacific Fisheries Commission (WCPFC) Convention Area (Figure 1). Fishing operations, all pole and line targeting primarily skipjack but also albacore, take place in three distinct zones described as:

1. Southern quarter: 0-25 degrees north in latitude, 145-175 degrees East in longitude
2. Eastern offshore: 35-45 degrees north in latitude, 165-175 degrees East in longitude
3. Adjacent Sea of Japan (from area near Tanegashima to the Southern quarter)

Skipjack tuna (*Katsuwonus pelamis*) and Albacore tuna (*Thunnus alalunga*) are highly migratory species (HMS). Skipjack tuna are distributed globally in tropical and subtropical waters. Skipjack tuna in the WCPO are considered to be a single stock for assessment and management purposes, and are managed by the WCPFC. Albacore tuna are split into separate North Pacific and South Pacific stocks. The North Pacific stock ranges across much of the North Pacific Ocean with no East-West distinction. North Pacific albacore is therefore managed by both the WCPFC and the Inter-American Tropical Tuna Commission (IATTC).

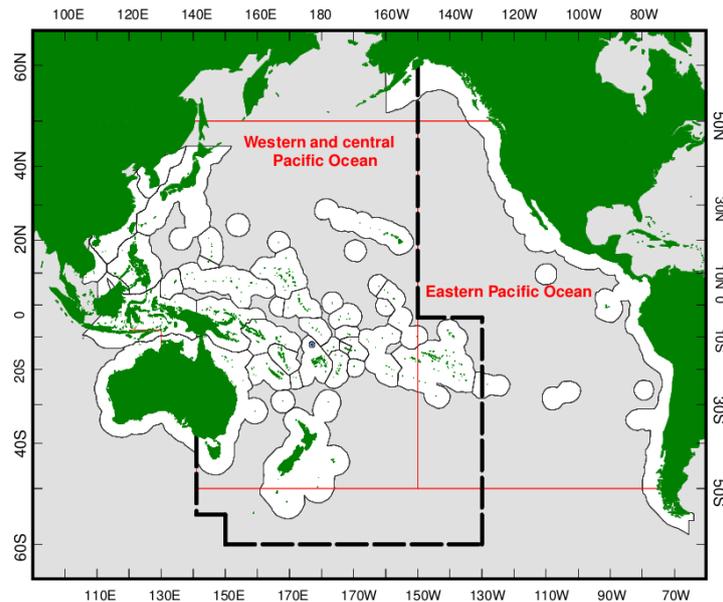


Figure 1. WCPO and EPO area definitions, and WCPFC area of competence (Source: Williams and Terawasi, 2015)

The client for the certification is Meiho Gyogyo Co. Ltd, with the Unit of Certification being skipjack and albacore tuna caught and landed by two pole and line vessels (Meiho Maru No. 22, and Toyokuni Maru No. 8). Meiho Gyogyo is a subsidiary of Meiho Co. Ltd, itself a subsidiary of Minami Shokuhin Co. Ltd, both of which are involved in diverse food processing and supply. Both companies have been involved in tuna processing for a number of years and Minami Shokuhin Co. Ltd has had supply contracts with fishing companies in the past. An important contract between Minami Shokuhin Co. Ltd and Toyokunimaru Gyogyo Co. Ltd started in 2011. In 2012, Meiho Gyogyo Co. Ltd was incorporated and the Meiho Maru No. 22 was purchased. That vessel, and the Toyokuni Maru No. 8, owned and operated by Toyokunimaru Gyogyo Co. Ltd, exclusively supply all their product to Meiho Co. Ltd and Minami Shokuhin Co. Ltd, with product landed in Shiogama (Miyagi Prefecture) being supplied to Meiho Co. Ltd and product landed in Yaizu (Shizuoka Prefecture) being supplied to Minami Shokuhin Co. Ltd.

A rough breakdown of the flow of products from the two vessels and from the market (via auction) is shown in the following text table.

Port	Skipjack (mt) from:			Albacore (mt) from:		
	Toyokuni M	Meiho M	Market	Toyokuni M	Meiho M	Market
Yaizu	800	1,000	6,700	200	0	2,300
Shiogama	500	600	600	0	400	1,600

The two vessels in the UoC therefore provide only a proportion of the total product flowing to Meiho Co. Ltd and Minami Shokuhin Co. Ltd plants in Yaizu and Shiogama. The markets are dedicated points of landing through which all product must pass. Typically, fish would be auctioned through the market but the Minami Shokuhin Co. Ltd–Toyokunimaru Co. Ltd contract specifies the fish will be bought by Minami Shokuhin Co. Ltd and its and the Meiho Maru catch all by-passes the auction. At all stages of landing, grading, storage and trucking there is clear documentation and labelling to ensure there is no mixing of fish with fish caught from any other vessel. There is a dedicated landing line for each individual vessel. The documentation includes name of vessel, date of landing, species and weight of fish and

ownership. In the processing plants, product is also separated by clearly marked batches, traceable to vessels and trips.

Details of the two vessels can be found on the WCPFC website (Toyokuni Maru: <http://www.wcpfc.int/node/12602>; Meiho Maru: <http://www.wcpfc.int/node/12668>). Both vessels were commissioned in 1995. The Toyokuni Maru has a crew of 30 and a trip capacity of approximately 330mt. The Meiho Maru has a complement of 32 and a trip capacity of approximately 360mt. The maximum total annual landings from the two vessels would be about 3,500mt, though lesser amounts have been landed in 2013 and 2014 (see below). A replacement for the Toyokuni Maru, and an additional Meiho vessel, are being planned for completion around the end of 2017. If both vessels are commissioned and the Meiho Maru No. 22 is retained, the total maximum annual landings could increase by about 65%.

The vessels are licensed by the Fisheries Agency of Japan (FAJ) for 5-year periods. The license provides global coverage with clear conditions. Amongst these are conditions that constrain refuelling and taking on fishing supplies. When fishing in the WCPFC, the vessels have an effective trip duration of 50 days due to fuel and provisioning constraints and restrictions. All materials, including live bait, are taken from Japan. The vessels operate to a fishing plan set at the start of the calendar year. The plan is developed by the fishing master(s). The traditional pattern is to fish in Japanese adjacent and offshore waters in the period May to October, and in the southern quarter, i.e. Tropical Pacific, at other times. The general Japanese pole and line distant water fleet pattern of fishing in the Tropical Pacific has changed markedly through time for a variety of reasons and fishing is now most common in the Marshall Islands and the Federated States of Micronesia (FSM). In 2014, the Meiho Maru fished three trips (see translated document no. 2), roughly centred on i) eastern FSM and The Marshall Islands, ii) The Marshall Islands, and iii) international waters to the east of the Mariana Islands. In 2015, all southern quarter fishing in November-April is planned for FSM waters, generally westward of 2014 fishing areas. A permit is required to fish in any national waters (e.g. FSM). Permits are applied for and issued annually, and by arrangement between the Japanese Tuna Fisheries Cooperative Agency (JTFCFA) and national governments. Catch records are provided both to the FAJ and the JTFCFA. The JTFCFA, as the permitting authority, conveys data to national authorities (e.g. FSM). On average, each pole and line vessel carries a national compliance observer within national waters once every 2-3 years. Permit conditions vary by country. The permits for fishing in (e.g.) FSM waters (see translated document no.3) prohibit fishing within the 12mile Territorial Seas, within one nautical mile of the edge of submerged reefs, within two nautical miles of any Fish Aggregating Device (FAD), or in any way that might disrupt local fishing. Fishing is restricted to tuna or tuna-like species and any bycatch of turtles, reef fish, and marine mammals must be released alive (though none is reportedly caught).

Pole and line fishing is targeted at marks such as seabirds or floating logs. Fishing is by pole and line using barbless hooks. Artificial lures are used but hooks are not baited. Anchovy (*Engraulis japonicas*), bought in Japan and carried live in tanks, is used to chum the area being fished. Fishing takes place typically until the target skipjack or albacore tunas have moved on. If too many smaller fish are caught, then fishing is stopped as small fish are not economically desirable. As each fishery area/time has its own and known characteristics, fishing plans are generally set up to avoid smaller fish. According to Toyokunimaru Co. Ltd, since 1995 when the Toyokuni Maru was commissioned, only the species reported in catch records since 2011 have been caught (2011 being the time the Toyokuni Maru started supplying exclusively to the client fishery and for which catch records have been made available for the assessment). Those species are yellowfin tuna (*Thunnus albacares*), bigeye tuna (*T. obesus*), yellowtail amberjack (*Seriola lalandi Valenciennes*), and dolphin fish (*Coryphaena hippurus*). Bycatch is very limited and there are no discards. Sharks are unwanted and no targeting takes place, with no reports of catches. There are no reports of

any catch of seabirds, marine mammals and turtles.

A (poor quality) video showing operations on a similar vessel to the Toyokuni Maru and Meiho Maru can be found at: <https://www.youtube.com/watch?v=SBvYBbzZ6aE>. Pole and line fishing is described in numerous places (e.g. FAO: <http://www.fao.org/fishery/fishtech/30/en>).

Catches

The total catch of skipjack by the UoC was 1,376 mt in 2013, 2,308 mt in 2014, and 2,541 mt in 2015. The total catch of albacore by the UoC was 1,228 mt in 2013, 942 mt in 2014, and 659 mt in 2015 (see translated document no.1 for 2013 and 2014 figures; figures for 2015 are from updated documents sent by the client [document no. 63]).

Based on statistics in the 2013 WCPFC Tuna Fishery Yearbook (<https://www.wcpfc.int/statistical-bulletins>), the total WCPO catch of skipjack in 2013 was 1,810,166 mt (note that this is slightly higher than the figure of 1,784,091 mt reported in WCPFC, 2014a). Based on the same source, the total 2013 pole and line catch of skipjack was 161,220 mt, of which the Japanese component was 73,434 mt.

Catches of North Pacific albacore cannot be extracted from the same source, which combines North and South Pacific albacore stocks. From ISC (2014), 2013 catches amounted to 92,509 mt. Based on graphically presented data, the total catch has varied in the range 60–80,000 mt since the mid-2000s until 2012, with about 50% being taken by troll and pole and line (no information on pole and line is separately provided). Japanese catches have formed about 63% of the annual total, suggesting Japanese catches of about 58,000 mt in 2013. Based on statistics in the 2013 WCPFC Tuna Fishery Yearbook, the Japanese total albacore catch splits approximately 50:50 between pole and line versus other gears.

The UoC catches in 2013 therefore represent the following percentages of skipjack and rough percentage estimates of albacore catches, assuming 63% of the troll plus pole and line 2013 catch is by Japanese vessels, with 50% of that due to pole and line:

	Skipjack	Albacore
2013 UoC catch as % Total (all gears)	0.08	1.32
2013 UoC catch as % all pole and line	0.85	2.11
2013 UoC catch as % Japan pole and line	1.87	4.22

Pole and line catches generally, especially of skipjack and including by Japanese vessels, have decreased markedly over the past two decades (see Figure 2). This has coincided with a major increase in purse seine fishing in the WCPO by purse seine vessels. Current catches of skipjack are at an all-time high. Figure 3 shows WCPO catches by gear and tuna species (WCPFC, 2014a).

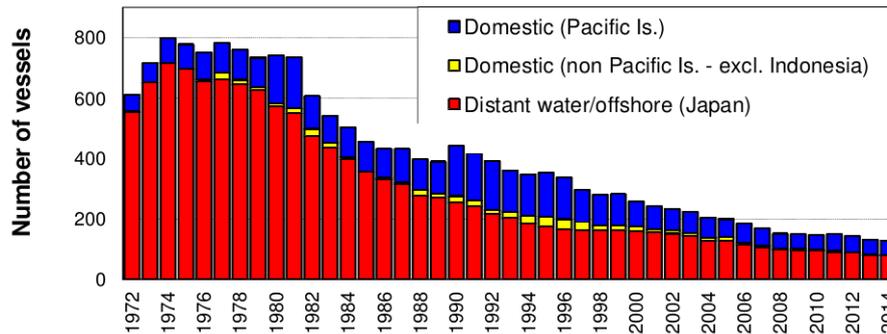


Figure 2. Pole and line vessels operating in the WCPFC Convention Area (excluding vessels from the Japanese Coastal and Indonesian domestic fisheries). (Source: Williams and Terawasi, 2015).

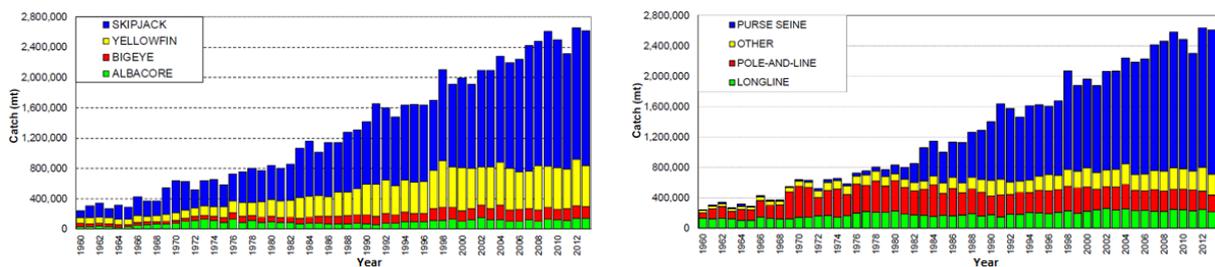


Figure 3. Left panel: Catch (mt) of albacore, bigeye, skipjack and yellowfin tunas in the WCPFC Statistical Area. Right panel: Catch (mt) of albacore, bigeye, skipjack and yellowfin tunas in the WCPFC Statistical Area, by longline, pole-and-line, purse-seine and other gear types. (Source: WCPFC, 2014a)

3.3 Principle One: Target Species Background

CABs carrying out certification assessments are required by the MSC to harmonise assessments of overlapping fisheries (MSC CR v1.3 27.8.7-8). As noted at section 4.1 of this report, the key documents for skipjack harmonisation are i) the 2011 PNA purse seine fishery for skipjack tuna in the WCPO; ii) the 2014 3rd Annual surveillance for the same; and two in-assessment fisheries at the PCDR stage in early 2015. Those fisheries are the Tri Marine Western and Central Pacific skipjack and yellowfin tuna, and the Solomon Islands skipjack and yellowfin tuna purse seine and pole & line. For North Pacific albacore, the key harmonisation document is the 2015 recertification of the Canadian Highly Migratory Species Fishery (CHMSF) for North Pacific albacore. Links to these and the first and second PNA surveillances can be found at:

- **PNA PCR (2011):** https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pna_western_central_pacific_skipjack_tuna/assessment-downloads-1/20111221_PCR.pdf
- **PNA Surveillance 1 (2012):** https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pna_western_central_pacific_skipjack_tuna/assessment-downloads-1/20121221_SR_PNA197.pdf
- **PNA Surveillance 2 (2013):** https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pna_western_central_pacific_skipjack_tuna/assessment-downloads-1/20131212_SR_TUN197.pdf
- **PNA Surveillance 3 (2014):** https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pna_western_central_pacific_skipjack_tuna/assessment-downloads-1/20141212_SR_TUN197.pdf

[downloads-1/20141218_SR_TUN197.pdf](#)

- **Tri Marine:** https://www.msc.org/track-a-fishery/fisheries-in-the-program/in-assessment/pacific/tri-marine-western-and-central-pacific-skipjack-and-yellowfin-tuna/assessment-downloads-1/20151210_PCDR_TUN501.pdf
- **Solomon Islands:** https://www.msc.org/track-a-fishery/fisheries-in-the-program/in-assessment/pacific/solomon-islands-skipjack-and-yellowfin-tuna-purse-seine-and-pole-and-line/assessment-downloads-1/20160330_PCDR_TUN526.pdf
- **CHMSF PCR (2015):** https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/CHMSF-British-Columbia-North-Pacific-Albacore-Tuna/reassessment-downloads-folder/MSC_CHMSF_Albacore_tuna_fishery_PCR_June2015.pdf

Catches

Catch information on skipjack and albacore (North and South Pacific combined), and other tuna and related species, is available annually from the WCPFC in the form of the WCPFC Tuna Fisheries Handbook and associated data sets (both available at: <https://www.wcpfc.int/statistical-bulletins>). Figure 4 shows total catches by all gears for skipjack, by year. Skipjack catches have increased steadily from 1950 and in 2013 were at an all-time high, close to 1,800,000 mt.

Albacore catches have varied through time. According to ISC (2014), the total reported catch of north Pacific albacore for all nations combined (see Figure 5) peaked at 126,175 mt in 1976 and then declined to the lowest observed catch in the time series (37,274 mt) in 1991. Following this low point, total catch recovered to a second peak of 119,297 mt by 1999. Total catch declined through the 2000s to a low of 63,654 mt in 2005 and has increased slightly to between 65,000 and 92,000 mt in recent years (2006-2012). Median catch over the stock assessment model time frame (1966-2012) is 72,439 mt and average annual catch for 1981-2010 is 72,128 mt. The total catch in 2013 was 92,509 mt.

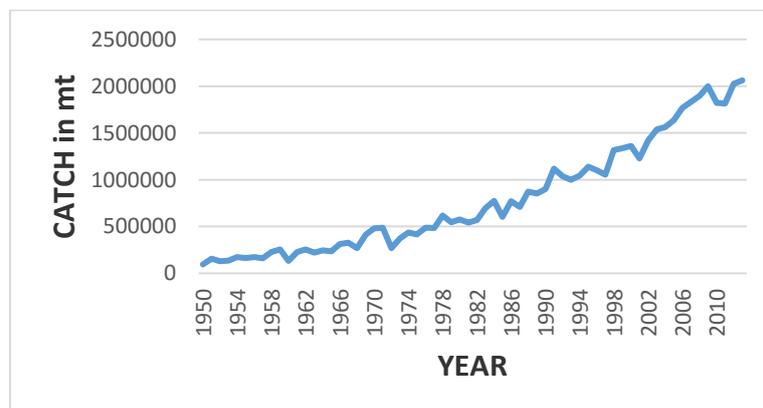


Figure 4. Total WCPFC skipjack catch by year from 1950 to 2013. (Source: WCPFC Tuna Fishery Yearbook, <https://www.wcpfc.int/statistical-bulletins>).

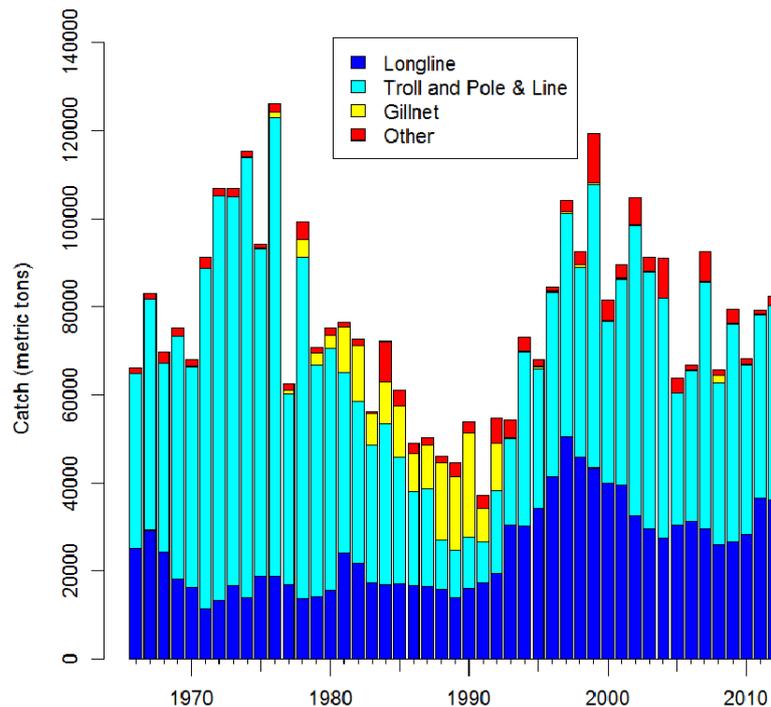


Figure 5. Total WCPFC North Pacific albacore catch by year from 1966 to 2012. (Source: ISC (2014)).

The WCPFC Tuna Fisheries Handbook and associated datasets provide breakdowns for all species, by gear and flag state, by year. Catch splits and history by species and gear are shown in Figure 3. Details for pole and line, the Japanese pole and line fleet, and the UoC are shown in section 3.2.

Skipjack catches are predominantly taken from equatorial waters, especially by purse seine, the dominant gear type. Catches by 5 degree square, averaged over 2003-12 are shown in Figure 6.

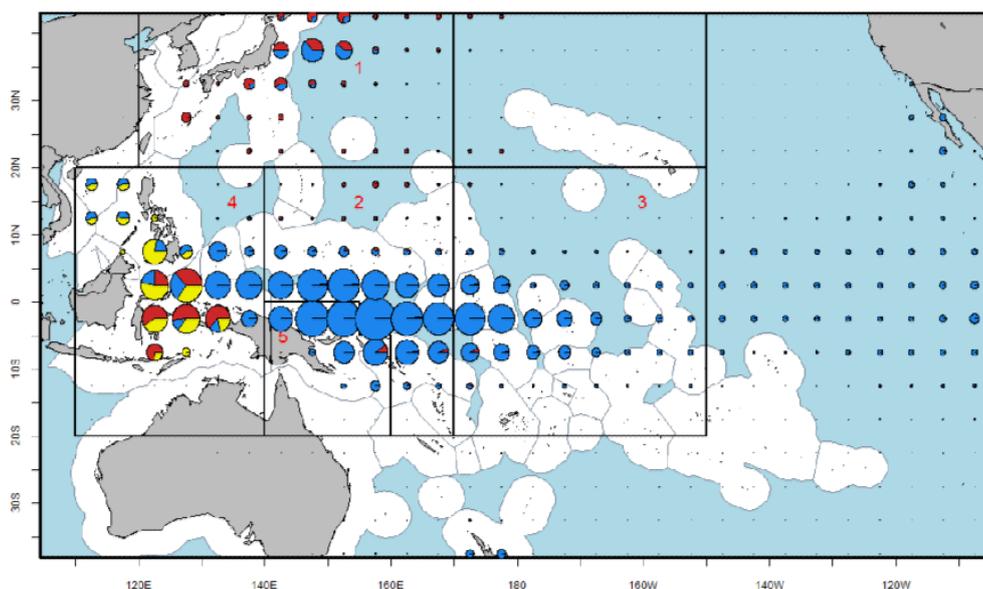


Figure 6. Catch distribution (2003-2012) by 5 degree squares of latitude and longitude and fishing method: longline (green), purse-seine (blue), pole-and-line (red), and skipjack (yellow).

other (yellow). Overlaid are the sub-regions for the assessment model. Note the break at 170 E in Region 1 is incorrect. Source (figure and caption copied from Rice *et al*, 2014). Note the numbered regions (1-5) refer to spatial divisions used in the stock assessment (the top two boxes are both Region 1).

Albacore catches are taken by multiple fleets over a wide area. Figure 7 shows the general coverage by fleets (labelled F1-F24), as used in the stock assessment.

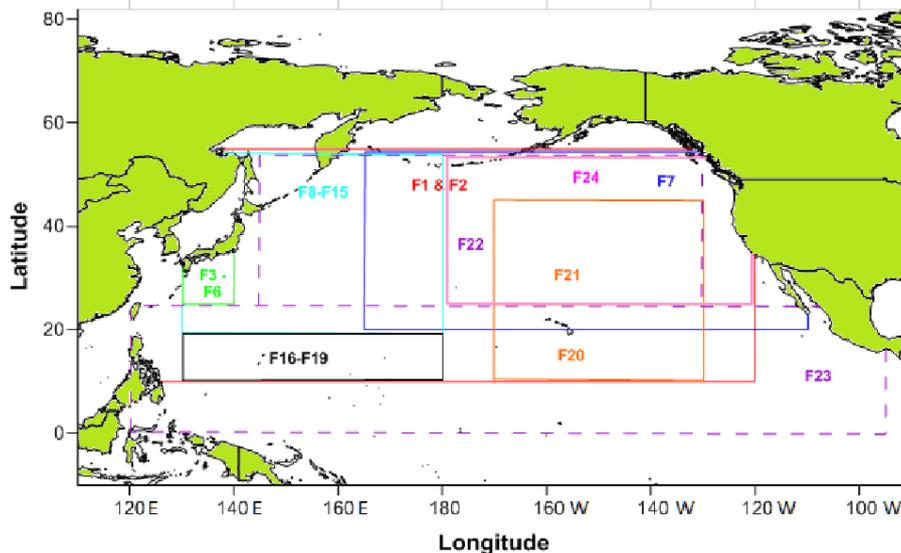


Figure 7. Operational areas of 24 fisheries defined for the 2014 north Pacific albacore tuna (*Thunnus alalunga*) stock assessment. Fleets F1 and F2 are the Japanese pole and line fleet, with F1 being for quarters 1 and 2, and F2 for quarters 3 and 4; the fleet definitions are as used for stock assessment purposes. (Source: ISC, 2014)

Stock assessment process (both P1 species)

Stock assessments are undertaken by the Oceanic Fisheries Programme (OFP) of the Secretariat of the Pacific Community (SPC), as science provider to the WCPFC. Both skipjack and albacore were last reviewed by the WCPFC Scientific Committee (SC) in August 2014 (WCPFC, 2014a), with the report, including management advice, being agreed by the WCPFC at its annual meeting in December 2014 (WCPFC, 2014b). Multiple, relevant working papers are available at: <https://www.wcpfc.int/meetings/10th-regular-session-scientific-committee>. The key skipjack assessment paper by Rice *et al* (2014) is available at: <https://www.wcpfc.int/node/18998>. The key North Pacific assessment paper by the International Scientific Committee (ISC, 2014) is available at: <https://www.wcpfc.int/node/19202>.

The SC conducts assessments annually, with priorities reflecting current concerns with status of stocks or uncertainty in the assessments. Procedures and stock assessment methodology for the assessments are now fine-tuned amongst members and cooperating non-members of the WCPFC, though important technical changes are made in response to methodological advances, working papers presented, and external reviews (e.g., Ianelli *et al*, 2012). A Pre Assessment Workshop (PAW) is typically held annually at the SPC during the first quarter of the year, with members and cooperating non-members providing data and input. The completed assessments (by SPC OFP) are presented to the WCPFC SC meeting, held

annually in August. The SC reviews the assessments and issues an agreed statement on the current status of the stocks, management advice, and implications. The statement is forwarded to the WCPFC annual session for consideration and endorsement of any recommended management actions to be taken. A similar process is used for North Pacific albacore with the ISC forming the key, joint WCPFC and IATTC reference group. External reviews have been carried out by Chen (2011a, b) and Cordue (2011).

SPC, as data provider and manager to the WCPFC, maintains a central database for the catch, effort, size frequency, tagging, biological data, observer, sampling and other data from the tuna fisheries. This allows the SC to use these data for stock assessments and advisory processes.

3.3.1 Skipjack

Biology

Skipjack tuna (*Katsuwonus pelamis*) belongs to the family Scombridae. Skipjack is distributed widely across tropical and subtropical waters of the world's oceans. In the Pacific Ocean, the majority of skipjack biomass is in tropical areas, though extending to 40 degrees north and south where poleward-flowing currents occur and roughly corresponding to the 20 degree C surface isotherm (WCPFC, 2014a). Skipjack is a highly productive species, with considerable variability in life history characteristics, reaction to oceanographic variability, and vulnerability to a range of surface-fishing gears.

Skipjack in the WCPO are considered to be a single stock for assessment and management purposes. Based on extensive tagging data, the spatial extent of the WCPO stock is believed to approximate the WCPFC Convention Area (Wild and Hampton, 1994; see Figure 1, above). Tagging studies suggest skipjack movement is highly variable (Sibert *et al*, 1999) and it is thought that variability is influenced by large-scale oceanographic variability (Lehodey *et al*, 1997).

Growth and onset of maturity are rapid. In the WCPO, approximate age estimates from tagging and otolith readings indicate fork lengths of 48, 65, 75, and 80 cm for ages 1 to 4 years respectively (Tanabe *et al*, 2003), though with significant individual variability. These growth rates are similar to those estimated elsewhere, e.g., in the Indian Ocean (Kolody *et al*, 2011), though are slightly higher. Maturity is typically reached within the first year, again similar to skipjack in the Indian Ocean (Kolody *et al*, *ibid*). Skipjack are highly fecund and spawn opportunistically throughout their range and through the year when conditions are favourable.

Hampton (2000) estimated natural mortality rate using a size-structured tag attrition model. The study indicated that natural mortality was of the order of 0.8 *per* month for skipjack of fork length 21–30 cm, and much lower, 0.12-0.15 *per* month, for skipjack of fork length 51–70 cm. Again, these mortality rates are similar to those for skipjack in the Indian Ocean (Kolody *et al*, *ibid*).

Taken together, the life history characteristics imply that skipjack are highly productive, with expected high inter-annual variability in recruitment to the stock and the fisheries which exploit them. In the stock assessments (below), external life history parameter estimates are used but life history parameters are also estimated internally and are explored in sensitivity tests.

Stock assessment and information

As noted above, Skipjack in the WCPO is considered to be a single stock for assessment (Wild and Hampton, 1994) and management purposes. The stock has been assessed regularly since 2000. At the time of the 2011 PNA Western and Central Pacific Skipjack Tuna certification, the latest assessment was due to Hoyle *et al* (2010, 2011). That assessment has now been superseded by Rice *et al* (2014). The latest stock assessment makes a number of structural and technical changes, and takes account of issues raised in an independent review of the 2011 bigeye tuna assessment (Ianelli *et al*, 2012).

The assessment is conducted using the now well-established MULTIFAN-CL program (see: <http://www.multifan-cl.org/>). MULTIFAN-CL was developed as an analytical tool for fisheries in which large-scale age sampling of catches is unfeasible or not cost effective, but where length-frequency (size composition) sampling data are available. It provides a statistically-based, robust method of length-frequency analysis.

The assessment models the population dynamics of the stock and the fisheries operating on it. It uses maximum likelihood estimates to fit a range of parameters and is then used to evaluate stock status probabilistically with respect to reference points. The model is age- and spatially-structured, with 16 quarterly age-classes and 5 Regions (see Figure 6), a change from the 3 Regions used in the previous (2011) assessment. The model uses catch, effort, size composition, and tagging data, grouped in to 23 fisheries, a change from the 17 used in the previous assessment. Fisheries are modelled with respect to their selectivity by size, areas fished, and standardised CPUE (for 2 fisheries as opposed to one in the previous assessment). The model is complex, fitting data of varying quality from a diverse range of fishing activities. It also accommodates quarterly movements of fish between 5 Regions.

Given the model complexity and sometimes conflicting data sources, great care has been taken to investigate uncertainty, especially in the key parameters (biomass and recruitment). Model fitting followed state-of-the-art approaches to develop a base case and investigate the robustness (using likelihood profiling) of absolute estimates of biomass. Sensitivity tests were informative (varying fixed S-R steepness, alternate growth assumptions, alternate mixing assumptions, changes in weighting factors) and a crosswise grid of (36) model runs was undertaken to explore the main sources of structural and data uncertainty due to all sensitivity factors in combination. Confidence intervals on key outputs were calculated using standard statistical approaches.

Data descriptions are included in Rice *et al* (2014). The primary data types are tagging, length-frequency, and catch and effort. These are described briefly, following Rice *et al* (*ibid*).

Tagging data are a key input to the assessment, providing information on stock size, exploitation rate, and abundance. The data used in the assessment include the SPC OFP's Skipjack Survey and Assessment Project (SSAP) carried out during 1977–80, the Regional Tuna Tagging Project (RTTP) during 1989–92 and in-country projects in the Solomon Islands (1989–90), Kiribati (1991), Fiji (1992) and the Philippines (1992). Tagging data from regular Japanese research cruises were available for the period 1988–2012. Tagging data from the Pacific Tuna Tagging Programme (PTTP) were available for the period 2006 until the 2nd quarter of 2012. All tags were released using standard tuna tagging equipment and techniques by trained scientists and technicians. Tags have been returned mostly from purse seine vessels via processing and unloading facilities throughout the Asia-Pacific region.

In the assessment, the numbers of tag releases input to the assessment model were adjusted for a number of sources of tag loss – unusable recaptures due to lack of adequately resolved recapture data, estimates of tag loss (shedding and initial mortality) due to variable skill of taggers, and estimates of base levels of tag shedding/tag mortality. The procedures used in re-scaling the releases are described in detail in Berger *et al*. (2014), but essentially the re-

scaling preserves the recovery rates of tags from the individual tag groups as if none of the tag loss had occurred. These processes were able to be applied only to the RTTP and PTTP releases.

For incorporation into the assessment, tag releases were stratified by release region, time period of release (quarter) and the same size classes used to stratify the length-frequency data. A total of 314,555 effective releases were classified into 251 tag release groups. The returns from each size-class of each tag release group (50,087 effective tag returns in total) were then classified by recapture fishery and recapture time period (quarter).

Because tag returns by purse seiners were often not accompanied by information concerning the set type, tag return data were aggregated across set types for the purse seine fisheries in each region. The population dynamics model was in turn configured to predict equivalent estimated tag recaptures by these grouped fisheries.

The quantity and quality of tagging data, and the data treatment external to and within the model are all appropriate. Sensitivities to mixing assumptions, and hence interpretation of the data, have been explored.

Catch and effort data are available by year and quarter for each of the 23 defined fisheries. As fisheries are defined partly by Region, the catch and effort data are also spatially structured. Discarded catches of skipjack are estimated to be minor by the SPC OFP 2014 and are ignored.

The large majority of skipjack catch is by purse-seine vessels in the equatorial regions fishing under the PNA Vessel Days Scheme (VDS). Reporting is by standardised WCPFC logbook and there is an increasing use of electronic data reporting in some areas (e.g., Karis *et al*, 2014). Observers are carried on all (100%) purse-seine vessels fishing under the PNA VDS. Skipjack catch from vessels fishing under the VDS have accounted for approximately 80% of the total skipjack catch since 2010.

In the past, there have been concerns about bias in purse-seine catch weight estimates due to grab sampling as opposed to more recent spill sampling methods. The issue was subject to an independent review by Cordue (2013), with a response from SPC. The issue of bias has been recognised and whereas previous assessments have tried to accommodate both approaches, the latest assessment uses only a single set of purse-seine catch estimates, using estimates based on the spill method. The bias is, in fact, more important for assessments of purse-seine bycatch species - bigeye and yellowfin tuna. For some fleets (e.g., Spanish and Japanese, reported catch is used rather than an estimate).

Purse-seine catch estimates are allocated by set type (i.e. whether a set is associated with a constructed FAD, or not). It is known that some VDS effort data have been potentially misrepresented due to different approaches to reporting fishing *versus* non-fishing (e.g. transit or searching) time. The issue has been recognised by Rice *et al* (2014) who note the practice essentially represents effort creep which has not yet been specifically corrected to ensure consistency of reporting. While the impact of this is not known, it is stated this will be minimised by estimation of frequent time-based changes in catchability. It needs also to be noted that from a management perspective, the issue is well-recognised. The 3rd Annual Surveillance of the PNA Western and Central Pacific Skipjack Tuna Unassociated and Log Set Purse Seine Fishery certification, to which this certification assessment must be harmonised, considers the issue in some detail and concludes that "*Given these measures, and the evidence that effort remains within the TAE, the audit team concluded that this weakness in the VDS is not currently considered sufficient to compromise the effectiveness of the VDS as a tool for limiting fishing effort to the desired levels.*"

Size composition (length-frequency) data for each of the defined fisheries were compiled into 54 2 cm size classes, from 2–4 cm to 108–110 cm, with data from purse-seine, longline, pole and line, and other fisheries. In previous assessments, purse-seine length frequencies from grab samples by observers were used, with a correction for known grab sampling bias. Due to incomplete coverage this led to gaps in the data series with poor model tracking of length (and hence, *via* growth models, age). Changes made in the latest assessment include the use of port sampling from Pago Pago in American Samoa (up to 2008) and sample weighting by catch. While longline catch few and large skipjack, the length-frequency data collected from Japanese training and research longline vessels have been used in the model because they allow improved selectivity estimates across the size range.

Extensive size composition data for pole and line fisheries are available, sourced primarily from observers, with the exception of more northern fishing grounds (Regions 1 and 2) where length data are available from the Japanese off shore and distant-water fleet from the beginning of the model period, 1972, until 2009. For equatorial fishing grounds, excluding Region 2, data were available from both the Japanese distant-water fleet and from domestic fleets. Data from the pole and line fisheries in region 3 were dominated by observer-collected samples from the Japanese fleets (1974-2004), with additional data from Fiji in the 1990's. Length data from the pole and line fishery in Region 4 consist of mostly Japanese data from the period 1972 --2009, with significant data from Indonesia in the years 2009-2012. The data from the pole and line fishery in region 5 are from multiple countries, dominated by the USA in the years 1988 --1997 and Papua New Guinea (PNG) in the years 1998 --2012.

Some size composition data for the Philippines domestic fishery were included in the assessment, allowing estimation of selectivity by fishery. A number of other fisheries (Indonesian domestic fishery, Vietnamese domestic fishery, Philippines domestic purse seine fishery in Region 4), had insufficient size composition data available to allow fishery-specific selectivity estimation.

Overall, size-composition data are sufficient to allow robust model building to assess stock status and provide a basis for advice.

Reference points

Article 6 of the WCPFC Convention requires that the Commission apply the guidelines of Annex II of the United Nations Fish Stocks Agreement (Guidelines for the application of the 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).

As summarised in WCPFC-TCC10-2014-DP06 (see: <https://www.wcpfc.int/node/19705>), at its 8th Annual Session, the Commission adopted a hierarchical approach to identifying the Limit Reference Points for the key target species in the WCPFC, as follows:

Level	Condition	LRPs
Level 1	A reliable estimate of steepness is available	F_{MSY} and B_{MSY}
Level 2	Steepness is not known well, if at all, but the key biological (natural mortality, maturity) and fishery (selectivity) variables are reasonably well estimated.	$F_{X\%SPR_0}$ and either $20\%SB_0$ or $20\%SB_{current,F=0}$
Level 3	The key biological and fishery variables are not well estimated or understood.	$20\%SB_0$ or $20\%SB_{current,F=0}$

The hierarchical approach followed advice from the 7th Regular Session of the SC (WCPFC, 2011) which based its recommendations on a number of studies that explored technical aspects of estimation and robustness (e.g. to mis-specified levels of S-R steepness) as well as considering meta-analyses to gain insight in to appropriate levels of depletion that might serve as appropriate LRPs. The use of $20\%SB_{F=0}$ was considered sufficiently precautionary.

At its 9th Annual Session, the Commission decided to set the LRP for skipjack at Level 3, $20\%SB_{recent, F=0}$, where $SB_{recent, F=0}$ refers to the estimated spawning biomass in the absence of fishing averaged over a recent time window. At its 10th Annual Session, the Commission decided that the time window for estimation of the spawning biomass in the absence of fishing should have a length of 10 years, and be based on the years $t1=y_{last}-10$ to $t2=y_{last}-1$ where y_{last} is the last year used in the assessment.

Taken together these clearly demonstrate that the WCPFC has adopted a biomass LRP for skipjack tuna, with a clear definition of the period of calculation, and intended to be precautionary. Still remaining, but not essential for MSC scoring, is the issue of defining the risk level for exceeding the limit. This work is underway through the Scientific Committee and Management Objectives Workshop (MOW) informal process (see: <https://www.wcpfc.int/meetings/wcpfc-management-objectives-workshop-3>) and has been given impetus by the Commission through Conservation and Management Measure CMM 2014-06 (WCPFC, 2014b).

This has been given further force through adoption of an agreed work plan for the adoption of harvest strategies under CMM 2014-06 at WCPFC12 (see <https://www.wcpfc.int/conservation-and-management-measures>).

At the 11th Regular Session of the Commission in 2014 (WCPFC, 2014b), CMM 2014-01 was passed, replacing a number of previous CMM. Included in the resolution at paragraph 2 is the statement: “*the Fishing Mortality Rate (F) for skipjack will be maintained at a level no greater than F_{msy} , i.e. $F/F_{msy} \leq 1$.*” This reiterates and replaces the same statement made previously in CMM 2013-01.

The agreed fishing mortality limit of $F/F_{msy} \leq 1$ is consistent with maintaining the skipjack stock at or above B_{msy} . This is an indication of an intent to maintain the stock at a high productivity level, not just well above the point at which recruitment might be impaired. The adoption of the fishing mortality LRP thus implies a TRP of SB_{msy} or greater, consistent with MSC CR v1.3 CB2.3.1.1 and CB2.3.2.3.

At WCPFC12, the Commission agreed CMM 2015-06, setting an explicit biomass TRP of $50\%SB_{F=0}$, over the same time window as used for setting the LRP (see <https://www.wcpfc.int/conservation-and-management-measures>).

The use of explicit LRP and (until recently) implicit TRP is also seen through the standard procedures for providing advice from the SC to the Commission. WCPFC (2014a), for example, at Table SKJ2, copied below as Figure 8, shows SC reporting against MSY-related reference points for the 2014 skipjack base case assessment and selected sensitivity runs. Preceding paragraphs 42-48 frame advice in terms of SB_{msy} and $20\%SB_{F=0}$.

Table SKJ2: Estimates of management quantities for selected stock assessment models (see Table SKJ1 for details). For the purpose of this assessment, “current” is the average over the period 2008–2011 and “latest” is 2011.

	Base case	h=0.65	h=0.95	Mix 2qtr
MSY	1,618,800	1,426,800	1,806,800	,784,000
C_{latest}/MSY	1.02	1.16	0.92	0.93
$F_{current}/F_{MSY}$	0.61	0.82	0.45	0.52
B_0	6,587,000	6,913,000	6,404,000	7,419,000
$B_{current}$	3,615,213	3,613,290	3,612,585	4,374,786
SB_0	6,229,000	6,538,000	6,056,000	6,989,000
SB_{MSY}	1,753,000	2,111,000	1,453,000	1,999,000
$SB_{F=0}$	6,303,358	6,690,474	6,082,301	7,085,699
$SB_{current}$	3,260,579	3,258,721	3,258,170	3,971,998
SB_{latest}	3,052,995	3,050,692	3,049,508	3,548,468
$SB_{current}/SB_{F=0}$	0.52	0.49	0.54	0.56
$SB_{latest}/SB_{F=0}$	0.48	0.46	0.50	0.50
$SB_{current}/SB_{MSY}$	1.86	1.54	2.24	1.99
SB_{latest}/SB_{MSY}	1.74	1.45	2.10	1.78

Figure 8. Copy of Table SKJ2 from WCPFC (2014a), showing SC reporting against MSY-related reference points for the 2014 skipjack base case assessment and selected sensitivity runs.

In 2013, WCPFC10 agreed on a programme of work to be undertaken to inform the Commission’s consideration and adoption of a TRP and Harvest Control Rule (HCR) for skipjack tuna at its session in 2014. Building on scientific analyses, two proposals were made for TRP at WCPFC11. PNA/FFA members put forward a resolution to adopt a TRP of 50% $SB_{F=0}$ while the government of Japan proposed a TRP of 60% $SB_{F=0}$. The Commission did not make a decision at WCPFC11. It can be inferred from Figure 8 (i.e. Table SKJ2) that $SB_{msy}=28\%$ based on the latest base case assessment. Both proposals are therefore for TRP of the order of twice B_{msy} .

The debate about the TRP is based on a range of economic, political, and biological considerations. Skipjack are taken primarily by the PNA-dominated purse-seine fishery which also takes juvenile yellowfin and bigeye tuna, most especially in FAD-associated sets (see e.g., Figure 19 of Williams and Terawasi, 2015). Longline fisheries, however, target larger yellowfin and bigeye tunas. Bigeye in the WCPFC is currently at a low level (below its LRP; see section 3.4) and there is considerable debate about how best to achieve reductions in fishing mortality on bigeye which can be made through either or both longline and purse seine fleets. Depending on the skipjack TRP set, the economic implications for the fleets are quite different (see, e.g., <https://www.wcpfc.int/meetings/wcpfc-management-objectives-workshop-3>). Skipjack are not a low trophic level (LTL) species. However, one possible biological issue of relevance to TRP-setting relates to a suggestion of range contraction of skipjack from coastal Japanese waters, possibly as a result of the expanding tropical purse-seine fisheries (Kiyofuji *et al*, 2014). Discussion on the biological issue is current at the SC.

In 2015, WCPFC12 agreed Conservation and Management Measure CMM 2015-06 which sets the TRP for skipjack tuna at an (initial) value of 50% $SB_{F=0}$, subject to review no later than 2019.

In summary, explicit biomass and fishing mortality rate LRP have been agreed. An explicit TRP of 50% $SB_{F=0}$ is in effect.

Stock status

WCPFC (2014a) reports on stock status and trends. The latest assessment estimates $MSY = 1,618,800$ mt; $F_{current}/F_{msy} = 0.61$; and $SB_{latest}/SB_{F=0} = 0.48$. Note that the subscripts

current and *latest* are different; the former refers to a three year, recent average, while the latter (*latest*) refers to the latest year for the estimate (2011 in the assessment reported in WCPFC, 2014a).

The SC report summarises the status and trends in one composite graphic, copied here as Figure 9. Figure 9 (panel SKJ5) shows the familiar Kobe plots for the base case and limited sensitivity runs. As can be seen from the graphics and the summary statistics above, the skipjack stock is currently estimated to be at about twice SBmsy, and is being harvested at a rate of 0.61Fmsy. Sensitivity runs suggest it is within the range of candidate TRPs being considered by the WCPFC and that it is well above the LRP (and point of recruitment impairment). The summary figures do not include uncertainty ranges but elsewhere in Rice *et al* (2014) these are shown for estimated SSB (see Rice *et al*, 2014, Figure 24). It is apparent that the stock is above the explicit LRP and implicit TRP (SBmsy) with a high degree of certainty (as defined by MSC v1.3 CB2.2.1). There is not, however, a high degree of certainty that it is at or above the full range of candidate TRPs being considered by the WCPFC.

While the stock is estimated to be well above the LRP and SBmsy, fishing mortality has been steadily increasing and the MSY has recently been taken or slightly exceeded. The SC provided management advice that fishing is having a significant effect on stock size, especially in the western equatorial region and can be expected to affect catch rates, as too can oceanographic factors. The SC recommended the Commission take action to avoid any further increases in fishing mortality and to keep the stock at current levels. The SC also advocated for tighter purse-seine control rules, and the adoption of TRP and overall HCR. A TRP was set in 2015.

Harvest strategy and control rules

Skipjack is managed under the auspices of the WCPFC but is substantially caught under the PNA purse seine VDS, with PNA members all being members of the Forum Fisheries Agency (FFA). FFA members comprise a large and influential bloc within the WCPFC and are highly influential on the annual development and implementation of Conservation and Management Measures (CMM). It is through CMM that the WCPFC seeks to manage fisheries, setting conditions and constraints, and agreeing frameworks. Current, key CMM include CMM 2014-01 and CMM 2014-06 (WCPFC, 2014b). CMM 2014-01 is the current, dominant determinant of how fisheries can operate, while CMM 2014-06 lays out how the WCPFC views harvest strategies and its plans for implementing them for all tropical tuna stocks, including skipjack. Importantly, the Commission adopted a clear work plan at WCPFC 12 (see <https://www.wcpfc.int/conservation-and-management-measures>).

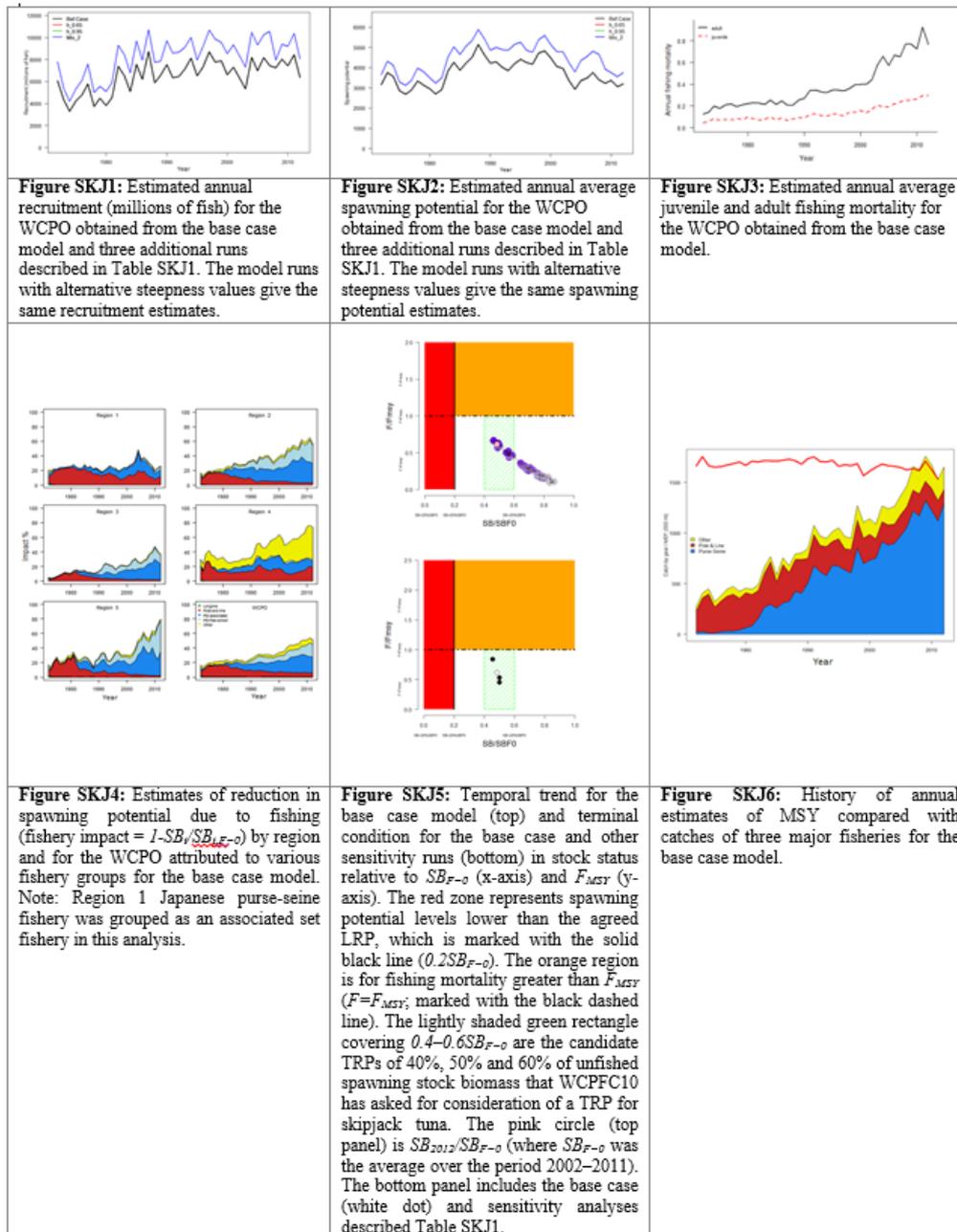


Figure 9. Composite of Figures SKJ1-6, copied from WCPFC (2014a).

Skipjack fishing is predominantly by purse-seine vessels operating under the VDS, as well as by pole and line fishing, including the UoC as a small subset. Pole and line fishing is dominated by the Japanese fleet but is increasing in the waters of Vietnam, Indonesia, and the Philippines. A critical issue for skipjack management is the way in which the purse-seine fleet interacts technically with the longline fleet. Purse-seine may be on associated sets (i.e., using Fish Aggregating Devices, FADs) or unassociated sets. Purse-seine fishing for skipjack, most especially when fishing with FADs, catches small bigeye and yellowfin tuna, the target species of the longline fleet. The mix of unassociated and associated purse-seine fishing, and longline fishing, has implications for biological pressure on bigeye tuna in particular and on the economics of the fisheries. This is the reason for debate in setting TRP. Setting objectives for skipjack fisheries is therefore complicated. Nevertheless, the WCPFC uses a default TRP of SB_{msy} and is actively working towards setting a much higher target, in $\%SB_{F=0}$ terms, taking account of the varied economic and biological considerations of its members.

CMM 2014-06 lays out the WCPFC interpretation of harvest strategies in a way fully consistent with MSC definitions and requirements. The intention is clearly to move towards well-defined harvest control rules ('decision rules' in WCPFC terminology). In the meantime, the harvest strategy in place relies on annual decision-making processes founded on the core principles of the WCPFC as laid out in its Convention and in a growing catalogue of CMMs (see: <https://www.wcpfc.int/conservation-and-management-measures>).

WCPFC (and MSC at MSC CR v1.30 GCB2.5) define a harvest strategy as (i) the control rules and tools in place; (ii) the information base and monitoring; and (iii) the assessment method. The intention is that these elements should work together effectively to ensure overall performance, measured in terms of achieving outcomes (i.e. meeting objectives).

As articulated through reference points (see above) the current WCPFC objectives for skipjack are to (i) ensure fishing mortality rate does not exceed F_{msy} (effectively ensuring the stock is maintained above B_{msy}); (ii) ensure the spawning stock does not fall to $20\%SB_{F=0}$ (which should be assured through meeting objective (i)); and (iii) maintain the stock at least as high as SB_{msy} (which again should be assured through meeting objective (i)). In reality, it is clear from all reports (e.g., WCPFC, 2014a, b, and CMM 2014-06) that the objective in fact is for a much higher $\%SB$, providing less risk (of declining to the SB LRP) and better economic performance.

Formal decision rules (harvest control rules) and TRP have not yet been defined because of the debate over TRP in mixed fisheries with competing objectives. The issues are well-understood by WCPFC members and processes are in train to develop explicit, formal rules. While the debate is taking place and options are being developed, management of skipjack has operated informally to meet the objectives. The information base is extensive from a wide range of biological studies and from a diverse range of fisheries. The information is sufficient to support a state-of-the-art stock assessment (above) that provides probabilistic estimates of key parameters and their relationship to the explicit and implicit reference points. Advice is given annually by the SC not just in relation to skipjack but to implications of management controls across fisheries (especially purse seine and longline) and the likely impacts on all tropical tuna stocks, most notably bigeye and yellowfin tunas. Advice from the stock assessment is provided by the Scientific Committee (e.g., WCPFC, 2014a) and additional work is carried out by the scientific provider, SPC, to the Commission. Annual decision-making, articulated through CMM, is supported by good scientific decision-support materials. The Commission also receives advice from its Technical and Compliance Committee (see e.g. WCPFC, 2014b). The most current CMM is CMM 2014-01, which lays out a wide range of capacity limitation measures, catch controls, FAD usage restrictions, country-specific measures, etc. CMM 2014-01 is supported by a number of other relevant CMM, dealing with vessel monitoring (CMM 2014-02), vessel records (CMM 2013-03), shark measures (CMM 2014-05), compliance and monitoring (CMM 2014-07),

Advice flows not just to the WCPFC but also through its constituent parties, notably the PNA, under whose purse-seine Vessel Days Scheme (VDS) over 80% of the skipjack catch is taken, with 100% observer coverage. All fishing under the VDS is subject to strict PNA-wide rules, as well as to any national or WCPFC rules in force. The PNA, like the WCPFC, uses scientific, technical, and compliance advice to adjust rules annually to meet objectives, cognizant of changes in advice on skipjack stock status, and on other species also caught in skipjack fisheries (see, e.g., <http://www.pnatuna.com/VDS> for PNA advice on effort limitation for 2015-2017), and (<http://www.ffa.int/node/1543>) for a recent announcement through the Forum Fisheries Agency (FFA) of the FFA, including all PNA members, of an intention to move to full catch controls within ten years. Currently, the VDS works by the PNA agreeing a Total Annual Effort (TAE), expressed in Vessel Days, which is allocated to individual PNA parties as Party Allocation of Effort (PAE). The procedures for reaching agreement on TAE and PAE,

and their correspondence with scientific advice is not transparent but the TAE must take account of WCPDC-agreed measures such as effort and capacity limits set in CMM 2014-01.

There are no formally agreed HCR yet in place, but the harvest strategy, using high quality science and compliance information, is founded on high quality scientific advice. The evidence of successful management to date is in the state of the stock. Skipjack is estimated to be at $48\%SB_{F=0}$, approaching twice the SB_{msy} level of $28\%SB_{F=0}$, and fishing mortality is estimated to be $0.61F_{msy}$. Skipjack is also not projected to fall to the SB_{msy} level. WCPFC (2014a) reports that “*Future status under status quo projections (assuming 2012 conditions) was robust to assumptions on future recruitment. Under either assumption, spawning biomass remained relatively constant and it is exceptionally unlikely (0%) for the stock to become overfished ($SB_{2032} < 0.2SB_{F=0}$) or for the spawning biomass to fall below SB_{MSY} , and it is exceptionally unlikely (0%) for the stock to become subject to overfishing ($F > F_{MSY}$).*” Nevertheless, the WCPFC has put in place CMM 2014-06 aimed at ensuring harvest control rules and agreed TRPs are developed and implemented for all stocks, including skipjack. This was strengthened in 2015 through the agreed work plan for the adoption of harvest strategies under CMM 2014-06.

3.3.2 Albacore

Biology

Albacore tuna (*Thunnus alalunga*) belongs to the family Scombridae. Albacore are distributed globally. In the Pacific Ocean there are two separate and distinct stocks, one in the North Pacific and the other in the South Pacific. The stock distinction is supported by differences in catch rates (Suzuki *et al*, 1977); tagging data (Ramon and Bailey, 1996); larval distributions (Ueyanagi, 1969); and genetic analyses (Takagi *et al*, 2001). North Pacific albacore are therefore assumed to be a discrete stock for assessment and management purposes.

Albacore tuna mature at approximately 5 years or at about 85 cm and have a lifespan of 10 to 12 years. Growth rates are moderate, with fork lengths at first birthday nearly 40 cm. Fecundity is estimated to be 0.8 to 2.6 million eggs per spawning. North Pacific Albacore spawn from March through to July on grounds located in the WCPO in subtropical waters between about 10 to 25 degrees North at depths exceeding 90 m (ISC, 2014).

Natural mortality is not well known for North Pacific albacore and has not been estimated, e.g., from tagging data because of low tag return rates in the WCPO ((Bertignac *et al*, 1999), and estimates of M are positively correlated with tag return rates (see Ichinokawa *et al*, 2008). However, since productivities of the north Atlantic and North Pacific albacore stocks are similar, based on previous assessment results (ISC, 2014), natural mortality is assumed for stock assessment purposes to be a constant 0.3 for all ages and for both sexes, the same as that used for north Atlantic albacore assessments (e.g., ICCAT 2010).

Taken together, the life history characteristics imply that albacore are highly productive, with, as for all tuna species which are influenced by environmental conditions, expected high inter-annual variability in recruitment to the stock and the fisheries which exploit them.

Stock assessment and information

As noted above, North Pacific albacore is considered to be a single stock for assessment and management purposes.

The stock has been assessed regularly by the Albacore Working Group (ALBWG) of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) since 2005. Virtual Population Analysis (VPA) was used for assessment in 2006 and was superseded by an assessment using the Stock Synthesis framework (see, e.g., Methot and Wetzel 2013) in 2011. Stock Synthesis version 3 (SS3; available at: http://nft.nefsc.noaa.gov/Stock_Synthesis_3.htm) was again used for stock assessment purposes in 2014. SS3 is a framework for exploring and implementing integrated length- and age-based forward-simulating statistical catch-at-age models. It is widely used around the world, but especially on the west coast of the USA.

The 2014 stock assessment has attended to multiple issues raised by independent reviews of the 2011 stock assessment (Chen, 2011a, b; Cordue, 2011).

The assessment models the population dynamics of the stock and the fisheries operating on it. It uses maximum likelihood estimates to fit a range of parameters and is then used to evaluate stock status probabilistically with respect to reference points. The model is age- and sex- but not spatially-structured, though a total of 24, spatially resolved fisheries are considered, providing an implicit spatial resolution. The model fits to all known catch data from 1966 to 2012 from ISC, WCPFC and IATTC members and cooperating non-members. Catch and size composition data collected primarily from Japanese vessels at port of landing and also by on-board observers, are fitted quarterly in all years. Catch and effort data are used for tuning, with eleven series investigated and ultimately four used (two Japanese longline fleets and two Japanese pole and line distant water fleets, split as two half-yearly components to reduce interpretation problems associated with seasonal switching between albacore and skipjack). Catch data are available from 1952 but the assessment starts from 1966 due to difficulties in assigning earlier data to fleets.

Biological assumptions include fixing the steepness of the Beverton-Holt stock-recruitment model at $h = 0.9$; sex ratio of 1:1; 50% maturity at age-5 and 100% maturity at age-6; natural mortality fixed as $M = 0.3$ for all ages and both sexes. Selectivity was assumed to be domed in all fisheries.

Model building and weighting as described in ISC (2014) follows state-of-the-art approaches to data fitting and interpretation of diagnostics to provide a selected base case run; retrospective and sensitivity analyses to both biological assumptions and data treatments (including weighting); and probabilistic estimates of parameters of interest, stock status, and potential future state.

Reference points

Article 6 of the WCPFC Convention requires that the Commission apply the guidelines of Annex II of the United Nations Fish Stocks Agreement (Guidelines for the application of the Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; including determination of stock-specific LRPs and TRPs.

The IATTC is similarly guided by Article IV of the Antigua Convention which relates to application of the Precautionary Approach as described in the FAO Code of Conduct for

Responsible Fishing and/or (Annex II of) the United Nations Fish Stocks Agreement (Guidelines for the application of the Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

As summarised in WCPFC-TCC10-2014-DP06, at its 8th Annual Session, the Commission adopted a hierarchical approach to identifying the Limit Reference Points for the key target species in the WCPFC as follows:

Level	Condition	LRPs
Level 1	A reliable estimate of steepness is available	F_{MSY} and B_{MSY}
Level 2	Steepness is not known well, if at all, but the key biological (natural mortality, maturity) and fishery (selectivity) variables are reasonably well estimated.	$F_{X\%SPR_0}$ and either $20\%SB_0$ or $20\%SB_{current,F=0}$
Level 3	The key biological and fishery variables are not well estimated or understood.	$20\%SB_0$ or $20\%SB_{current,F=0}$

The hierarchical approach followed advice from the 7th Regular Session of the SC (WCPFC, 2011) which based its recommendations on a number of studies that explored technical aspects of estimation and robustness (e.g. to mis-specified levels of S-R steepness) as well as considering meta-analyses to gain insight in to appropriate levels of depletion that might serve as appropriate LRPs. The use of $20\%SB_{F=0}$ was considered sufficiently precautionary.

Unlike skipjack (above) the Commission has not explicitly followed up by agreeing which Level should apply to North Pacific albacore. Nevertheless, on the basis that the Three-Level hierarchical approach to identifying the Limit Reference Points is exhaustive, at least Level 3 must apply. That is, there is an implicit LRP of $20\%SB_{F=0}$. Further, given applicability through the WCPFC Convention of Annex II of the United Nations Fish Stocks Agreement (Guidelines for the application of the Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; paragraph 7 (i.e. “*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.*”), there is a *de facto* fishing mortality LRP of F_{msy} .

In addition to these implicit fishing mortality and (spawning) biomass LRPs, the Northern Committee of the WCPFC in 2008, adopted an ‘*interim*’ reference point known as $F_{SSB-ATHL}$, the fishing mortality reference point that results in future projected SSB falling below the Average of the Ten Historical Lowest (ATHL) SSB estimates with a 50% probability. The most recent estimate of SSB_{ATHL} is 235,670 mt (ISC 2014).

Use of implicit LRP is also seen through the standard procedures for providing advice from the NC to the Commission. ISC (2014), for example, at Table 5.6, copied below as Figure 10, shows ISC reporting against the fishing mortality rate associated *inter alia* with $SSB-ATHL$, $20\%SSB_0$, and MSY . Advice to the WCPFC and IATTC is framed in terms of these quantities.

It should be noted that $F_{SSB-ATHL}$ is currently close to the fishing mortality rate associated with $20\%SSB_0$. Superficially, this could be interpreted as an interim LRP consistent with the MSC default of $20\%SSB_0$. However, SSB_{ATHL} is more than double the estimated SSB_{msy} . If MSC CR v1.3 CB2.3.3.4 were applied, given SSB_{msy} is estimated below $20\%SSB_0$, the accepted

MSC default LRP would be $75\%SSB_{msy} = \text{approximately } 7\%SSB_0$. To summarise, the estimated SSB_{msy} is very low and the implicit fishing mortality rate and spawning biomass LRPs are exceptionally conservative.

No Target reference points have been set for North Pacific albacore. Both WCPFC and IATTC have adopted approaches to developing TRP and LRP (see section below on harvest strategies).

Table 5.6. Potential reference points and estimated F-ratios (Reference Point/F) using $F_{2010-2012}$ and $F_{2002-2004}$ (reference years for north Pacific albacore CMMs adopted by the IATTC and WCPFC) to assess current stock status, associated spawning biomass and equilibrium yield for north Pacific albacore when exploited at $F_{2002-2004}$ or $F_{2010-2012}$. Median SSB and yield are shown for $F_{SSB-ATHL}$ as this simulation-based reference point is a non-equilibrium based concept.

Reference Point	Reference Point Ratio	Female Spawning Biomass (t)	Equilibrium Yield (t)
$F_{2010-2012}$ (Fcurrent in the 2014 assessment)			
$F_{SSB-ATHL}$	0.72	100,344	90,256
F_{MSY}	0.52	49,680	105,571
$F_{0.1}$	0.51	73,380	93,939
F_{MED}	1.30	156,291	74,640
$F_{10\%}$	0.63	22,867	96,590
$F_{20\%}$	0.71	54,530	105,418
$F_{30\%}$	0.81	86,192	99,612
$F_{40\%}$	0.94	117,855	89,568
$F_{50\%}$	1.13	149,517	77,429
$F_{2002-2004}$ (Reference for existing CMMs)			
$F_{SSB-ATHL}$	0.85	87,164	97,079
F_{MSY}	0.76	47,916	101,429
$F_{0.1}$	0.56	57,140	92,923
F_{MED}	1.34	156,291	69,288
$F_{10\%}$	0.71	22,867	93,303
$F_{20\%}$	0.80	54,530	101,135
$F_{30\%}$	0.92	86,192	94,712
$F_{40\%}$	1.07	117,855	84,296
$F_{50\%}$	1.29	149,517	72,059

Figure 10. Copy of Table 5.6 from ISC (2014), showing reporting against MSY-related reference points for the 2014 North Pacific base case assessment.

Stock status

ISC (2014) reports on stock status and trends. The latest assessment estimates MSY to be $105,571 \pm 14,759$ mt; female SSB_{msy} to be $49,680 \pm 6,739$ mt; and female SSB_{ATHL} to be 117,835 mt, more than twice the female SSB_{msy}. The 2012 total SSB was estimated to be 220,202 (95% CI 187,180-251,042) mt. F/F_{msy} is estimated as 0.52, and F/F_{SSB-ATHL} as 0.72.

The ISC report summarises the status and trends in a composite graphic of Kobe Plots with trajectories assuming different fishing mortality ration determinants. Figure 11 shows only the plots for SSB/SSB_{msy} and SSB/20%SSB₀. Measured against either determinant, the North Pacific albacore stock is estimated never to have reduced to SSB_{msy}, the default MSC v1.3 TRP, nor to the implicit (and MSC default) LRP of 20%SSB₀. Similarly, fishing mortality rate is estimated never to have reached F_{msy}, the implicit (and MSC default) LRP. From the confidence intervals estimated by ISC there is a high degree of certainty (using MSC Cr v1.30 CB2.2.1 definitions) that the stock has been above both SSB_{msy} and 20%SSB₀ in all years.

Estimated recruitment is shown in Figure 12. The stock is estimated to be well above SSB_{ATHL}, a conservative LRP, and 20%SSB₀. There is no indication of any recruitment impairment.

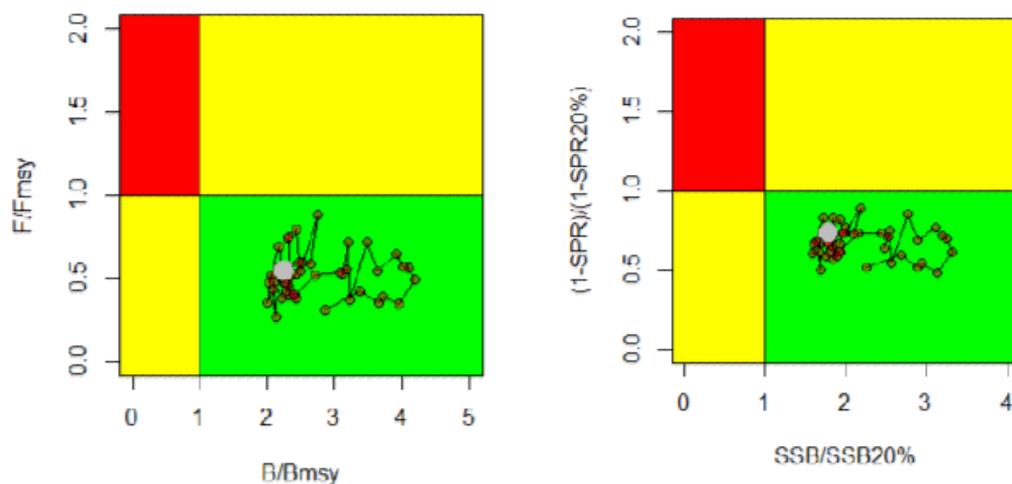


Figure 11. Kobe Plots for North Pacific Albacore, sourced from ISC (2014). Left Panel: Plot of F/F_{msy} vs SSB/SSB_{msy}; Right Plot: Plot re-expressed in terms of 1-SPR/ (1-SPR20%) vs SSB/SSB20%.

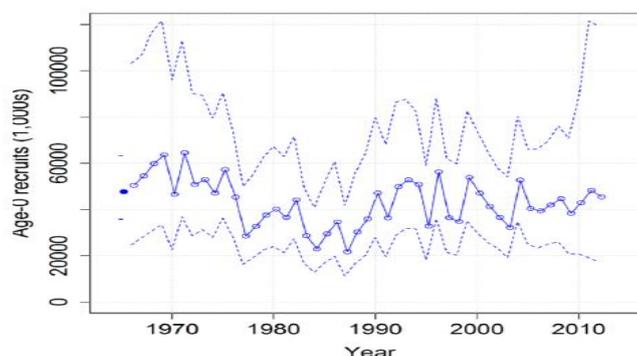


Figure 12. Estimated recruitment of the 2014 base case assessment model. Dashed lines indicate 95% confidence intervals. (Source: ISC, 2014)

Harvest Strategy and Control Rules

North Pacific albacore is managed under the auspices of both the WCPFC and IATTC. Current, key WCPFC Conservation and Management Measures are: i) CMM-05-03, which adopts a range of measures relating to effort control and reporting; and CMM 2014-06, which relates to plans to develop and implement harvest strategies, including TRPs and HCRs. The key adopted Resolution of the IATTC is C-05-02, which relates to effort control and reporting, but also to coordination with WCPFC and to ensuring future consideration of actions related to North Pacific albacore, as may be warranted based on analyses. That resolution and a supplemental (C-13-03) were both explicitly 'maintained' by the IATTC in 2014 (IATTC, 2014).

Neither WCPFC CMM 2005-03 nor IATTC C 2005-02 constitute a harvest strategy as defined, for example, by WCPFC CMM 2014-06, which lays out the WCPFC interpretation of harvest strategies in a way fully consistent with MSC definitions and requirements.

CMM 2014-06 reveals a clear intention by the WCPFC to move towards well-defined harvest control rules ('decision rules' in WCPFC terminology). In the meantime, the harvest strategy in place for all stocks, including North Pacific albacore, relies on annual decision-making processes founded on the core principles of the WCPFC as laid out in its Convention and in a growing catalogue of CMMs (see: <https://www.wcpfc.int/conservation-and-management-measures>). The majority (about two thirds) of North Pacific albacore catch is taken in the WCPO under WCPFC auspices. A smaller portion is taken in the EPO under IATTC auspices. The two RFMOs work closely, receiving the same advice and coordinating between members and Secretariats. The IATTC is also moving towards well-defined decision rules and adoption of LRP and TRP (see, e.g. IATTC, 2014). Like the WCPFC, the harvest strategy in place for all stocks, including North Pacific albacore, relies on annual decision-making processes founded on the core principles of its Convention and a growing catalogue of Resolutions and practice.

As articulated through reference points (see above) the current implicit WCPFC objectives for albacore are to (i) ensure fishing mortality rate does not exceed F_{msy} (effectively ensuring the stock is maintained above B_{msy}); (ii) ensure the spawning stock does not fall to $20\%SSB_{F=0}$; and (iii) maintain the stock at least as high as SSB_{msy} (which should be assured through meeting objective (i), but note this is a lower SSB than implied at (ii)). These objectives are implied by the WCPFC Convention (i); through adoption of the Three-Level hierarchical definitions of SSB LRPs (ii); and (*via* (i)), the Convention (iii).

Formal decision rules and TRP have not yet been defined by WCPFC or IATTC. The issues are well-understood by WCPFC and IATTC members and processes are in train to develop explicit, formal rules, in both the WCPFC (CMM 2014-06) and the IATTC (see, e.g., IATTC, 2014, ref. Appendix 3I). While the debate is taking place and options are being developed, management of albacore has operated informally to meet the objectives. The information base is extensive from a wide range of biological studies and from a diverse range of fisheries. The information is sufficient to support a state-of-the-art stock assessment (above) that provides probabilistic estimates of key parameters and their relationship to the implicit and interim reference points.

Advice from the stock assessment is provided annually by the Scientific Committee of the WCPFC and Scientific Advisory Committee of the IATTC. For the WCPO, additional work is carried out by the scientific provider, SPC, to the Commission. The IATTC has its own scientific staff to provide additional decision-making support. Annual decision-making, articulated

through WCPFC CMM and IATTC Resolutions and Recommendations, is supported by good scientific decision-support materials. The Commissions also receive advice from their compliance committees (see e.g. WCPFC, 2014b). As noted above, the most current stock-specific measures are WCPFC CMM 2005-03 and IATTC-05-02. These are supported by a number of other relevant WCPFC CMM, dealing with vessel monitoring (CMM 2014-02), vessel records (CMM 2013-03), shark measures (CMM 2014-05), compliance and monitoring (CMM 2014-07); and IATTC Resolutions, dealing, e.g., with albacore supplemental matters (C-13-03), and VMS (C-14-02).

There are no formally agreed HCRs yet in place, but the harvest strategy, using high quality science and compliance information, is founded on high quality scientific advice. The evidence of successful management to date is in the state of the stock. North Pacific albacore is estimated to be harvested at 0.52Fmsy and spawning stock is at more than double SSBmsy. Projections reported by ISC (2014) at constant fishing mortality and average historical recruitment indicate the stock will remain relatively stable at between the 25th and median historical percentiles over the short- and long-term, suggesting also the stock will remain above SSBmsy.

The WCPFC has put in place CMM 2014-06 aimed at ensuring harvest control rules and agreed TRPs are developed and implemented for a range of stocks, including North Pacific albacore. The IATTC has considered an explicit proposal to develop TRP, LRP, and decision rules for North Pacific albacore (IATTC, 2014; PROPOSAL IATTC-87 J-1), and has adopted proposed target and limit reference points as interim.

3.4 Principle Two: Ecosystem Background

Retained species, bycatch, discards, and ETP.

Pole and line catches in the WCPFC area increased to a high in the late 1970s and early 1980s (Figure 13, top panel). The species composition changed somewhat between 1950 and 1980 but has remained consistent since then. Total catches, dominated by skipjack tuna, have declined steadily as purse seine fishing has dominated catches of skipjack. The Japanese pole and line fisheries have dominated the total catches of all species and the Japanese catch pattern therefore reflects the overall catch pattern (Figure 13, middle panel). Over the past decade, the total catch has declined from *circa* 100,000 mt *per* year to about 80,000 mt. The decline is almost exclusively due to lower catches of skipjack, with albacore catches remaining steady. Yellowfin bycatch has declined in a similar fashion to skipjack while bigeye bycatch has remained steady (Figure 13, lower panel).

The Japanese pole and line catch comes both from Japanese adjacent and offshore waters, and from Tropical waters, with Tropical water catches concentrated from November through April. The distribution of catches has changed through time for a variety of economic and technological reasons with reductions especially in the Tropical Pacific. Currently, there are 46 licensed Japanese pole and line vessels able to fish in distant waters, with 23 active. The UoC contains two of those vessels, the Toyokuni Maru and the Meiho Maru. This is of the order of 2-3% of the Japanese pole and line total fleet catch. The two vessels fish predominantly in adjacent and offshore waters of Japan, with the majority of trips in the period May through October (a simple count of trips dated May-Oct vs Nov-April for Toyokuni Maru (2011-2014) and the Meiho Maru (2013-2014), shows a split of 18:4 and 8:2, respectively.)

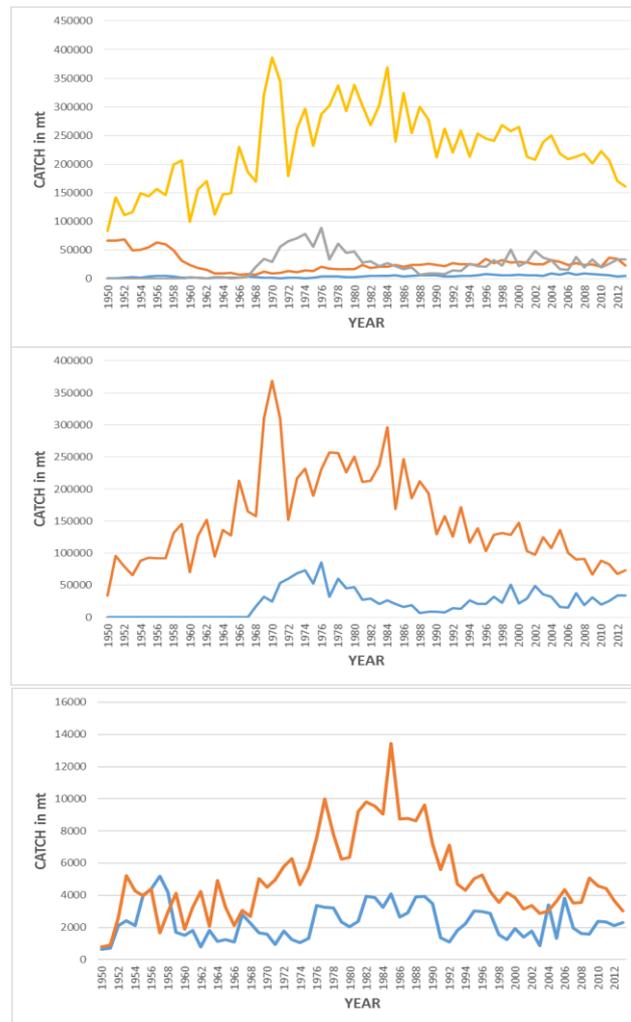


Figure 13. Top panel: Total WCPFC pole and line catches by year (yellow: skipjack, orange: albacore, grey: yellowfin, blue: bigeye). Middle panel: Japanese pole and line catches by year (upper line: skipjack, lower line: albacore). Bottom panel: Japanese pole and line catches by year (upper line: yellowfin, lower line: bigeye). (Source: WCPFC Tuna Fishery Yearbook, <https://www.wcpfc.int/statistical-bulletins>).

Pole and line gear is used to catch skipjack and albacore in surface waters. Fish are spotted and the vessel stops, throws live bait (Japanese anchovy, *Engraulis japonicus*) to attract the target species (so-called “chumming”), and deploys gear. Fishing is labour intensive, being carried out by hand by a large crew. Hooks are barbless, unweighted, and unbaited, though lures are used. The method is highly selective for the target species with little bycatch, no discarding, and no ETP species caught. Table 1 is derived from data supplied by the client. It shows catch records for the years in which the two UoC vessels have fished to the client company. Logbooks were supplied for the certification and individual log sheets for multiple years were available during the site visit (see translated document nos. 4 and 6). The vessels report on two logbooks, one sent to the FAJ with detailed operational data and catch records by species for the various tuna species and other species. The other (the SPC/FFA Regional Pole and Line logsheet, available at: <http://www.spc.int/oceanfish/en/data-collection/241-data-collection-forms>) is used when fishing in national waters of FFA members. Permits to fish in those waters are issued on an annual basis by JTFCFA and the logsheets are returned to the JTFCFA (and thence to national governments).

Skipjack and albacore constitute 98-99% of the total catch annually (Table 1). Of the four bycatch species reported (bigeye tuna, yellowfin tuna, dolphin fish, and yellowtail amberjack), only bigeye reaches about 1% of the total catch.

Table 2 shows annual bait purchase for both vessels for complete years 2011-2014; all bait is Japanese-caught Japanese anchovy. The total by year is 2.2-2.9% of the total catch, with an average of 2.5%. This is slightly lower than but not substantially different to tuna:bait ratios reported in a recent study by the International Pole and Line Foundation (IPNLF; see http://ipnlf.org/pdf/04-12-12-IPNLF_Baitfish_Report_PRINTABLE.pdf) for Japan and the WCPO. Note that complete 2015 bait records were not available for assessment but early 2015 records for both vessels suggest similar patterns to previous years.

No retained species, including Japanese anchovy, are considered to be main species as defined at MSC CR v1.3 CB3.5 and GCB3.5.2.

There are no bycatch species and hence none are considered main.

There are no ETP species caught. The UoC removes only a small fraction of the North Pacific albacore and skipjack biomass, spread throughout the year and across a wide swathe of deep oceanic environment. The removal of anchovy in waters adjacent to Japan amounts to 0.0002% of the currently estimated SSB (see below), and an even smaller fraction of total biomass.

It is noted that the President of Toyokunimaru Gyogyo Co. Ltd (who spent 6 years on pole and line vessels before managing the Toyokuni Maru for 20 years) reported that the only species caught over that period were as reported since 2011. Stakeholders asked about this (WWF, Appendix 3, NRIFS, Appendix 3 also reported that the method is highly targeted and selective with little or no catch of species other than skipjack and albacore. No stakeholders have suggested species others than those recorded have been caught.

Table 1. Catch in mt by species and year for each vessel, showing overall percentage by species and target catch (skipjack and albacore) as percentage of total catch.

<u>Year</u>	<u>TARGET</u>		<u>Bigeve</u>	<u>Yellowfin</u>	<u>Dolphinfish</u>	<u>Yellowtail Amberjack</u>	<u>TOTAL</u>	<u>%TAR- GET</u>
	<u>Skipjack</u>	<u>Albacore</u>						
<u>Toyokuni Maru</u>								
2011	1134.7	591.9	28.5	6.4	0.1	0.0	1761.5	98%
2012	750.9	567.3	9.7	7.6	0.1	0.0	1335.5	99%
2013	742.8	610.1	6.2	13.7	0.1	1.4	1374.4	98%
2014	898.6	370.0	3.1	6.6	0.1	0.0	1278.5	99%
2015	1145.1	333.1	0.7	3.1	0.2	0.4	1482.6	99%
<u>Meiho Maru</u>								
2013	633.7	618.2	1.8	0.2	3.0	1.3	1258.2	99%
2014	1409.7	572.4	18.2	4.4	0.2	0.0	2004.9	99%
2015	1395.8	326.3	5.7	0.9	0.0	0.9	1729.6	99%
%Species	66%	33%	1%	0%	0%	0%	100%	

Table 2. Bait (Japanese anchovy) purchase and total catch, by vessel and year (mt).
Figures are calculated from purchase records per trip, supplied by Meiho Gyogyo Co. Ltd.

<u>Year</u>	<u>Toyokuni Maru</u>	<u>Meiho Maru</u>	<u>Total Catch</u>	<u>Anchovy as % of catch</u>
2011	43.9		1761.5	2.5%
2012	38.8		1335.5	2.9%
2013	35.8	33.8	2632.6	2.6%
2014	30.9	39.9	3283.3	2.2%
			Mean	2.5%

Although there are no main, retained species defined, information is available to consider SG100 scoring at PI 2.1.1. (i.e. *There is a high degree of certainty that retained species are within biologically based limits and fluctuating around their target reference points*). Stock assessments are available from WCPFC for bigeye and yellowfin tuna, and from Japan for yellowtail amberjack and Japanese anchovy.

Bigeye and yellowfin tuna were last assessed by the WCPFC Scientific Committee in 2014 (WCPFC, 1014a; see <https://www.wcpfc.int/meetings/10th-regular-session-scientific-committee>), with the report being agreed by the WCPFC at its annual meeting in December 2014 (WCPFC, 2014b; see <https://www.wcpfc.int/meetings/11th-regular-session-commission>).

Bigeye tuna

The Bigeye stock assessment report is available at <https://www.wcpfc.int/node/18975>. With respect to scoring at PI 2.1.1, the key advice is that “*The latest (2012) estimates of spawning stock biomass are below both the level that will support MSY ($SB_{latest}/SB_{MSY} = 0.77$ for the base case and range from 0.62 to 0.96 across the four models) and the newly adopted LRP of $0.2SB_{F=0}$ ($SB_{latest}/SB_{F=0} = 0.16$ for the base case and range from 0.14 to 0.18.*” In other words, bigeye is currently assessed to be below the WCPFC-agreed, and MSC default, LRP of 20%B0 and is below any likely agreed definition of biologically based limits. This is shown graphically in Fig. 14.

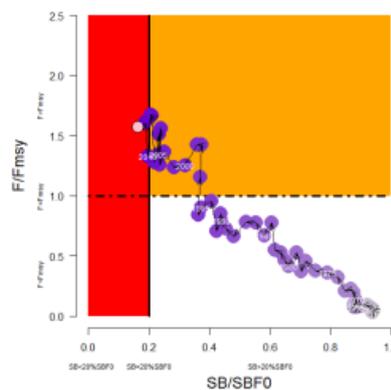


Figure 14. Temporal trend for the bigeye base case assessment model, showing stock status relative to $SB_{F=0}$ (x-axis) and FMSY (y-axis). The red zone represents spawning potential levels lower than the agreed LRP, which is marked with the solid black line ($0.2SB_{F=0}$). The orange region is for fishing mortality greater than FMSY ($F=F_{MSY}$; marked with the black dashed line). (Figure copied from <https://www.wcpfc.int/meetings/10th-regular-session-scientific-committee>).

Yellowfin tuna

The yellowfin assessment report is available at <https://www.wcpfc.int/node/18997>. With respect to scoring at PI 2.1.1, the key advice is that “*The latest (2012) estimates of spawning biomass are above both the level that will support MSY ($SB_{latest}/SB_{MSY} = 1.24$ for the base case and range from 1.05 to 1.51 across the four models) and the newly adopted LRP of $0.2SB_{F=0}$ ($SB_{latest}/SB_{F=0} = 0.38$) for the base case model and range from 0.35 to 0.40.*” In other words, yellowfin is currently assessed to be above the Bmsy level and the WCPFC-agreed, and MSC default, LRP of 20%B0 and is above any likely agreed biologically based limits (with a high degree of certainty). This is shown graphically in Fig. 15.

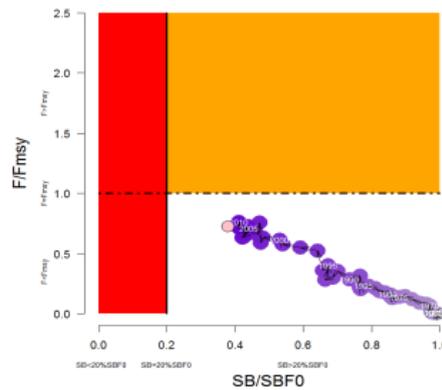


Figure 15. Temporal trend for the yellowfin base case assessment model, showing stock status relative to $SB_{F=0}$ (x-axis) and F_{MSY} (y-axis). The red zone represents spawning potential levels lower than the agreed LRP, which is marked with the solid black line ($0.2SB_{F=0}$). The orange region is for fishing mortality greater than F_{MSY} ($F = F_{MSY}$; marked with the black dashed line). The pink circle (top panel) is $SB_{2012}/SB_{F=0}$ (where $SB_{F=0}$ was the average over the period 2002–2011).

Anchovy

Anchovy are caught primarily by purse seine vessels. The Pacific Ocean-based anchovy stock as assessed is distributed to the east of Japan as shown in Figure 16.



Figure 16. Distribution of Pacific Ocean-based group of anchovy (Source: <http://abchan.job.affrc.go.jp/digests26/>).

Anchovy was last assessed in 2014, with a report in Japanese (see translated document no. 23) being available in Japanese at <http://abchan.job.affrc.go.jp/digests26/>. For the

certification, a translation of the summary was available, as well as a fuller translation of the 2013 assessment (see translated document no. 22). Anchovy is assessed using cohort analysis and status is evaluated against an agreed Blim of 130,000 mt. Despite a protracted downward biomass trajectory, the fishing mortality is estimated to be below Fmed (approx. 0.85Fmed in 2013) and the stock is projected not to decline further given current catches. Although the estimated SSB of 401,000 mt in 2013 is more than three times the Blim, the basis for Blim is somewhat qualitative and the assessment does not (cannot) include any estimates of uncertainty. The available reports do not suggest there is a target reference point for anchovy.

The catch of anchovy peaked at over 400,000 mt in the early 2000s, decreased to 210,000 - 250,000 mt in 2007 – 2010, 160,000 mt in 2011 and 150,000 mt in 2012. The total anchovy use by the two UoC vessels is about 70 mt per year (see translated document nos. 8,10), approximately 0.005% of the recent annual anchovy catch and 0.0002% of current estimated SSB.

The management strategy for anchovy as outlined in the translated summary document is based on maintaining a fishing mortality limit on one-year-old fish corresponding with the median estimated SSB/R (i.e. Fmed). The catch target is set based on application of 0.8 Fmed, with a catch limit based on application of 1.0 Fmed. The current fishing mortality is 0.86 (= 0.85Fmed), close to the target level. However, fishing mortality has been higher than Fmed for many years (see Table 3).

Table 3 Anchovy fishing mortality-at-age estimated by cohort analysis

Source: <http://abchan.job.affrc.go.jp/digests26/>.

	2005	2006	2007	2008	2009	2010	2011	2012	2013
F (age 1)	1.09	1.57	1.19	1.17	1.02	1.31	1.25	1.03	0.86

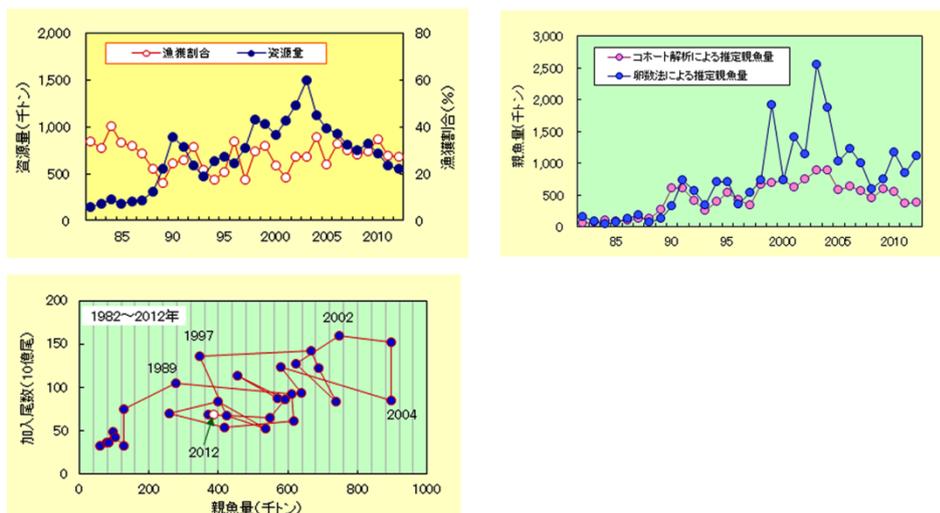


Figure 17. Graphs copied from the 2013 anchovy assessment (see translated document no. 22; note the 2014 assessment is available at <http://abchan.job.affrc.go.jp/digests26/>). Top left: Biomass (mt) in blue and catch rate in white; top right: SSB from cohort analysis in pink, and from egg survey in blue; bottom left: recruitment vs SSB. Note the 2012 estimate. The 2013 estimate from the 2014 assessment estimates SSB at 401,000 mt).

Yellowtail amberjack

Yellowtail amberjack was last assessed in 2014, with a report in Japanese (see translated document no. 24) being available at <http://abchan.job.affrc.go.jp/digests26/>. For the certification, a translation of the summary was available. Based on that summary, amberjack are migratory fish with a distribution centred on Japanese coastal waters though extending to east coast of the Korean Peninsula. Japan's catch of amberjack in 2013 reached a record high of 118,000 mt. The catch using fixed nets, used for the stock assessment, has been trending upwards. It exceeded 35,000 mt in 2010 and reached a record high of 49,000 mt in 2013, comparable to levels seen in the early half of the 1950's. The stock was assessed using cohort analysis to be increasing and at current fishing levels is not expected to decline. It is unclear if there are any formal limits reflective of biologically based limits but from the evidence available it appears the stock is in good health.

Dolphin fish

Dolphin fish is a highly migratory species, distributed widely in tropical and subtropical oceans around the world, where it supports important commercial, artisanal, and recreational fisheries. According to the NOAA Fishwatch, the biology of dolphin fish makes them resilient to fishing pressure, and catch trends indicate that regulations limiting catch or fishing effort are not necessary (http://www.fishwatch.gov/seafood_profiles/species/mahimahi/species_pages/pacific_mahimahi.htm). The trends referred to are around Hawaii, but for the same HMS stock that is occasionally taken in very small numbers by the UoC fishery throughout its extensive range.

The dolphin fish catch taken by the UoC is negligible and is spread over a very large area.

Habitat and Ecosystem Effects

The scale and intensity of the pole and line fishery are low. The UoC includes two vessels, fishing a total of about 10-14 trips per year across an area spanning seas adjacent to Japan and across the Tropical WCPO. The fishery takes place using short lines and barbless hooks at the surface, in oceanic waters. There is no fishing within Territorial Seas and fishing is prohibited in proximity to reefs.

There is no direct impact of the gear on the bottom. Gear is seldom if ever lost and is limited to short poles and lines; there is therefore no indirect impact. Given that the gear has no direct or indirect impact with the seabed any effects are likely to be undetectable and there are unlikely to be any detectable changes to the dynamics or habitats of associated populations. No management strategy is therefore deemed necessary. Nor is there any requirement for information on potential habitat impacts, which are absent.

The UoC removes of the order of 3,000 mt of fish per year from a large area of the WCPO and waters adjacent to Japan, primarily of species caught in much greater volumes by other fisheries and which have large populations. It uses a negligibly small amount of bait relative to the population and other catches of Japanese anchovy. Catch of retained species is low and very small in comparison to targeted catches or bycatch of those species. There is no bycatch of other fish or ETP. The consequences of the fishery on species composition, functional group composition, community distribution, and trophic structure are considered to be undetectable. No management strategy is therefore deemed necessary. Nor is there any requirement for information on potential ecosystem impacts.

During stakeholder meetings, all stakeholders expressed the view that the fishery would have negligible impact on habitat structure and function or ecosystem structure and function. The default scoring tree has been used or scoring; the RBF has not been used. However, it is

worthwhile noting that expressed in the language of Scale Intensity Consequence Analysis (SICA), the scale of the fishery with respect to spatial and temporal aspects would be 1 and 4 respectively (from MSC CR V 1.3 Tables CC8 and CC9), with an Intensity score of 1 (“Negligible”; from MSC CR V 1.3 Table CC10). The Consequence score for any habitat-related SICA Subcomponent, at MSC CR V 1.3 Table CC12, is 1. The Consequence score for any ecosystem-related SICA Subcomponent, at MSC CR V 1.3 Table CC13, is also 1. For both habitat and ecosystem components of P2, therefore, MSC equivalent scores for outcome PIs would be 100 (using MSC CR V 1.3 Table CC14). It is noted that if this reasoning had been invoked as part of default tree scoring (using CB3.14.6 and CB3.17.5) it could have been used to justify scoring to SG80, not SG100.

NB Because Japanese anchovy is considered against the retained species PIs and the RBF is not used, there is no requirement to assess the bait fishery against the habitat or ecosystem PIs.

3.5 Principle Three: Management System Background

Jurisdictions in the area of operation

The fishery under assessment has two pole and line vessels (Meiho Maru and Toyokuni Maru). They fish skipjack tuna in the WCPO, which is under the jurisdiction of the WCPFC and North Pacific albacore tuna in the Northern Pacific Ocean which is under the jurisdiction of the IATTC and the WCPFC. The target species are therefore subject to both national and RFMO measures and policy.

The area under assessment is specified as 0-40 degrees North and 140-170 degrees South. The area is entirely encompassed by the WCPFC Convention Area and extends eastwards to include the Marshall Islands and the Phoenix islands (Kiribati). Fishing operations are in three distinct zones

4. Southern quarter: 0- 25 degrees north in latitude, 145- 175 degrees east in longitude
5. Eastern off shore: 35 -45 degrees north in latitude, 165-176 degrees east in longitude
6. Adjacent Sea of Japan (from near Tanegashima to the southern quarter).

Legal framework

When operating in the Japanese EEZ, the fishery is under domestic management. When operating in international waters, the fishery is under the jurisdictions of both the Commission for Conservation and Management of Highly Migratory Fish Stocks in the WCPFC and the IATTC.

Japan is a signatory to the United Nations Convention on the Law of the Sea (UNCLOS) as well as the subsequent United Nations Fish Stocks Agreement (UNFSA). It has adopted the FAO Code for Responsible Fisheries and assisted in the local development of the Japanese Code of Conduct for Responsible Fishing operations. Japan has also supported the four International Plans of Action (IPOA) (on seabirds, sharks, fishing capacity and illegal, unreported and unregulated fishing) that have emerged under the FAO Code

The Japanese fisheries management system is based primarily on the powers contained in the Fisheries Law (1949, as revised 1962) of Japan. (see translated documents no 15 and 17). The Ministry of Agriculture, Forestry and Fisheries (MAFF) administer the law. MAFF is responsible for preserving and managing marine biological resources and fisheries production activities. The Fisheries Agency (FAJ) is the department within MAFF responsible for preserving and managing marine biological resources and fishery production activities. The

FAJ maintains several research institutes, such as the National Research Institute of Far Seas fisheries (NRIFSF).

WCPFC was established by the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the WCPO. The WCPF Convention entered into force on 19 June 2004. It is tasked to co-ordinate scientific research and make recommendations designed to maintain populations of tuna and species sharing the same ecosystem at levels that will prevent recruitment failure and permit maximum sustainable yield.

The WCPF Convention draws on many of the provisions of the UN Fish Stocks Agreement. It is designed to reflect the regional political, socio-economic, geographical and environmental characteristics of the WCPO.

The WCPF Convention seeks to address problems in the management of high seas fisheries resulting from unregulated fishing, over-capitalization, excessive fleet capacity, vessel re-flagging to escape controls, insufficiently selective gear, unreliable databases and insufficient multilateral cooperation in respect to conservation and management of highly migratory fish stocks.

Japan is a member of the WCPFC.

IATTC is governed by the Antigua Convention (2003). Each member of the IATTC is represented by up to four Commissioners, appointed by the respective governments. The Commission was established under the Convention and is tasked to co-ordinate scientific research and to make recommendations designed to maintain populations of tuna at levels which will permit maximum sustainable yield. The Antigua Convention entered into force on 27 August 2010. Fishing for tuna and tuna like species, both on the high seas and in zones of national jurisdiction, is governed by the Convention.

The Antigua Convention explicitly recognizes the United Nations Convention on the Law of the Sea (UNCLOS) of 1982, the Rio Declaration on Environment and Development and Agenda 21, the Johannesburg Declaration and Plan of Implementation adopted by the World Summit on Sustainable Development (2002), the FAO Code of Conduct for Responsible Fisheries (1995), including the 1993 FAO Compliance Agreement and International Plans of Action adopted by FAO within the framework of the Code of Conduct, and the 1995 UN Fish Stocks Agreement (UNFSA). The Convention clearly intends to form part of the implementation of these international agreements within its area of jurisdiction.

Japan is a member of the IATTC.

Stakeholders and Consultations

The Fisheries Agency of Japan (FAJ) regularly undertakes both formal and informal consultation with fishing industry stakeholders and other groups (see translated document no 9).

The key industry stakeholder groups are the Japan Tuna Fisheries Co-operative Association (JTFCFA), the Japan Distant Water Tuna Fishery Association (JDWTFA), the Japan Adjacent Sea Tuna Fishery Association (JASTFA) and the Japan Far Seas Purse Seine Fishing Association (JFSPSFA). These organisations represent the interests of the tuna fisheries.

The government interacts throughout the year with industry stakeholders that provide the parties opportunities to inform the management system.

The Fisheries Research Agency (FRA), an incorporated administrative agency, conducts a wide range of research and development activities on fisheries, from basic research and application to practical use.

The National Research Institute of Far Seas Fisheries (NRIFSF) was established at Shimizu city (now Shizuoka city), Shizuoka prefecture in 1967. As one of the national research institutes of the FAJ, NRIFSF covers the research for tunas, whales, walleye pollock, snapper, squids, and krill caught by the Japanese fisheries operating widely in the Pacific, Indian, Atlantic and Antarctic Oceans.

A meeting takes place annually (in person or electronically), in which FAJ, FRA, NRIFSF and other national and Prefectural research institutes coordinate and plan activities. Many of those activities are ongoing and the annual plan includes both ongoing and new multi-year projects as well as shorter duration activities. However, the plan and meeting records are not public.

The Fisheries Policy Council made up of various stakeholders meets regularly to discuss fisheries matters and the minutes are widely available (see translated document no. 21)

WWF is the eNGO in Japan that has particular interest in tuna fisheries. WWF Japan is involved and included in the Japanese government tuna discussions, e.g., the WWF is involved in the Management Objectives and Commission processes as part of the Japanese delegation to the WCPFC.

The government also seeks the public's views and stakeholder involvement when amending laws and regulations

WCPFC co-operates with all relevant organizations in the region, which are the Secretariat of the Pacific Community (Oceanic Fisheries Programme), Pacific Islands Forum Fisheries Agency (FFA), the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), Secretariat for the Pacific Regional Environment Programme (SPREP), Indian Ocean Tuna Commission (IOTC), Inter-American Tropical Tuna Commission (IATTC), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), Commission for the Conservation of Southern Bluefin Tuna (CCSBT), Agreement for the Conservation of Albatross and Petrels (ACAP) and North Pacific Anadromous Fish Commission (NPAFC). There is a Memorandum of Understanding, which clearly lays out the type and level of co-operation between these organizations. There are, in particular, shared responsibilities between RFMOs, mainly WCPFC, IOTC, IATTC and CCSBT, which are addressed.

WCPFC holds a meeting every year, after the annual meetings of the three specialist committees, which are the Scientific Committee, Technical and Compliance Committee, and the Northern Committee. Consultation occurs at several levels within the management system. Consultation at the international level is formalized, and there are well-developed mechanisms for the seeking and using appropriate information.

The opportunity to become a Member or a Co-operating Non-member is open to all. The membership of relevant nations is high and there is a high level of participation. In particular, the small island nations are well represented through the FFA.

The Commission may be joined by any government or international organization that can also be a signatory to the United Nations Convention on the Law of the Sea (1982), and that has a fishing interest in the area. Interested NGOs have an opportunity to observe at meetings.

IATTC holds a meeting every year, and specialist working groups (comprising scientists from the contracting parties) convene technical meetings on an annual basis. Decision-makers use

information derived from the CPCs and the inputs from the specialist working groups and such consideration forms the basis of the management advice provided by IATTC. Consultation occurs at several levels within the management system. Consultation at the international level is formalized, and there are well-developed mechanisms for the seeking and using appropriate information.

The opportunity to become Contracting Party or Co-operating Non-Contracting Party is open to all, including non-states. The Commission may be joined by any government that is a member of the United Nations (UN), and that is a member of a Specialized Agency of the United Nations. In addition, any inter-governmental economic integration organization constituted by States that have transferred to it competence over the matters governed by the IATTC Convention, such as the EU, may join. The Convention is open to accession by any State or regional economic integration organization (e.g. EU) that had already acceded to the previous 1949 Convention, has coastline in the Convention Area, has vessels fishing stocks covered by the Convention or is invited to accede on the basis of a decision by the Parties. Interested NGOs have an opportunity to observe at meetings.

Decision Making

The decision making process is clearly defined (see translated document no. 5). Decisions at both RFMOS, WCPFC and IATTC, are by consensus and if necessary by voting (majority required) and decisions are binding. Members may require an independent review on a decision to ensure it is consistent with the Convention. Conservation and management measures are binding but resolutions are non-binding. The WCPFC Convention requires that members of the Commission apply the precautionary approach as described in Article 6 and Annex II. Specifically, the Convention requires that the Commission be more cautious when information is uncertain unreliable or inadequate. In all cases decisions are required to be based on the best scientific information available. Recommendations from research monitoring and performance review are published formally. Reports of plenary sessions are published formally and are publicly available. The Fisheries Agency of Japan participates in WCPFC and IATTC meetings and in the decision making process. It is responsible for distribution and publication of Convention decisions and outcomes to the relevant agencies and fishing industries in Japan. It is also responsible for any changes in Japanese legislation and regulations to enforce decisions. The client company, Meiho Gyogyo Ltd., provides information to the Japanese government for input into the Convention decision making process. The President is responsible for the development of management strategies to ensure decisions are enacted and regulations applied. The decisions are communicated to the fishing Masters of the two vessels who ensure that the fishing operations are in compliance with RFMO decisions.

Long and short term objectives

The long term objectives for fisheries management and conservation are set out on the Fisheries Act No. 267 1949 (see translated document no. 15 and 16). This law covers all Japanese fisheries. Its purpose is to ensure the long term utilization and sustainability of fisheries and to provide the means and the organisations to ensure the objectives are met. There are also conservation and sustainable use policies that incorporate precautionary and ecosystem approaches into fisheries management decisions.

The Fishery Annual Report (see translated document no. 16) sets short and long term objectives as below

- *“We will run stock assessment studies with priorities put on the skipjack/tuna, the*

important fish species for Japan's fisheries which have been controlled internationally.

- *We also make effort to further enhance the accuracy of stock assessments and stock estimates through development and use of the techniques to study the impact of the marine environment change on fishery resources and to estimate fishery resource change in order to contribute to the clarification of the mechanism of the fishery resource change.*
- *We will keep leading in the relevant RFMO's so that conservation and control measurements based on scientific grounds can be put in place there.*
- *With regard to the stocks that have been internationally controlled through the consideration of the strength of restrictions necessary for the stock control, supervision by fishery patrol vessels dispatched, and collection and analysis of catch data, we will control those fisheries that catch the stocks concerned and make effort to comply with international agreements as a responsible fishing country.*
- *We will enhance the traceability at RFMO's to secure the compliance of the conservation and management measures and to help to stop catches illegally fished from being distributed to the market.*
- *We will strategically and effectively utilize global cooperation and secure our overseas fishing grounds through bilateral fishery consultations and ensure continuous use of international resources through RFMO's.*
- *We will conduct research and studies while focusing on the fish species relating to the TAC and TAE systems and the ones to do with the stock control guideline. We also will make effective use of fishing vessels and establish and/or support the system to collect information on resources and hydrographic conditions from the fishing boats.*
- *Furthermore, we will keep the system to collect hydrographic observation data and the like in alliance with prefectural governments. In addition, we will encourage the development of the next generation fish sonar that tells its users not only schools of fish, but the fish species and sizes of the fish in the schools detected.*
- *Finally, we will strengthen research and studies to figure out the stock abundance and stock status of commercially important fish species. For example, research vessels are used to study the impact of the marine environment change in the tropical region on the stock abundance and migratory routes of skipjack tuna, yellowfin, and bigeye tuna."*

The client group has written objectives (see translated document no. 7 and 12) to maintain the overall size of its catch of young skipjack (<1.5 kg) to less than 5%. Likewise, for albacore to maintain its catch of small albacore (<4.0kg) to less than 10%. These lengths have been decided based on the biology of the species and specifically aim to protect the juvenile stocks for the future. These objectives are carefully monitored and vessels must move on if catching small fish. A similar quantitative management objective is applicable to bigeye where the proportion of catch to the overall catch must be maintained at <1%.

Long term objectives are explicit within the WCPFC convention; e.g., Article 2 specifies that the Commission has the objective to "*ensure through effective management, the long term conservation and sustainable use of highly migratory fish stocks in the WCPO in accordance with the 1982 Convention and Agreement*" (UNCLOS and FSA respectively). Article 5 of the Convention then provides principles and measures for achieving this conservation and management objective. Article 10 of the Convention is consistent with MSC principles and objectives in specifying long term objectives of "*maintaining or restoring populations... above levels at which their preproduction may become seriously threatened*". Evidence that these objectives are guiding decision making is provided in various Commission reports and in CMMs. Commission reports also indicate that explicit action is being undertaken through

CMMS to support achievement of objectives.

The IATTC Antigua Convention Article IV states that application of the Precautionary Approach shall be done as it is described in the Code of Conduct and/or the 1995 UN Fish Stocks Agreement, for the conservation, management, and sustainable use of fish stocks covered by the Convention. IATTC management actions taken relate *inter alia* to ecosystem effects of fishing; protecting biodiversity and advocating for ecosystem based approaches to management; and reducing pollution and impacts on both target and non-target or associated or dependent species

Monitoring Control Surveillance and Enforcement

The monitoring control and surveillance function is the responsibility of MAFF. With regard to distant water skipjack and tuna fisheries, MAFF sets the number of vessels by tonnage and by fishing area to be licensed. (see translated document no. 3). The license is valid for 5 years. The approval of the licence application may be subject to the restrictions and conditions below:

- 1) A vessel fishing within the waters of a foreign country's jurisdiction authority shall obtain a fishing permit from that country and comply with all statutory and regulatory conditions, including regulations specifically on foreign vessel fishing operations within the relevant waters
- 2) In order to fish only in the fishing areas permitted and comply with international agreements, a vessel shall follow the instructions of a fishing supervisor for fishing operations.
 - In order to comply with the resource conservation and management measures based on the international agreements below, when a fishing inspector officially authorized by the countries that have ratified the agreements requests a vessel to have on-board inspection on the high seas, the vessel shall let the inspector on-board.
 - International Convention for the Conservation of Atlantic Tunas
 - Convention between the United States of America and the Republic of Costa Rica for the Establishment of an Inter-American Tropical Tuna
 - Convention for the Conservation of Southern Bluefin Tuna
 - Agreement for the Establishment of the Indian Ocean Tuna Commission
 - Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean
 - Agreement for the Implementation of the Provisions 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
- 4 A vessel shall neither refuse, inhibit, nor evade any inspection activities of the fishing inspector who boards the boat on the basis of 3) above.
- 5 A vessel shall move into the port designated, when instructed to do so by a fishing supervisor
- 6 Within the waters defined by Clause 1 of Article 3 of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, excluding Japan's EEZ, a vessel shall neither be refuelled by, nor receive any fishing materials, including fishing gear from vessels registered on a committee list specified by Article 1-(c) of the convention.
- 7 All fishing vessels must complete catch and effort returns.

There are severe penalties for anyone not complying or to be found in violation of the Fisheries Act and the fishing permit. Penalties include imprisonment, fines, permit removals or suspensions and the catch, fishing boat or gear or any other things used for gathering or catching aquatic animals and plants illegally, may be confiscated, the corresponding market

value may be collected.

Both the WCPFC and IATTC have strategies to improve compliance including vessel registration and catch and effort monitoring and diplomatic and other pressures applied to nation states. Management controls are implemented using Conservation and Management Measures and Resolutions. Most information on compliance comes from port monitoring, observer programs and the vessel monitoring systems. The WCPFC has established a regional scientific and enforcement program with a regional observer program coordinated by the Commission (e.g., CMM 2007-01).

All vessels over 24m length catching tuna within the region must have VMS. Other requirements include measures to reduce bycatch mortality of seabirds, sea turtles and sharks

WCPFC and IATTC, like most of the RFMOs managing tuna and tuna-like species, uses its vessel registers to establish 'positive lists' and identify IUU vessels, information which is shared with other RFMOs.

Conservation measures are set by WCPFC but national authorities carry out enforcement.

The WCPFC and IATTC both have a permanent working group on compliance that reviews and monitors compliance with their management measures. The working group also recommends measures to promote compatibility among the national fisheries management measures, addressing matters related to compliance with fisheries management measures, analyze information on compliance and report the findings to the Commission which will in turn inform the members and non-members. An annual report is produced as part of the compliance review, which reports observed infringements.

Sanctions are only applied to fishing entities, such IUU vessels and vessels that are detected as being noncompliant with resolutions. WCPFC notifies Flag States of non-compliant vessels, which the Flag States should order to withdraw from Commission Area.

4 EVALUATION PROCEDURE

4.1 Harmonised Fishery Assessment

At Principle 1, key **already-certified fisheries** are as follows:

Skipjack:

- i. PNA Western and Central Pacific skipjack tuna (<https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pna-western-central-pacific-skipjack-tuna>), certified in 2011 and since subject to surveillance in 2012, 2013, 2014, and most recently in 2015. Since 2014 certification and surveillance has been contracted to SCS Global.

North Pacific Albacore:

- i. Canadian Highly Migratory Species Foundation (CHMSF) British Columbia albacore tuna North Pacific (<https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/CHMSF-British-Columbia-North-Pacific-Albacore-Tuna>), recertified in 2015. The certification is contracted to Global Trust.
- ii. AAFA and WFOA North Pacific albacore tuna (<https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/aafa-pacific-albacore-tuna-north>), recertified in 2012 by IFC.

Key **fisheries in-assessment** are:

Skipjack:

- i. Tri Marine Western and Central Pacific skipjack and yellowfin tuna (https://www.msc.org/track-a-fishery/fisheries-in-the-program/in-assessment/pacific/tri-marine-western-and-central-pacific-skipjack-and-yellowfin-tuna/assessment-downloads-1/20151210_PCDR_TUN501.pdf). The certification is being undertaken by SCS Global.
- ii. Solomon Islands skipjack and yellowfin tuna purse seine and pole & line (https://www.msc.org/track-a-fishery/fisheries-in-the-program/in-assessment/pacific/solomon-islands-skipjack-and-yellowfin-tuna-purse-seine-and-pole-and-line/assessment-downloads-1/20160330_PCDR_TUN526.pdf). The certification is being undertaken by MRAG Americas.

Steps taken:

Skipjack: SCS Global and MRAG Americas were contacted initially by e-mail on 7th July and then again on 13th July 2015, with the draft skipjack background section and scoring attached. Both CABs were asked to consider the materials and provide feedback. Acoura Marine suggested the use of CR v2.0 scoring at PI 1.2.2, following MSC Notice, "Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries" of 24th November. Scoring Issues PI 1.2.2 Sla and c would then be scored using CR v2.0 provisions for SG60 scoring. Use of CR v2.0 was suggested for consistency across multiple tuna certification assessments, in particular noting the use of CR v2.0 for North Pacific albacore, part of the UoC for this assessment.

MRAG Americas responded on 24th July, saying the Lead Assessor and P1 expert were happy with the Acoura Marine-proposed approach, but noting the need to confirm use of CR v2.0 with MSC. Acoura Marine then noted the need to follow processes laid out in CR v1.3 27.8.12 if CR v2.0 is used to score at PI1.2.2.

Having not heard from the SCS Global Team Leader, we contacted the SCS Global Lead Assessor of the PNA certification and P1 expert for the Tri Marine certification on 27th July,

asking specifically for a view on the use of CR v2.0 and a preference as to how to proceed. SCS Global responded the same day, indicating support to use CR v2.0 at PI1.2.2 and raising potential scoring differences also at PI1.2.1 and 1.2.4.

MRAG Ltd responded again 31st July noting a potential scoring issue at PI 1.1.1(a). Specifically, the availability of uncertainty estimates associated with skipjack SSB. The relevant reports do not contain explicit, numerical estimates but do include graphical summaries. Also, statistical estimates of associated uncertainty are small compared to structural uncertainty, which has been extensively explored. SCS noted difference of opinion on scoring of PI 1.2.1(a).

Conference calls were held on 6th and 11th August with all three CAB P1 experts. The PI 1.1.1(a) issue was resolved by inclusion of a graphical portrayal of the (very small) confidence intervals associated with skipjack SSB estimates. Extensive discussion was had on PI 1.2.1(a) scoring and rationale, with alternative views on whether or not the fishery met the SG80 level. A decision was deferred for SCS and MRAG P1 assessors to consult with their Lead Assessors. The use of CR v2.0 at PI 1.2.2 was at this time still unresolved while Acoura Marine (on behalf of all CABs) held discussions with MSC. The PI 1.2.1(a) scoring issue was resolved quickly, with all CABs agreeing to SG60 scoring.

North Pacific Albacore: Global Trust was contacted by e-mail on 7th July. In response, on 8th July, Global trust advised it had harmonised milestones of conditions with the existing 2012 AAFA certification when recertifying the CHMSF in 2015 and will consider the outcomes of this assessment. It further advised that it would be happy to discuss any issues.

Various discussions were held with MRAG Ltd over following weeks. No issues were identified requiring different scores. Conditions have been scheduled consistent with CHMSF conditions.

At Principle 2, no fisheries requiring harmonisation were identified. However, note was taken of rationales used when scoring the pole and line component of the CHMSF British Columbia albacore tuna fishery.

At Principle 3, key already-certified fisheries are as follows (refer details as for P1 above):

Skipjack:

- i. PNA Western and Central Pacific skipjack tuna

North Pacific Albacore:

- i. CHMSF British Columbia albacore tuna North Pacific
- ii. AAFA and WFOA North Pacific albacore tuna

The scores are very similar, the exception being the skipjack PNA P3.2.1 and 3.2.2. Those lower scores reflect the particular situation in the PNA. The conditions on those PIs have since been closed and rescored at 80 (PNA, 2013).

Subsequent to harmonisation efforts in 2015, and following notifications by MSC on i) interpretation of CR V2 at PI1.2.2 si(a) and si(c); and ii) a pilot harmonisation process for certifications of highly migratory species, harmonisation was slowed down with the expectation of a meeting in early 2016 to enable complete harmonisation. During that time, this certification process was put in abeyance, though the certification processes for both Tri Marine and Solomon Islands fisheries continued to PCDR stage. In April 2016 a harmonisation meeting was held in Hong Kong, organised by MSC, with an independent facilitator, peer review functions provided across certifications by all Independent Experts present, a further non-involved Peer Reviewer appointed by the MSC's Peer Review College, all involved CABs present, and opportunity for direct stakeholder input. Extensive discussion was held on scoring

and rationales for skipjack and North Pacific albacore (as well as for WCPFC yellowfin and South Pacific albacore). During the meeting, consideration was given to consistency of scoring across certifications of overlapping fisheries, as well as between certifications within the region and across regions. For example, consideration was given to recent PI1.2.2-related matters arising in the IOTC area.

Agreement was reached for all stocks, including skipjack and North Pacific albacore. Scoring and rationales as of July 2015 for the stocks under this UoC were found to be robust. Because of the time delay caused by use of the new, pilot harmonisation process, there has been a need to update some of the fishery-specific information in this report at Principles 1 and 2. However, these changes have been small except as relates to adoption of an explicit TRP for skipjack tuna, where previously an implicit one was in effect. No new stock assessments for P1 species have taken place during the course of the certification process.

Overall, while extended, the harmonisation of multiple fisheries has been good, with thorough exploration of issues and excellent CAB and IE communication.

4.2 Previous assessments

This fishery has not undergone MSC full assessment. A confidential pre-assessment was carried out by IFC in September 2014

4.3 Assessment Methodologies

MSC Certification requirements V1.3 January 2013, was used for this assessment with the exception of P1.2.2 si(a) and si(c) which were scored at SG60 using version CR v2.0, in the interests of harmonising and following the MSC Notice, "Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries" of 24th November.

The MSC full assessment reporting template v 1.3 was used.

The default assessment tree was used without adjustments except for both skipjack and albacore at PI 1.2.2 si(a) and si(c), as noted above.

4.4 Evaluation Processes and Techniques

4.4.1 Site visits and consultations

The site visit for this assessment was held between 22–25th June 2015 in Tokyo, Shizuoka and Yaizu, Japan. The stakeholders consulted during the site visit and schedule of meetings is shown in Table 4.

Table 4. Stakeholders consulted during the site visit and schedule of meetings.

Date	Name	Position	Organisation	Location
22 June	Aiki Yamauchi	Fisheries Project Leader	WWF Japan (eNGO)	Tokyo
	Makoto Yoshida	Staff		
	Satoshi Maekawa	Staff		
22 June	Shuichi Harahare	Manager	Japan Fisheries Tuna Coop Association	
22 June	Shingo Fukui	Asst Director Section chief Pole and Line	Fishery Agency (Government)	Tokyo
	Takeru Iida			
23 June	Kenji Matsunaga	President	Meiho Gyogyo (client)	Yaizu

Date	Name	Position	Organisation	Location
	Andreas Hermawan	Translator		
23 June	Takeo Hashigaya	President	Toyokuni-maru Fisheries Cooperative Association	Yaizu
24 June	Shingo Suzuki Yoshiyuki Kimpara	Deputy Director, Yaizu Fish Market Director Yaizu Fish Market	Yaizu Fisheries Cooperative Association (Fish market)	Yaizu
24 June	Hiroshi Nishida Hitetada Kiyofuji	Head Tuna and Skipjack Section Snr Researcher Tuna and skipjack section	National Research Institute of far Seas Fisheries (NRIFSF) (Research Institute)	Shizuoka
25 June	Kenji Matsunaga Andreas Hermawan Satoshi Maekaw Makotto Yashida	President Translator Staff Staff	Meihi Gyogyo (Client Group)	Yaizu

4.4.2 Evaluation Techniques

a) Media announcements

Three media outlets were used: (i) Announcement of the fishery going under MSC assessment was made on the Japanese website: <http://mainichi.jp>; (ii) Announcement and invitation for stakeholder participation in a Local Japanese paper the [Suisan Shinbun \(Weekly Paper\)](#) and (iii) the MSC website. The Japanese website and local paper were selected to reach predominantly local stakeholders while the MSC notice targeted a wide range of stakeholders within the sustainable seafood industry. The combination of these ensured that key stakeholders were notified of the announcement.

b) Methodology for information gathering

Information for the assessment was gathered during the site visits and in separate correspondence with individual stakeholders through Intertek Japan. Intertek Japan was key in providing most of the operational and regulatory information on the fishery and were extremely helpful and cooperative throughout the assessment process. Regional information (e.g. SPC stock assessments, WCPFC CMMs) was obtained primarily from online sources.

c) Scoring process

Scoring was partly completed during the site visit and partly completed afterwards. Principle 1 was provisionally scored during the site visit, but scores were then reviewed and in some cases modified during further team discussions and after harmonisation discussions with other CABs in relation to skipjack and albacore (see Section on harmonisation). In relation to Principle 2, some further research was required after the site visit on some issues, especially those requiring translation of documents.

The scores were decided following CR v1.3 section 27.10 and using the criteria set out in Table C2.

d) Decision rules for final outcome

The decision rules for MSC certification are as follows:

- No PI scores below 60;
- The aggregate score for each Principle, rounded to the nearest whole number, is 80 or above, calculated using the standard weightings in the MSC scoring worksheet (see also CR v1.3 section 27.10.9).

Scoring elements used in Principle 2 are shown in Table 5.

Table 5. Principle 2 scoring elements used in the assessment (as required at CR v1.3 Annex CB 3.1.1).

Component	Scoring elements	Main/not main	Data-deficient or not
2.1	Bigeye tuna	Not main	Not
	Yellowfin tuna	Not main	Not
	Japanese anchovy	Not main	Not
	Yellowtail amberjack	Not main	Not
	Dolphin fish	Not main	Not
2.2	None	-	Not
2.3	None	-	Not
2.4	None defined	-	Not
2.5	None	-	Not

5 Traceability

5.1 Eligibility Date

The Target Eligibility Date (TED) will be the date of certification.

5.2 Traceability within the fishery

a) Tracking, tracing and segregation systems within the fishery

The client, Meiho Gyogyo Co. Ltd., is a subsidiary of Meiho Co. Ltd., itself a subsidiary of Minami Shokuhin Co. Ltd. (MSC). Minami is a food processing company with wide interests. Minami has a pre-existing contract with Toyokuni to supply all of its Pole and Line catch from the Toyokuni Maru 'direct' to Minami. The vessels in the UoC (Toyokuni Maru and the Meiho Maru) land to both Shiogama (Miyagi Prefecture) (feeding to Meiho plants) and to Yaizu (Shizuoka Prefecture) (feeding to Minami plants).

Both vessels freeze the catch on board. And it is kept in refrigerated seawater (brine) at -18 degrees centigrade.

The vessels must carry and complete a logbook for each trip. The following mandatory reporting information is recorded: the departure and arrival port, departure and arrival dates, fishing times, their respective latitude and longitude co-ordinates and number of fishers. Information must be submitted for all target and other species caught catch as well as those species listed on the Protected Species List. Retained catch information includes species, number of individuals and estimated weight in kilograms.

Upon reaching one of two ports (Yaizu or Shigama), fish are landed into the Fish Market. The markets are dedicated points of landing through which product must pass. Typically, fish would be auctioned through the market but the Minami Shokuhin-Toyokuni contract specifies the fish will be bought by Minami Shokuhin Co. Ltd. and its and the Meiho Maru catch is all taken by Meiho Gyogyo, by-passing the auction. Markets have multiple points of landing (3) in Yaizu and one in Shiogama. When more than one vessel is unloading, catch is separated by vessel. Limited sampling is done on board but some weights are taken for operational decision-making. At port, all fish (landed frozen in brine at -18C, whole, are sorted in to four standard size categories for market. In Yaizu, Minami processes about 35 mt per day, while in Shiogama, Meiho processes 17 mt per day.

At all stages of landing, grading, storage and trucking there is clear documentation and labelling to ensure there is no mixing of fish with fish caught from any other vessel. There is a dedicated "line" for each individual vessel. The documentation includes name of vessel, date of landing, species and weight of fish and ownership.

Records are completed and held by both the company and the Fish market. These are also submitted FJA. Data such as boat name, date of fish reception, Fish Market identification unique to unloading number, port of unloading, species and their respective accurate weights in kilograms, logbook number and page number of logbook are recorded.

Transshipment is not undertaken by the client group. Under the Fisheries Management (International Agreements) Amendment Regulations 2012, strict guidelines are in place for the transshipment of highly migratory fish stocks and are in accordance with the WCPFC CMM-2009-06 on the regulation of transshipment, including a transshipment declaration, having an observer present at the time of unloading, and reporting requirements to the Executive Director of the Commission of the WCPFC.

b) Risk of substitution of certified products with non-certified products

The two vessels in the Unit of certification target primarily skipjack but also albacore tuna. They fish within Japan's EEZ and also in the WCPFO. VMS records can be matched to logbook entries for fishing times and these can be verified against logbook entries. All catches can be classed as MSC certified and are eligible to carry the MSC ecolabel. Only one boat unloading occurs at a time, preventing the substitution of non-certified catch from another pole and line or any other vessel operating in the fishery.

c) Points of landing

There are two designated ports for the client vessels to land in eastern Japan, Yaizu and Shioyama. In Yaizu, approximately 35 mt of fish *per day* is processed and approximately 17 mt *per day* in Shioyama.

5.3 Eligibility to enter further Chains of Custody

Skipjack and albacore tuna caught by the Meiho Maru and Toyokuni Maru vessels after the target eligibility date will be eligible to enter further chains of custody, pending the outcome of this evaluation.

There are two eligible points of landing:

- Yaizu
- Shioyama

5.4 Eligibility of Inseparable or Practically Inseparable (IPI) stock(s) to enter further Chains of Custody

There are no IPI stocks

6 EVALUATION RESULTS

6.1 Principle Level Scores

Table 6 Final Principle Scores

Principle Scores	
Principle	Score
Principle 1 – Skipjack tuna	86.9
Principle 1 – North Pacific albacore tuna	83.8
Principle 2 – Ecosystem	97.0
Principle 3 – Management System	88.3

6.2 Summary of Scores

Table 7 Summary of scores

Prin- ciple	Wt (L1)	Component	Wt (L2)	PI No.	Performance Indicator (PI)	Wt (L3)	Score	Contribution	
One SKJ	1	Outcome	0.5	1.1.1	Stock status	0.5	0.25	100	25.00
				1.1.2	Reference points	0.5	0.25	90	22.50
				1.1.3	Stock rebuilding				
		Management	0.5	1.2.1	Harvest strategy	0.25	0.125	70	8.75
	1.2.2			Harvest control rules & tools	0.25	0.125	60	7.50	
	1.2.3			Information & monitoring	0.25	0.125	90	11.25	
	1.2.4			Assessment of stock status	0.25	0.125	95	11.88	
	One ALB	1	Outcome	0.5	1.1.1	Stock status	0.5	0.25	100
1.1.2					Reference points	0.5	0.25	70	17.50
1.1.3					Stock rebuilding				
Management			0.5	1.2.1	Harvest strategy	0.25	0.125	80	10.00
		1.2.2		Harvest control rules & tools	0.25	0.125	60	7.50	
		1.2.3		Information & monitoring	0.25	0.125	90	11.25	
		1.2.4		Assessment of stock status	0.25	0.125	100	12.50	
Two		1	Retained species	0.2	2.1.1	Outcome	0.333	0.0667	80
	2.1.2				Management	0.333	0.0667	90	6.00
	2.1.3				Information	0.333	0.0667	85	5.67
	Bycatch species	0.2	2.2.1	Outcome	0.333	0.0667	100	6.67	
			2.2.2	Management	0.333	0.0667	100	6.67	
			2.2.3	Information	0.333	0.0667	100	6.67	
	ETP species	0.2	2.3.1	Outcome	0.333	0.0667	100	6.67	
			2.3.2	Management	0.333	0.0667	100	6.67	
			2.3.3	Information	0.333	0.0667	100	6.67	
	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	100	6.67	
			2.5.2	Management	0.333	0.0667	100	6.67	
			2.5.3	Information	0.333	0.0667	100	6.67	
	Three	1	Governance and policy	0.5	3.1.1	Legal & customary framework	0.25	0.125	95
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	90	11.25
Fishery specific management system		0.5	3.2.1	Fishery specific objectives	0.2	0.1	90	9.00	
			3.2.2	Decision making processes	0.2	0.1	85	8.50	
			3.2.3	Compliance & enforcement	0.2	0.1	85	8.50	
			3.2.4	Research plan	0.2	0.1	80	8.00	
			3.2.5	Management performance evaluation	0.2	0.1	80	8.00	

Overall weighted Principle-level scores	SCORES
Principle 1 - SKJ; Stock rebuilding PI not scored	86.9
Principle 1 - ALB; Stock rebuilding PI not scored	83.8
Principle 2 - Ecosystem	97.0
Principle 3 - Management	88.3

6.3 Summary of Conditions

[Note: The table below is for summary purposes only. See Appendix 1.3 of this report template for full requirements for documenting Conditions in accordance with the MSC scheme requirements.]

Table 8 Summary of Conditions

Condition number	Condition	Performance Indicator	Related to previously raised condition? (Y/N/N/A)
1	By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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.	Skipjack 1.2.1	No, but note harmonising fisheries will include same condition and will also need to be applied to PNA purse seine fishery at re-assessment
2	By the fourth annual surveillance,, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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; b) The selection of the harvest control rules shall take into account the main uncertainties; c) 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.	Skipjack 1.2.2	Related to PNA 2011; other harmonising fisheries will include the same condition
3	By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: b) The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity; c) 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.	Albacore 1.1.2	Ref CHMSF 2015
3	By the fourth annual surveillance, , the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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; b) The selection of the harvest control rules shall take into account the main uncertainties; c) 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.	Albacore 1.2.2	Ref CHMSF 2015

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TRANSLATIONS

NB These documents are held by Intertek Japan

Documents provided by client and translated (in part or full)

1. Catch Landing Record by fish species_Meiho-maru (2013-15), Toyokuni-maru (2011-15)
2. Catch record Meiho Maru 2014
3. Copy distant water skipjack tuna fishery license held by the Meiho-maru vessel 2014
4. Daily catch record (from a vessel owned by the client)
5. Diagram of Decision-making process 2105
6. Example of the template "SPC/FFA Regional Pole-and-line Logsheet" completed by the Toyokuni-maru vessel on March 24, 2015
7. Fisheries Management Plan Meiho Gyogyo2015
8. Fishing Bait Purchase Record_Meiho-maru (2013-15), Tokyokuni-maru (2011-15)
9. List of Japan's skipjack/tuna fishery stakeholders 2015
10. Quantity of Bait Purchased (in kilogram) from 2011 to 2014
11. Result of the Monitoring or Research Report on the Endangered Species--Interaction between Fishing and the rare species 2015
12. Short and long term quantitative objectives to achieve Principle I &II 2015
13. Turnover by Fish Type 2011-14 for the Toyokuni-maru and 2013-14 for the Meiho-maru.2014

Documents provided by FAJ and translated (in part or full)

14. Annual catch statistics 2003-2013
15. Basic Plan for Fisheries"(excerpt)
16. Fishery Annual Report for the Fishing Year 2014
17. Fisheries Law (excerpt)
18. Government Gazette_extra#68, March 26, 2012"(excerpt)
19. How the Japanese government cracks down IUU fisheries
20. Ministerial Ordinance on the Permission, Regulation, Etc. of Designated Fisheries
21. Minutes of the 67th Resource Control Meeting held by the Fishery Policy Council

Documents sourced by Acoura Marine and translated (in part or full)

22. Stock assessment report (summary) in 2013—anchovy
23. Stock Assessment of Pacific Anchovy in fy 2014 (summary)
24. Stock Assessment of Amberjack in fy 2014 (summary)

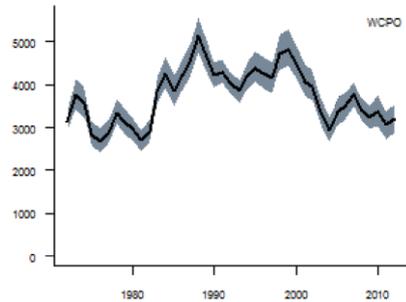
8 APPENDIX 1 SCORING AND RATIONALES

8.1 Performance Indicator Scores and Rationale

Principle 1 Evaluation Tables

8.1.1 Skipjack

Evaluation Table for PI 1.1.1

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	It is likely that the stock is above the point where recruitment would be impaired.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	Y	Y	Y
	Justification	<p>The MULTIFAN-CL assessment provides probabilistic estimates of parameters of interest, and has been extensively explored using a crosswise grid of sensitivity tests (WCPFC, 2014a).</p> <p>The stock assessment estimates spawning stock biomass, SB, to be <i>circa</i> 50%SB_{F=0}, well above the WCPFC-agreed, and MSC default, LRP of 20%SB_{F=0}. There is no indication of any recruitment reduction, though the annual average spawning potential has shown a recent downward trend towards the level seen in the 1970s (see Figure 9).</p> <p>Explicit confidence intervals on SB are not given in WCPFC (2014a) or Rice <i>et al</i> (2014). However, Figure 24 of Rice <i>et al</i> includes a graph showing the approximate 95% confidence intervals:</p>  <p>The confidence intervals are very tight. More importantly, structural uncertainty, which far exceeds within-model statistical uncertainty, has been explored using an extensive cross-wise grid of sensitivity assessments. Overall, there is a high degree of certainty that the stock is above the point where recruitment would be impaired. The SG100 requirement is met.</p>		
b	Guidepost		The stock is at or fluctuating around its target reference point.	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.
	Met?		Y	Y

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing	
	Justification	<p>The MULTIFAN-CL assessment provides probabilistic estimates of parameters of interest, and has been extensively explored using a crosswise grid of sensitivity tests (WCPFC, 2014a).</p> <p>The stock assessment estimates spawning stock biomass, SB, to be <i>circa</i> $50\%SB_{F=0}$, the recently-agreed, and well above $SB_{msy} = 28\%SB_{F=0}$. The stock is estimated never to have reduced to SB_{msy} and has hence been above its TRP in all years (see Figure 9).</p> <p>(NB The stock is estimated to be in centre of the range of candidate TRP being considered by the WCPFC.) Based on status relative to the implicit TRP, the SG100 requirement is met.</p>	
References		WCPFC (2014a; see: https://www.wcpfc.int/meetings/10th-regular-session-scientific-committee); Rice <i>et al</i> (2014)	
Stock Status relative to Reference Points			
	Type of reference point	Value of reference point	Current stock status relative to reference point
Target reference point	A) $\%SB_{F=0}$	a) $50\%SB_{F=0}$	$SB_{current} = 52\%SB_{F=0}$; $SB_{current}/SB_{msy} = 1.86$; $SB_{latest} = 48\%SB_{F=0}$; $SB_{latest}/SB_{msy} = 1.74$; Where 'current' means a recent 3-year average and 'latest' means the most recent year.
Limit reference point	a) $\%SB_{F=0}$ b) F_{msy}	a) $20\%SB_{F=0}$ b) $F(28\%SB_{F=0})$	a) $SB_{current} = 52\%SB_{F=0}$; a) $SB_{latest} = 48\%SB_{F=0}$; b) $F_{current}/F_{msy} = 0.61$
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100; (b) 100; Use CR Table C2:			100
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 1.1.2

PI 1.1.2		Limit and target reference points are appropriate for the stock		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	Y	Y	
	Justification	The skipjack stock is subject to a state-of-the-art stock assessment (Rice <i>et al</i> , 2014; WCPFC, 2014a) which is able to provide estimates of spawning biomass, SB, and fishing mortality rate, F, as well as MSY-related reference points against which stock status can be determined. Explicit SB and F LRPs have been agreed and an implicit SB TRP is used. All reference points are of standard form as used in multiple fisheries jurisdictions, including tuna RFMOs, and are appropriate to the skipjack stock, taking account of its productivity and resilience. SG80 is met.		
b	Guidepost		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		Y	Y
	Justification	The SB LRP is set at 20%SB _{F=0} , the default MSC value and as commonly used worldwide. This meets the SG80 requirements. The use of 20%SB _{F=0} followed advice from the SC (WCPFC, 2011) which based its recommendations on a number of studies that explored technical aspects of estimation and robustness (e.g. to mis-specified levels of S-R steepness) as well as considering meta-analyses to gain insight in to appropriate levels of depletion that might serve as appropriate LRPs. The use of 20%SB _{recent} was considered sufficiently precautionary. SG100 is therefore met.		
c	Guidepost		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.	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, 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.
	Met?		Y	N
	Justification	WCPFC (2015; CMM 2015-06) sets an explicit TRP of 50%SB _{F=0} . This is to be reviewed no later than 2019 and will be used in developing Conservation and Management Measures, provision of scientific advice to the Commission, and in the formulation of Harvest Control Rules (as set out in the WCPFC Work Plan related to CMM2014-06; WCPFC (2014f)). The agreed TRP is well above the implicit B _{msy} of 28%B ₀ . However, while well above B _{msy} , it is not clear that explicit account has been taken of precautionary issues such as the ecological role of the stock. Indeed, the debate on setting a TRP at either 50% or 60%SB _{F=0} , was due to consideration of potential impacts of the fishery on stock size at its northern range (Kiyofuji <i>et al</i> , 2014). It is unclear whether this debate is primarily ecological or economic but SG100 is therefore not met.		
d	Guidepost		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	
	Met?		Not applicable	

PI 1.1.2		Limit and target reference points are appropriate for the stock	
	Justification	Not applicable	
References		Kiyofuji <i>et al</i> , 2014; Rice <i>et al</i> , 2014; WCPFC, 2011; WCPFC, 2014a, f; WCPFC CMM 2015-06	
OVERALL PERFORMANCE INDICATOR SCORE:			
(a) 80; (b) 100; (c) 80;(d) NR; Use CR Table C2:			90
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 1.2.1

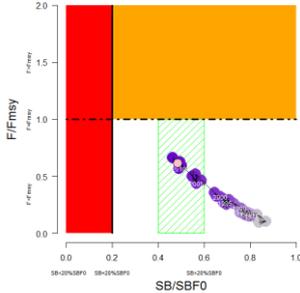
PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.
	Met?	Y	N	Not scored
	Justification	<p>The key Guidance for this PI (MSC CR v1.30 GCB2.5) defines the elements of a harvest strategy as i) the control rules and tools in place; ii) the information base and monitoring; and iii) the assessment method. The intention is that these elements should work together effectively to ensure overall performance, measured in terms of achieving outcomes (i.e. meeting objectives).</p> <p>The harvest strategy currently in operation is not formalised but consists of the elements considered at PIs 1.2.2, 1.2.3, and 1.2.4. Each PI is considered below in its own right; this PI is intended to consider how they work together to achieve objectives.</p> <p>First, therefore, it is essential to understand the objectives, as articulated through the reference points. This is covered in PI 1.1.2, above. Explicit LRPs exist for biomass and fishing mortality rate. An implicit (and recently made explicit) MSY-related biomass TRP also exists, with work to agree a higher TRP in train.</p> <p>CMM 2014-01 (WCPFC, 2014c) has the stated objective of ensuring “Compatible measures for the high seas and exclusive economic zones (EEZs) are implemented so that bigeye, yellowfin and skipjack tuna stocks are, at a minimum, 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”, though noting that “The Commission will amend, or replace the objectives with target reference points after their adoption” (the subject of CMM 2014-06; WCPFC, 2014f). Further, CMM 24-01 states that “The Fishing Mortality Rate (F) for skipjack will be maintained at a level no greater than Fmsy, i.e. $F/F_{msy} \leq 1$”.</p> <p>The objectives of CMM 2014-01 thus reflect the WCPFC-agreed explicit fishing mortality LRP and the implicit biomass TRP (see PI 1.1.2), while also recognizing the biomass TRP will be modified (substantially upwards) to take account of environmental and economic factors. Discussion in the Management Objectives Workshop process (see also PI 1.2.2 Sla and Slc) was aimed at agreement of a spawning stock biomass of 50-60% $SB_{F=0}$ and CMM 2015-06 adopts $50SB_{F=0}$ whereas SB_{msy} is approximately 28%$SB_{F=0}$.</p> <p>While formal decision rules (harvest control rules) are being developed under an agreed work plan, management of skipjack has operated informally to meet the objectives. The information base is extensive from a wide range of biological studies and from a diverse range of fisheries. The information is sufficient to support a state-of-the-art stock assessment that provides probabilistic estimates of key parameters and their relationship to the explicit and implicit reference points. Advice is given not just in relation to skipjack but to implications of management controls across fisheries (especially purse seine and longline) and the likely impacts on all tropical tuna stocks. Advice from the stock assessment is provided by the Scientific Committee (e.g., WCPFC, 2014a) and additional work is carried out by the scientific provider, SPC, to the Commission. Annual decision-making, articulated through Conservation and Management Measures (CMM), is supported by good scientific decision-support materials.</p> <p>The Commission also receives advice from its Technical and Compliance Committee (see e.g. WCPFC, 2014b). The most current CMM is CMM 2014-01, which lays out a wide range of effort and capacity limitation measures relevant to skipjack fishing (especially by purse seine vessels), catch controls by longliners, FAD usage restrictions, country-specific measures, etc. CMM 2014-01 is supported by a number of other relevant CMM, dealing with vessel monitoring (CMM 2014-02), vessel records (CMM 2013-03), shark measures (CMM 2014-05), compliance and monitoring (CMM 2014-07). The key components relevant to skipjack are the purse seine effort and capacity controls intended to restrict fishing mortality to 2010 (or earlier) levels, well below F_{msy} and more than double SB_{msy} (see Figure 9, panel SKJ5).</p> <p>Advice flows not just to the WCPFC but also through its constituent parties, notably the Parties to the Nauru Agreement (PNA), under whose purse-seine Vessel Days Scheme (VDS) over 80% of the skipjack catch is taken, with 100% observer coverage. All fishing under the VDS is subject to strict PNA-wide rules, as well as to any national or WCPFC rules in force. The PNA, like the WCPFC, uses scientific, technical, and compliance advice to adjust rules annually to meet objectives, cognizant of changes in advice on skipjack stock status, and on other species also caught in skipjack fisheries (see, e.g., http://www.pnatuna.com/VDS for PNA advice on effort limitation for 2015-2017), and (http://www.ffa.int/node/1543) for a recent announcement through the Forum Fisheries Agency (FFA), including all PNA members, of an FFA intention to move to full catch controls within ten years.</p> <p>The current management arrangements, especially the effort and capacity limits for purse seine vessels, are expected to ensure that fishing mortality remains below the F_{msy} target and that spawning biomass remains</p>		

		<p>approximately twice SBmsy. SG60 requirements are therefore met.</p> <p>There are no formally agreed harvest control rules yet in place. The primary intended control on fishing mortality is through effort and capacity limitation, with the key constraints imposed through the PNA VDS. The processes for determining VDS Total Allowable Effort (TAE) and Party Allocations of Effort (PAE) are not transparent. More importantly, it is unclear how the TAE are determined, based on stock status advice. There is no clear linkage between potential catch and allocated effort. It is therefore not clear that the harvest strategy, utilizing high quality science and compliance information, and founded on high quality scientific advice, is responsive to the state of the skipjack stock; SG80 requirements are not met.</p> <p>The harvest strategy is not yet <u>designed</u> to achieve stock management objectives, though CMM 2014-06 is aimed at ensuring this is the case. The SG100 requirements are not met.</p>		
b	Guidepost	The harvest strategy is likely to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been fully evaluated and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) Not scored
	Justification	<p>The harvest strategy objectives are reflected in its previously implicit and now explicit TRP, and explicit LRP. For skipjack, fishing mortality rate remains well below Fmsy (LRP) and the stock is well above SBmsy (28% SB_{F=0}) and 20%SB_{F=0}(LRP). At 52%B0 it is just above the adopted TRP of 50%SB_{F=0}, a value that takes account of biological and economic factors (CMM 2014-06; WCPFC, 2014f). The SG80 requirements are met.</p> <p>The harvest strategy is informal and not fully evaluated. SG100 is not met.</p>		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	(Y/N) Y		
	Justification	<p>While not all catch components are fully monitored (e.g. Vietnam, Indonesia, Philippines), overall catch and operational data, and biological data, are gathered sufficient to monitor stock status and responsiveness on a regular basis. Sampling and compliance data for the primary skipjack purse-seine fishery are sufficient to ensure a large proportion of the skipjack catch (over 80%) is fully monitored.</p>		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Not scored
	Justification	<p>Not scored, but note would not meet SG100: No harvest strategy for skipjack tuna has been formalised and is not subject to a formal review process. However, the harvest strategy is periodically reviewed and improved as necessary. The WCPFC receives advice and reviews management resolutions during its annual meetings. Evidence of this is in the form of adoption of WCPFC CMM 2014-06 measures to progress development and adoption of TRP, LRP, and HCR. Other WCPFC CMM adoption demonstrates annual review and improvement. Nevertheless, consistent with harmonization requirements and PNA PCR (2011): https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pna_western_central_pacific_skipjack_tuna/assessment-downloads-1/20111221_PCR.pdf, the SG100 requirement is not met.</p>		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	(Y/N/Not relevant) NR	(Y/N/Not relevant) NR	(Y/N/Not relevant) NR

Justification	There is no targeting or record of captures of sharks in the UoC.	
References	WCPFC, 2014, a, b, c, f; PNA PCR (2011):	
OVERALL PERFORMANCE INDICATOR SCORE:		
CONDITION NUMBER (if relevant):		1
(a) 60; (b) 80; (c) 60; (d) -; (e) NR; Use CR Table C2:		70

Evaluation Table for PI 1.2.2

PI 1.2.2		There are well defined and effective harvest control rules in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	<p>Generally understood harvest 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>CR v2.0: Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.</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 HCRs are expected to keep the stock fluctuating at or above a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, most of the time.</p>
	Met?	Y	N	Not scored
	Justification	<p>There are not yet any well-defined harvest control rules in place and SG80 is not met.</p> <p>Following the MSC Notice, "Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries" of 24th November 2014, PI 1.2.2 si(a) is scored using CR v2.0 provisions for SG60 scoring (<i>Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached</i>). We note also, MSC Notice, "Interpretation on Harvest Control Rules (HCR)" of 16 December, 2015.</p> <p>MSC CR v2.0 lays out two conditions for acceptance of HCR being available sufficient to justify scoring at the SG60 level.</p> <p>First, CR v2.0 SA2.5.2a provides for HCR being recognised as available, "...if stock biomass has not previously been reduced below Bmsy or has been maintained at that level for a recent period of time".</p> <p>As noted at PI 1.1.1 si(c), The MULTIFAN-CL assessment provides probabilistic estimates of parameters of interest, and has been extensively explored using a crosswise grid of sensitivity tests (WCPFC, 2014a). The stock assessment estimates spawning biomass, SB, to be <i>circa</i> 50%SB_{F=0}, well above the implicit, and MSC default, TRP of SB_{msy} = 28%SB_{F=0}. The stock is estimated never to have reduced to SB_{msy} and has hence been above SB_{msy} in all years.</p> <p>The CR v2.0 SA2.5.2a condition is therefore met.</p> <p>Second, CR v2.0 SA2.5.3b provides for HCR being recognised as available if, "...there is an agreement or framework in place that requires the management body (<i>in this case WCPFC</i>) to adopt HCRs before the stock declines below Bmsy".</p> <p>WCPFC Conservation and Management Measure CMM 2014-06 (WCPFC, 2014f) sets out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules or ("harvest control rules"), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The Commission agreed to adopt a work plan at its 2015 annual meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific albacore tunas. In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process.</p> <p>According to WCPFC (2014a), paragraph 48, "Future status under status quo projections (assuming 2012 conditions) was robust to assumptions on future recruitment. Under either assumption, spawning biomass remained relatively constant and it is exceptionally unlikely (0%) for the stock to become overfished (SB₂₀₃₂<0.2SB_{F=0}) or for the spawning biomass to fall below SB_{MSY}, and it is exceptionally unlikely (0%) for the stock to become subject to overfishing (F>F_{MSY})."</p> <p>The CR v2.0 SA2.5.3b condition is therefore met.</p> <p>In summary, as conditions at both CR v2.0 SA2.5.2a and CR v2.0 SA2.5.3b are met, a score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.</p>		
b	Guidepost		<p>The selection of the harvest control rules takes into account the main uncertainties.</p>	<p>The design of the harvest control rules takes into account a wide range of uncertainties.</p>

PI 1.2.2		There are well defined and effective harvest control rules in place		
	Met?		N	N
	Justification	AS si(a) and si(c) are less than 80, this SI need not be scored. However, as it would not meet SG80, it is scored to allow inclusion with relevant condition. HCR are still under development and neither SG80 nor SG100 is met.		
c	Guidepost	There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	Y	N	N
	Justification	<p>Following the MSC Notice, "Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries" of 24th November 2014, PI 1.2.2 si(c) is scored using CR v2.0 provisions for SG60 scoring. We note also, MSC Notice, "Interpretation on Harvest Control Rules (HCR)" of 16 December, 2015.</p> <p>Two MSC CR v2.0 conditions need to be addressed.</p> <p>First, CR v2.0 SA2.5.6 requires that as part of the evidence that tools are working, "...teams should include current levels of exploitation in the UoA, as measured by fishing mortality rate where available". The best available information on the exploitation rate is in the 2014 SC report (WCPFC, 2014a); the MULTIFAN-CL base case assessment estimates $F_{current}/F_{msy}$ as 0.61 and, as shown in the embedded graphic, F is estimated never to have reached F_{msy}.</p>  <p>While there is concern that F is continuing to increase, CR v2.0. GSA2.5.2-7 as relates to SA2.5.6, notes that current F being "equal to or less than F_{msy} should be taken as evidence that the HCR is effective."</p> <p>Second, MSC CR v2.0 SA2.5.5b, related to when HCRs are recognized as being available at si(a) at the SG60 level (see above), requires "...a description of a formal or legal agreement to trigger the development of HCR".</p> <p>As noted at SIa, CMM 2014-06 (WCPFC, 2014f) sets out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules (or "harvest control rules"), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The Commission agreed to adopt a work plan at the 2015 Commission meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific albacore tunas. That work plan was adopted at WCPFC12 in December 2015. WCPFC12 also adopted an explicit TRP (WCPFC, 2015) In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process.</p> <p>The CMM has already triggered continuation of HCR development of <i>inter alia</i> skipjack.</p> <p>A score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.</p>		
References		WCPFC, 2014a, f; WCPFC, 2015		
OVERALL PERFORMANCE INDICATOR SCORE: (a) 60; (b) -; (c) 60; Use CR Table C2:				60
CONDITION NUMBER (if relevant):				2

Evaluation Table for PI 1.2.3

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	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 related to the current harvest strategy, is available.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) Y
	Justification	A comprehensive range of information related to the current harvest strategy is available. Data on stock structure and productivity, as well as fishery characteristics and composition are available. Extensive tagging and size composition sampling provide the basis for the use of MULTIFAN-CL and estimation of key reference points against which status can be determined and management advice provided. There is considerable information on the nature and distribution of oceanic habitats (see, e.g., PNA, 2011) and the relationship between the oceanic environment and tuna is well studied (e.g., Lehodey <i>et al</i> , 1997). SG100 requirements are met.		
b	Guidepost	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.	Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	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 inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	Y	Y	N
	Justification	Harvest control decisions and estimates of stock abundance depend on inferences (estimates) made from data using the stock assessment and a range of assumptions. The assessment estimates stock abundance using catch and effort data, size composition data, and tagging data, with the main abundance signal coming from the tagging data. Data for stock assessment are from all fisheries for the entire skipjack stock. Discarding is considered overall to be negligible and catches (fishery removals) are regularly monitored at a level of accuracy and coverage consistent with assessment requirements to enable management decision-making. The majority of catches are taken by purse-seine vessels under PNA VDS arrangements and are subject to 100% (since 2010) observer coverage at sea, as well as port and transshipment monitoring. Sampling protocols to ensure catch and size composition accuracy have been improved following the review by Cordue (2013). The frequency and certainty of monitoring is high (enough) given the frequency of the assessment, and assessment time step (quarterly) and approaches taken to ensuring robust estimation and advice. The data flow to the statistical assessment which accommodates uncertainties by exploring data weighting, providing statistically estimated ranges, and carrying out extensive tests to various uncertainties. This assessment needs to be harmonised with the 2011 assessment of the PNA unassociated-set purse seine fishery. That assessment scored this SI at SG80. The foregoing suggests a higher SI score may be warranted but a score of SG80 is given.		
c	Guidepost		There is good information on all other fishery removals from the stock.	
	Met?		Y	

PI 1.2.3		Relevant information is collected to support the harvest strategy	
	Justification	<p>There is good information on fishery removals from most other sources e.g. longline, non-PNA purse seine and pole & line fisheries, and increasing information from the diverse fisheries of Indonesia, Philippines, and Vietnam, including estimates of total catch, size and some effort data, especially in the Philippines.</p> <p>WCPFC (2014e) reports on the progress of the GEF-funded West Pacific East Asia (WPEA) Project, noting that it is the extension of the former Indonesia and Philippines Data Collection Project (IPDCP) funded by WCPFC members on a voluntary basis. Its purpose is to provide technical assistance and partial financial support to the participating countries (Indonesia, Philippines and Vietnam) for tuna data collection, annual tuna catch estimation, and capacity building to refine legal, institutional and policy arrangements. The five-year IPDCP and three-year WPEA projects were successfully finalized. However, WPEA activities continue to address data gaps in regional stock assessments and increase the countries' capacity in complying with WCPFC requirements. A continuation project is being prepared by the WCPFC Secretariat, seeking GEF-funding through the United Nations Development Programme (UNDP) for implementation in late 2014.</p> <p>Scoring is not straightforward, but consistent with the 2011 assessment of the PNA unassociated-set purse seine fishery (PNA, 2011), with which harmonisation is required, a score of SG80 is awarded.</p>	
References		Cordue, 2013; Lehodey <i>et al</i> , 1997; PNA, 2011; WCPFC,2014e	
OVERALL PERFORMANCE INDICATOR SCORE:		(a) 100; (b) 80; (c) 80; Use CR Table C2:	90
CONDITION NUMBER (if relevant):			

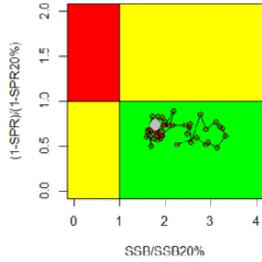
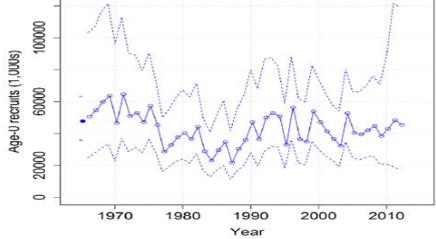
Evaluation Table for PI 1.2.4

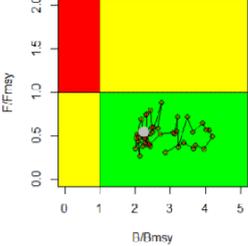
PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost		The assessment is appropriate for the stock and for the harvest control rule.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.
	Met?		Y	Y
	Justification	<p>There is a robust science and assessment process in place which has been subject to external review (WCPFC, 2009).</p> <p>The assessments are undertaken regularly, most recently in 2011 (Hoyle <i>et al</i>, 2011) and then 2014 (Rice <i>et al</i>, 2014; WCPFC, 2014a.) The stock assessment is implemented using MULTIFAN-CL, which fits an age- and spatially-structured model to catch, effort, size composition, and tagging data. The latest model fits data to 5 Regions in quarterly time periods starting in 1972; 23 fisheries are defined with selectivity fit separately to the majority. The model has been used for skipjack since 1998, and is continually fine-tuned and improved, benefitting from a large tagging database which enables more reliable estimation of parameters such as absolute biomass levels, indices of abundance and exploitation rates.</p> <p>The assessment is appropriate for the WCPO skipjack stock, accounting for spatial and temporal distributions, using appropriate biological assumptions, and accounting for diverse fisheries. 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. SG100 requirements are met.</p>		
b	Guidepost	The assessment estimates stock status relative to reference points.		
	Met?	(Y/N) Y		
	Justification	The assessment is used to estimate stock status relative to agreed SB and F LRPs and an implicit MSY-related TRP (WCPFC, 2014a, b). The SG60 requirements are met.		
c	Guidepost	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.
	Met?	Y	Y	Y
	Justification	<p>The assessment uses two approaches to describe the uncertainty in key model outputs. First, it estimates the statistical variation within a given assessment run. Second, and far more important given the tight confidence intervals estimated within the base case model for SB, structural uncertainty in the assessment is examined by considering the variation among model runs using a crosswise grid of model runs which include many of the options of uncertainty explored during model development (Rice <i>et al</i>, 2014). The structural uncertainty explored across models is much greater than the within-model statistical uncertainty.</p> <p>Estimates of SB and F, and status relative to MSY-based reference points are provided in a probabilistic way.</p> <p>SG100 requirements are met.</p>		
d	Guidepost			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.

PI 1.2.4		There is an adequate assessment of the stock status	
	Met?		Y
	Justification	<p>Alternative hypotheses and assessment approaches have been rigorously explored. Alternative hypotheses have been explored sequentially through time as alternative spatial and movement options, fishery definitions, etc., have been examined. Uncertainties examined using the crosswise grid include S-R steepness, alternate growth assumptions, alternate mixing assumptions, and changes in weighting factors (Rice <i>et al</i>, 2014).</p> <p>The SG100 requirements are met.</p>	
e	Guidepost		<p>The assessment of stock status is subject to peer review.</p> <p>The assessment has been internally and externally peer reviewed.</p>
	Met?	Y	N
	Justification	<p>There is a robust science and assessment <u>process</u> in place which has been subject to external review (WCPFC, 2009).</p> <p>Sampling processes to provide input data to the assessment have also been reviewed externally (Cordue, 2013).</p> <p>The assessment itself is subject to internal peer review through the Pre Assessment Workshop (PAW), held annually, and WCPFC SC annual processes. External review of bigeye tuna (Iannelli <i>et al</i>, 2013) has implications for the skipjack assessment and the SPC has taken advantage of that external review to help development of all tuna assessments, including for skipjack (Rice <i>et al</i>, 2014).</p> <p>The assessment itself has not been specifically subject to external review, the three relevant external reviews (WCPFC, 2009; Cordue, 2013; Iannelli <i>et al</i>, 2013) are all pertinent to scoring. A score of 80 is therefore awarded.</p> <p>Note that other certifications to which harmonization is required have scored this si at SG100. However, the North Pacific albacore assessment reported below, and the CHMSF certification to which it is harmonized (CHMSF, 2015), score this si at SG100 when stock-specific external reviews have been conducted.</p>	
References		Cordue, 2013; Hoyle <i>et al</i> , 2011; Iannelli <i>et al</i> , 2013; Rice <i>et al</i> , 2014; WCPFC, 2009; WCPFC, 2014a, b	
OVERALL PERFORMANCE INDICATOR SCORE:			
(a) 100; (b) 60; (c) 100; (d) 100; (e) 80; Use CR Table C2:			95
CONDITION NUMBER (if relevant):			

8.1.2 Albacore

Evaluation Table for PI 1.1.1

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	It is likely that the stock is above the point where recruitment would be impaired.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	Y	Y	Y
	Justification	<p>The SS3 assessment provides probabilistic estimates of parameters of interest, has been extensively explored and subjected to sensitivity testing of biological assumptions and data treatment and weighting.</p> <p>The stock assessment estimates 2012 spawning stock biomass, SSB, to be 1.8 x 20%SSB₀, well above the WCPFC and IATTC-implicit, and MSC default, LRP of 20%SSB₀ (see Figure 1.1.1a. left panel). There is no indication of any recruitment impairment (see Figure 1.1.1a, right panel). There is a high degree of certainty that the current spawning stock biomass is above the point where recruitment would be impaired as the lower bound of the estimate (187,180 mt) is estimated to be considerably higher than the 20%SSB₀ higher bound (123,132 mt). The SG100 requirement is met.</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Figure 1.1.1a: Left: Kobe Plot showing SSB/20%SSB₀ (grey circle is most recent assessed year); Right: Estimated recruitment through time (+/- 95% CIs).</p>		
b	Guidepost		The stock is at or fluctuating around its target reference point.	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.
	Met?		Y	Y

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing	
Justification	<p>The SS3 assessment provides probabilistic estimates of parameters of interest, and has been extensively explored using sensitivity tests (ISC, 2014).</p> <p>The stock assessment estimates spawning 2012 stock biomass, SSB, to be 2.2 times the MSC default. SSB_{msy} (estimated as 99,360, with 95%CI of 85,882-112,838 mt) is in fact lower than the standard MSC default LRP of 20%SSB₀. The stock is estimated never to have reduced to SSB_{msy} and has hence been above the default TRP in all years (see Figure 1.1.1b) with a high degree of certainty.</p>		
	 <p>Figure 1.1.1b: Kobe Plot showing SSB/SSB_{msy} (grey circle is most recent assessed year).</p> <p>Based on status relative to the default TRP, the SG100 requirement is met.</p>		
References		ISC (2014; see https://www.wcpfc.int/node/19202)	
Stock Status relative to Reference Points			
	Type of reference point	Value of reference point	Current stock status relative to reference point
Target reference point	None set. The implicit SSB LRP is itself greater than SSB _{msy} , and it and F _{msy} are analytically determined. The case is not covered by MSC CR v1.30 CB2.3.3. a) SSB _{msy}	a) 99,360 mt	a) SSB/SSB _{msy} = 2.2 (220,202 mt/99,360 mt)
Limit reference point	a) %SB ₀ b) F _{msy} c) F _{SSB-ATHL}	a) 20%SB ₀ b) 0.219 c) Arbitrary, MBAL-derivative	a) SSB/ 20%SB ₀ = 1.8 a) F/F _{msy} = 0.52 b) F/ F _{SSB-ATHL} = 0.72
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100; (b) 100; Use CR Table C2:			100
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 1.1.2

PI 1.1.2		Limit and target reference points are appropriate for the stock		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	Y	Y	
	Justification	The North Pacific albacore stock is subject to a state-of-the-art stock assessment (ISC, 2014) which is able to provide estimates of spawning biomass, SSB, and fishing mortality rate, F, as well as MSY-related reference points against which stock status can be determined. Fmsy is used implicitly as a LRP because the WCPFC and IATTC Conventions bind parties to (Annex 2 of) the United Nations Fish Stocks Agreement (Guidelines for the application of the Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. A further LRP is implied by the WCPFC's adoption at its 8 th Annual Session of a hierarchy of SSB LRPs, with the lower Level default being 20%SSB _{F=0} . No TRP are in effect but MSY- and SPR-based RP can be calculated as required (and a range is output by ISC, 2014). All reference points are of standard form as used in multiple fisheries jurisdictions, including tuna RFMOs, and are appropriate to the albacore stock, taking account of its productivity and resilience. SG80 is met.		
b	Guidepost		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		N	N
	Justification	The WCPFC LRP of 20%SB _{F=0} is arguably <u>set</u> by default following adoption of a hierarchical approach at the 8 th Annual Session of the Commission. No equivalent exists as yet for the IATTC. Fmsy is an implicit LRP in both the WCPFC and IATTC, by Convention. However, while the WCPFC has explicitly agreed to use Fmsy as a LRP for skipjack tuna, it has not done so for North Pacific albacore. The ISC has adopted a working LRP of F _{SSB-ATHL} but this has not been adopted in any formal sense by WCPFC or IATTC, though neither RFMO has rejected repeated advice based upon it. The SG requires that LRPs be 'set' rather than as at SI1.1.2c, where the language of requirement is more relaxed. As only one of the two RFMOs has in any sense 'set' an LRP (and acknowledging that the setting followed meta-analyses to ensure it was precautionary), and noting the need to harmonise assessments with CHMSF (2015), it is considered the SG80 requirements are not met. <i>(NB CR v1.30 CB2.3.2.1 can be read to allow wider use of implicit reference points. However, the paragraph refers to usage within management procedures, management strategies or decision rules, and is therefore deemed not relevant here.)</i>		
c	Guidepost		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.	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, 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.
	Met?		N	N
	Justification	Both the WCPFC and IATTC Conventions use language suggesting all fish stocks covered by their Conventions should maintain or restore populations of harvested species at levels of abundance which can produce the MSY, <i>inter alia</i> , through the setting of the total allowable catch and/or the total allowable level of fishing capacity and/or level of fishing effort. Arguably, this creates an implicit MSY-related target. However, this argument, akin to that used above to support implicit LRPs, is not well-tested. Also, given the MSC requirement to harmonise assessments with CHMSF (2015), it is considered the SG80 requirements are not met.		

PI 1.1.2		Limit and target reference points are appropriate for the stock		
d	Guidepost		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	
	Met?		Not applicable	
	Justification	Not applicable		
References		ISC, 2014; CHMSF, 2015		
OVERALL PERFORMANCE INDICATOR SCORE:				
(a) 80; (b) -; (c) -;(d) NR; Use CR Table C2:				70
CONDITION NUMBER (if relevant):				3

Evaluation Table for PI 1.2.1

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points.	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 is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.
	Met?	Y	Y	N
	Justification	<p>The key Guidance for this PI (MSC CR v1.30 GCB2.5) defines the elements of a harvest strategy as i) the control rules and tools in place; ii) the information base and monitoring; and iii) the assessment method. The intention is that these elements should work together effectively to ensure overall performance, measured in terms of achieving outcomes (i.e. meeting objectives).</p> <p>The harvest strategy currently in operation is not formalised but consists of the elements considered at PIs 1.2.2, 1.2.3, and 1.2.4. Each PI is considered below in its own right; this PI is intended to consider how they work together to achieve objectives.</p> <p>First, therefore, it is essential to understand the objectives, as articulated through the reference points. This is covered in PI 1.1.2, above. Although not scored at the SG80 level at PI1.1.2b and c, implicitly, LRPs exist for biomass (WCPFC) and fishing mortality rate (WCPFC and IATTC). An implicit MSY-related biomass TRP similarly and arguably exists (WCPFC and IATTC).</p> <p>While formal decision rules (harvest control rules) are being developed, and TRP and LRPs further defined, (WCPFC, 2014b; IATTC, 2014), management of North Pacific albacore has operated informally to meet the objectives. The information base is extensive from a wide range of biological studies and from a diverse range of fisheries. The information is sufficient to support a state-of-the-art stock assessment that provides probabilistic estimates of key parameters and their relationship to the implicit reference points. Advice from the stock assessment is provided by the relevant scientific committees (e.g., WCPFC, 2014a; ISC, 2014) and additional work is carried out by the scientific provider, SPC, to the WCPFC, or in-house by IATTC. Annual decision-making, articulated through WCPFC CMM and IATTC Resolutions, is supported by good scientific decision-support materials. The Commissions also receive advice from their respective technical and compliance committees. The most current WCPFC CMM is CMM 2005-03, which lays out a range of effort controls and reporting requirements. IATTC C-05-02 lays out similar measures and is supplemented by IATTC C-13-03. A range of complementary measures exist at both RFMOs.</p> <p>While there are no formally agreed harvest control rules yet in place, the harvest strategy, utilizing high quality science and compliance information, and founded on high quality scientific advice, is considered to be responsive to the state of the albacore stock. Consistent with harmonization requirements and existing CHMSF (2015) scoring, the SG80 requirements are considered to be met.</p> <p>The harvest strategy is not yet <u>designed</u> to achieve stock management objectives, though WCPFC CMM 2014-06 is aimed at ensuring this is the case and agreement at IATTC (2014; see Appendix 3I) provides a similar structure to progress TRP, LRP and HCR for North Pacific albacore, amongst other stocks. The SG100 requirements are not currently met.</p>		
b	Guidepost	The harvest strategy is likely to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been fully evaluated and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Y	Y	N
	Justification	<p>Fishing mortality rate remains well below F_{msy} (WCPFC and IATTC implicit LRP) and the stock is well above SSB_{msy} (MSC default TRP) and $20\%SSB_0$ (WCPFC implicit and MSC default LRP). Evidence of this is seen in Figure 1.1.1b where F/F_{msy} is currently at 0.52, and SSB/SSB_{msy} is 2.2. The SG80 requirements are met.</p> <p>The harvest strategy is informal and not fully evaluated. SG100 is not met.</p>		

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	<p>Internationally systems are in place for recording catch and effort for all fishing entities fishing on North Pacific albacore. ISC Members are required to annually report the following data for fishery monitoring: Category I: total annual catch (round weight by species) total annual effort (active vessels by fishery); Category II: catch-effort (summary of logbook data); <input checked="" type="checkbox"/> Category III: biological data, (size composition, length or weight frequencies, sex information). Fishing entities fishing in the WCPO are required to report all data on standard WCPFC forms. The ISC exchanges data with the IATTC and the WPFCC (through the SPC) on an annual basis.</p> <p>Monitoring is in place that is expected to determine whether the harvest strategy is working. The SG60 requirements are met.</p>		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			N
	Justification	<p>No harvest strategy for albacore tuna has been formalised and is not subject to a formal review process. However, the harvest strategy is periodically reviewed and improved as necessary. Both the IATTC and the WCPFC receive advice and review management resolutions during their respective annual meetings. Evidence of this is in the form of adoption of WCPFC CMM 2014-06 (WCPFC, 2014f) and IATTC (2014) measures to progress development and adoption of TRP, LRP, and HCR. Other IATTC Resolutions and WCPFC CMM adoption demonstrates annual review and improvement.</p> <p>This same justification is used to deny a score of SG100 for skipjack, which is consistent with other fisheries for which harmonization is required (PNA, 2011; others in-certification). This UoC needs also to be harmonized with CHMSF (2015), which scored this si at SG100. Given the requirements and available evidence, a score of SG 100 is not awarded here.</p>		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	NR	NR	
	Justification	There is no targeting or record of captures of sharks in the UoC.		
References		WCPFC, 2014f; also CMM 2014-02,3,5,7; IATTC, 2014		
OVERALL PERFORMANCE INDICATOR SCORE: (a) 80; (b) 80; (c) 60; (d) -; (e) NR; Use CR Table C2:				80
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 1.2.2

PI 1.2.2		There are well defined and effective harvest control rules in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	<p>Generally understood harvest 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>CR v2.0: Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.</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 HCRs are expected to keep the stock fluctuating at or above a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, most of the time.</p>
	Met?	Y	N	
	Justification	<p>There are not yet any well-defined harvest control rules in place through WCPFC and/or IATTC; SG80 is not met.</p> <p>Following the MSC Notice, "Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries" of 24th November 2014, PI 1.2.2 si(a) is scored using CR v2.0 provisions for SG60 scoring (<i>Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached</i>). We note also, MSC Notice, "Interpretation on Harvest Control Rules (HCR)" of 16 December, 2015.</p> <p>MSC CR v2.0 lays out two conditions for acceptance of HCR being available sufficient to justify scoring at the SG60 level.</p> <p>First, CR v2.0 SA2.5.2a provides for HCR being recognised as available "...if stock biomass has not previously been reduced below Bmsy or has been maintained at that level for a recent period of time".</p> <p>As noted at PI 1.1.1 si(c), The SS3 assessment provides probabilistic estimates of parameters of interest, and has been extensively explored sensitivity tests (ISC, 2014). The stock assessment estimates spawning stock biomass, SSB/SSBmsy to be 2.2 with no overlap in confidence intervals. The stock is estimated never to have reduced to SSBmsy and has hence been above SSBmsy in all years.</p> <p>The CR v2.0 SA2.5.2a condition is therefore met.</p> <p>Second, CR v2.0 SA2.5.3b provides for HCR being recognised as available if "...there is an agreement or framework in place that requires the management body (WCPFC and IATTC) to adopt HCRs before the stock declines below Bmsy".</p> <p>WCPFC CMM 2014-06 (WCPFC, 2014f) sets out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules or ("harvest control rules"), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The Commission agreed to adopt a work plan at the 2015 Commission meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific albacore tunas. In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process.</p> <p>According to ISC (2014), projections at constant fishing mortality and average historical recruitment indicate the stock will remain relatively stable at between the 25th and median historical percentiles over the short- and long-term, suggesting also the stock will remain above SSBmsy.</p> <p>The CR v2.0 SA2.5.3b condition is therefore met.</p> <p>Summary, as conditions at both CR v2.0 SA2.5.2a and CR v2.0 SA2.5.3b are met, a score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.</p> <p>NB CHMSF (2015) invokes SA2.5.3a as a supporting condition in preference to SA2.5.3a (either can be used). The SA2.5.3a condition is "HCRs are effectively used in some other UoAs, that are under the control of the same management body and of a similar size and scale as the UoA." The justification used here is different but not incompatible. The resulting score and condition are the same.</p>		

PI 1.2.2		There are well defined and effective harvest control rules in place		
b	Guidepost		The selection of the harvest control rules takes into account the main uncertainties.	The design of the harvest control rules takes into account a wide range of uncertainties.
	Met?		(Y/N) N	(Y/N) N
	Justification	AS si(a) and si(c) are less than 80, this SI need not be scored. However, as it would not meet SG80, it is scored to allow inclusion with relevant condition. HCR are still under development and neither SG80 nor SG100 is met.		
c	Guidepost	There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	Y	N	N
	Justification	<p>Following the MSC Notice, "Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries" of 24th November 2014, PI 1.2.2 si(c) is scored using CR v2.0 provisions for SG60. We note also, MSC Notice, "Interpretation on Harvest Control Rules (HCR)" of 16 December, 2015.</p> <p>Two MSC CR v2.0 conditions need to be addressed.</p> <p>First, CR v2.0 SA2.5.6 requires that as part of the evidence that tools are working, "...teams should include current levels of exploitation in the UoA, as measured by fishing mortality rate where available". The best available information on the exploitation rate is in ISC (2014); the SS3 base case assessment estimates F/Fmsy as 0.52 and, as shown in Figure 1.1.1c, F is estimated never to have reached Fmsy. R v2.0. GSA2.5.2-7 as relates to SA2.5.6, notes that current F being "equal to or less than Fmsy should be taken as evidence that the HCR is effective."</p> <p>Second, MSC CR v2.0 SA2.5.5b, related to when HCRs are recognized as being available at Sla at the SG60 level (see above), requires "...a description of a formal or legal agreement to trigger the development of HCR".</p> <p>As noted at si(a), CMM 2014-06 and IATTC (2014) set out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules or ("harvest control rules"), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The WCPFC agreed to adopt a work plan at the 2015 Commission meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific albacore tunas. In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process. IATTC (2014) has also adopted measures to progress development and adoption of TRP, LRP, and HCR.</p> <p>The WCPFC CMM and IATTC adoption of an approach has already triggered continuation of HCR development of <i>inter alia</i> North Pacific albacore.</p> <p>A score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.</p> <p>NB The CHMSF (2015) assessment uses a somewhat different justification for SG60 scoring using CR v2.0; that justification does include the first condition used here. The resulting score and condition are the same.</p>		
References	WCPFC, 2014a, b, f; IATTC (2014, and see Appendix 3l)			
OVERALL PERFORMANCE INDICATOR SCORE: (a) 60; (b) -; (c) 60; Use CR Table C2:				60
CONDITION NUMBER (if relevant):				4

Evaluation Table for PI 1.2.3

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	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 related to the current harvest strategy, is available.
	Met?	Y	Y	Y
	Justification	<p>The key harvest strategy component for monitoring is the stock assessment. It is supported by information and data flows from a number of sources.</p> <p>CPUE analysis, conventional tagging and archival/pop-up tagging. Additionally, the ALBWG coordinates biological research needs and disseminates research results and statistics to cooperating scientists and the management bodies.</p> <p>Stock structure: Data suggest distinct North and South Pacific Ocean Albacore tuna stocks, separated by the Equator. The distinction is supported by a range of fishery, tagging, genetic, and ecological data (ISC, 2014).</p> <p>Life-history parameters for North Pacific albacore are based on analyses of biological samples, collected routinely on annual albacore fisheries. Reliable data are available to estimate sex-specific growth rates, a maturity ogive and fecundity. Length-weight relationships are established by the ALBWG to convert population numbers to biomass. In recent stock assessments, natural mortality has been fixed at 0.3/yr-1. The stock-recruitment function is a Beverton-Holt parameterization with a prior for steepness (h) of 0.9 (ISC, 2014).</p> <p>Detailed fleet information on the north Pacific albacore tuna fisheries is kept domestically by Japan and other nations and internationally by both the IATTC and WCPFC. IATTC Resolution C-04-06 and amendment C-14-02 established a vessel monitoring system in the Eastern Pacific Ocean. The WCPFC has similar measures in place (e.g., CMM 2014-02 (vessel monitoring), CMM 2013-03 (vessel records), CMM 2014-07 (compliance and monitoring).</p> <p>Stock abundance is determined via stock assessment (see PI 1.2.4).</p> <p>Removal by all fisheries are reported to IATTC and WCPFC. ISC Members are required to annually report the following data for fishery monitoring: total annual catch, total annual effort and catch-effort (summary of logbook data).</p> <p>Overall, 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 related to the current harvest strategy, is available. SG100 requirements are met.</p>		
b	Guidepost	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.	Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	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 inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	Y	Y	N

PI 1.2.3		Relevant information is collected to support the harvest strategy	
	Justification	<p>Harvest control decisions and estimates of stock abundance depend on inferences (estimates) made from data using the stock assessment and a range of assumptions. The assessment estimates stock abundance using catch and effort data and size composition data. High quality, standardised CPUE indices are available (ISC, 2014; Ijima and Satoh, 2014; Kiyofuji, 2014). Data for stock assessment are from all fisheries for the entire North Pacific albacore stock. Discarding is considered overall to be negligible and catches (fishery removals) are regularly monitored at a level of accuracy and coverage consistent with assessment requirements to enable management decision-making.</p> <p>Internationally systems are in place for recording catch and effort for all fishing entities fishing on north Pacific albacore. ISC Members are required to annually report the following data for fishery monitoring: Category I: total annual catch (round weight by species) total annual effort (active vessels by fishery); Category II: catch-effort (summary of logbook data); <input checked="" type="checkbox"/> Category III: biological data, (size composition, length or weight frequencies, sex information). The frequency and certainty of monitoring is high (enough) given the frequency of the assessment, and assessment time step (quarterly) and approaches taken to ensuring robust estimation and advice.</p> <p>The data flow to the statistical assessment which accommodates uncertainties by exploring data weighting, providing statistically estimated ranges, and carrying out tests to various uncertainties, including biological assumptions.</p> <p>Based on the foregoing, SG100 might arguably be met. However, consistent with harmonization requirements with CHMSF (2015), a score of SG80 is given. The Canadian fishery scoring does not award SG100 due to some sources of uncertainty, including the absence of updated estimates of life history parameters. While these may cause uncertainty, they can be accommodated by appropriate sensitivity testing at the stock assessment stage.</p>	
c	Guidepost		There is good information on all other fishery removals from the stock.
	Met?		Y
	Justification	<p>There is adequate information on all other fishery removals from the stock.</p> <p>Other fishery removals such as recreational fishery by the US are reported in the catch tables in the annual ISC Plenary report.</p>	
References		ISC, 2014; Ijima and Satoh, 2014; Kiyofuji, 2014	
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100; (b) 80; (c) 80; Use CR Table C2:			90
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 1.2.4

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost		The assessment is appropriate for the stock and for the harvest control rule.	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.
	Met?		Y	Y
	Justification	<p>The stock has been assessed regularly by the Albacore Working Group (ALBWG) of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) since 2005 (ISC, 2014). Virtual Population Analysis (VPA) was used for assessment in 2006 and was superseded by an assessment using the Stock Synthesis framework in 2011. Stock Synthesis v3 (SS3) was again used for the most recent stock assessment purposes in 2014. SS3 is a framework for exploring and implementing integrated length- and age-based forward-simulating statistical catch-at-age models. It is widely used around the world.</p> <p>The assessment models the population dynamics of the stock and the fisheries operating on it. It uses maximum likelihood estimates to fit a range of parameters and is then used to evaluate stock status probabilistically with respect to reference points. The model is age- and sex- but not spatially-structured, though a total of 24, spatially resolved fisheries are considered, providing an implicit spatial resolution. The model fits to all known catch data from 1966 to 2012 from ISC, WCPFC and IATTC members and cooperating non-members. Catch and size composition data collected primarily from Japanese vessels at port of landing and also by on-board observers, are fitted quarterly in all years. Catch and effort data are used for tuning, with eleven series investigated and ultimately four used (two Japanese longline fleets and two Japanese pole and line distant water fleets, split as two half-yearly components to reduce interpretation problems associated with seasonal switching between albacore and skipjack).</p> <p>Biological assumptions include fixing the steepness of the Beverton-Holt stock-recruitment model at $h=0.9$; sex ratio of 1:1; 50% maturity at age-5 and 100% maturity at age-6; natural mortality fixed as $M = 0.3$ for all ages and both sexes. Selectivity was assumed to be domed in all fisheries.</p> <p>Model building and weighting as described in ISC (2014) follows state-of-the-art approaches to data fitting and interpretation of diagnostics to provide a selected base case run; retrospective and sensitivity analyses to both biological assumptions and data treatments (including weighting); and probabilistic estimates of parameters of interest, stock status, and potential future state.</p> <p>The assessment is appropriate for the North Pacific albacore stock, using appropriate biological assumptions, and accounting for diverse fisheries. 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.</p> <p>SG100 requirements are met.</p>		
b	Guidepost	The assessment estimates stock status relative to reference points.		
	Met?	Y		
	Justification	The assessment is used to estimate stock status relative to a range of SSB and F reference points, including those based on MSY and %SPR. The ISC also reports against an ISC-promulgated reference point based on avoiding the minimum of the average highest ten year SSB level. The SG60 requirements are met.		
c	Guidepost	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.
	Met?	Y	Y	Y

PI 1.2.4		There is an adequate assessment of the stock status		
	Justification	<p>The model is developed using state-of-the art approaches to investigate model convergence, model structure, parameter miss-specification and data conflicts. Diagnostic tools include model convergence tests, profiles of estimated recruitment at unfished equilibrium, residual analysis, and retrospective analysis. Uncertainty is explored using sensitivity tests to evaluate changes in data series, growth curve parameters, natural mortality, stock recruitment steepness, selectivity parameters and weighting of size composition data.</p> <p>Key parameters are estimated probabilistically.</p> <p>The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way. SG100 requirements are met.</p>		
d	Guidepost			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			Y
	Justification	<p>Alternative hypotheses and assessment approaches have been rigorously explored. A range of models have been used, moving from VPA to SS3 in the most recent two assessments. Uncertainties have been examined using sensitivity tests to a range of factors (see 1.2.4 si(c)).</p> <p>The SG100 requirements are met.</p>		
e	Guidepost		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?		Y	Y
	Justification	<p>There is a robust science and assessment <u>process</u> in place which has been subject to external review (WCPFC, 2009).</p> <p>The assessment itself is subject to internal peer review through the ISC, WCPFC SC, and IATTC professional scientific staff and SAC annual processes.</p> <p>The ISC had three independent reviewers from the Center of Independent Experts (University of Miami) conduct reviews of the ALBWG 2011 albacore stock assessment (Chen, 2011a, b; Cordue, 2011).</p>		
References		Chen, 2011a, b; Cordue, 2011; ISC, 2014; WCPFC, 2014a		
OVERALL PERFORMANCE INDICATOR SCORE:				
(a) 100; (b) 60; (c) 100; (d) 100; (e) 100; Use CR Table C2:				100
CONDITION NUMBER (if relevant):				

8.2 Principle 2 Evaluation Tables

Evaluation Table for PI 2.1.1

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Main retained species are likely to be within biologically based limits (if not, go to scoring issue c below).	Main retained species are highly likely to be within biologically based limits (if not, go to scoring issue c below).	There is a high degree of certainty that retained species are within biologically based limits and fluctuating around their target reference points.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) N
	Justification	<p>All catch is retained. Apart from the target species, bigeye and yellowfin tuna, dolphin fish and yellowtail amberjack are caught and retained. Japanese anchovy is used as bait. The target species comprise 98-99% of the catch. Bigeye tuna is of the order of 1%. The bait usage is on average 2.5% the weight of the total catch. There are thus no main retained species as defined at CR v1.3 CB3.5 and GCB3.5.2. SG60 and SG80 are therefore scored by default.</p> <p>Anchovy SSB in 2013 is estimated to be three times the agreed LRP but the basis for the LRP is unclear and there are no estimates of uncertainty (see translation document nos. 22,23). Bigeye tuna is estimated to be below its LRP (WCPFC, 2014a). Yellowfin tuna is estimated to be well above its LRP and there is a high degree of certainty it is within biologically based limits; however, no TRP is yet explicitly defined (WCPFC, 2014a). Yellowtail amberjack appears to be within biologically based limits but there is no clear LRP or TRP and no estimates of uncertainty (see translation document no. 24).</p> <p>SG 100 is not met; an intermediate score is not given because: (i) while the anchovy stock (2.5% the catch weight) is well above its LRP, no estimates of uncertainty are available to assign "a high degree of certainty"; (ii) the bigeye stock (1% of the catch) is known to be outside biologically based limits; and, (iii) other retained species form a very small percentage of the catch.</p>		
b	Guidepost			Target reference points are defined for retained species.
	Met?			(Y/N) N
	Justification	TRP are not defined for any of the species retained by the pole and line fishery of which the UoC is a part. A target fishing mortality rate reference point (0.8F _{med}) is defined for Japanese anchovy (see translation document no. 22). By weight, anchovy is 2.5% of the total UoC catch, while all other retained species account for approx. 1.5%. Nevertheless, SG100 is not awarded.		
c	Guidepost	If main retained species are outside the limits, there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species.	If main retained species are outside the limits, there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.	
	Met?	Y	Y	
	Justification	There are no main retained species. SG60 and SG80 are therefore scored by default.		

PI 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		
d	Guidepost	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.		
	Met?	(Y/N) Y		
	Justification	The only retained species for which status is not assessed is dolphin fish. The catch is typically of the order of 100 kg <i>per</i> year for the one UoC vessel though reached 3 mt for the other vessel in 2013. The primary measure to ensure the UoC does not result in dolphin fish or any other retained species being outside biologically based limits or hindering recovery is the targeting of, and highly selective gear for, the target species.		
References		WCPFC (2014a); also translated document nos. 22, 23, 24.		
OVERALL PERFORMANCE INDICATOR SCORE:				
				(a) 80; (b) -; (c) 80; (d) 60; Use CR Table C2: 80
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.1.2

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	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.	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.	There is a strategy in place for managing retained species.
	Met?	Y	Y	(Y/N) Y
	Justification	<p>There are no main retained species. SG60 and SG80 are therefore scored by default.</p> <p>No explicit strategy for managing pole and line fishery retained species has been articulated. However, the scale and intensity of the UoC, and low level of catch of non-target species, is such that no formal strategy is required. This is consistent with GCB3.3 bullet 2.</p> <p>The strategy for setting catches for anchovy outlined in the translated summary document (see translation document no. 22) is based on maintaining a fishing mortality limit on one-year-old fish corresponding with the median estimated SSB/R (i.e. Fmed). The catch target is set based on application of 0.8 Fmed, with a catch limit based on application of 1.0 Fmed. The anchovy bait used forms 2.5% of the catch and the other retained species form approx. 1.5%.</p> <p>A score of SG100 is awarded.</p>		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	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.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.
	Met?	Y	Y	N
	Justification	<p>There are no main retained species. SG60 and SG80 are therefore scored by default.</p> <p>There is no articulated strategy to manage retained species as such in the pole and line fishery; however, given the scale and intensity of the UoC no strategy is required. The management strategy for anchovy is simple but not explicitly tested. A score of SG100 is not supported.</p>		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y	(Y/N) N
	Justification	<p>There are no main retained species. SG80 is therefore scored by default.</p> <p>While there is no articulated strategy to manage retained species as such in the pole and line fishery, the persistent low level of catch provides clear evidence that this is sufficient, partially meeting the SG100 requirement.</p> <p>The management strategy for anchovy is simple and not explicitly tested; While fishing mortality in 2013 is below Fmed, it has been above Fmed for some time prior and it is not clear that the strategy is being implemented effectively. This catch component therefore does not meet the SG100 requirement.</p>		

PI 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		
d	Guidepost			There is some evidence that the strategy is achieving its overall objective.
	Met?			(Y/N) Y
	Justification	No clear objective has been articulated for retained species, including anchovy. However, as no strategy is required for the pole and line fishing activities, a score of SG100 is awarded.		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	NR	NR	NR
	Justification	Not Relevant		
References		Japanese and translated refs for anchovy 2013, 2014		
OVERALL PERFORMANCE INDICATOR SCORE:				
(a) 100; (b) 80; (c) 80; (d) 100; (e) NR; Use CR Table C2:				90
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.1.3

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Qualitative information is available on the amount of main retained species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main retained species taken by the fishery.	Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.
	Met?	Y	Y	N
	Justification	There are no main retained species. SG60 and SG80 are therefore scored by default. There are no scientific observers and only occasional compliance observers (in foreign EEZ) for pole and line operations. Information on catches from the UoC operations is therefore not fully verifiable. SG100 is not supported.		
b	Guidepost	Information is adequate to qualitatively assess outcome status with respect to biologically based limits.	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with a high degree of certainty.
	Met?	Y	Y	N
	Justification	The information is adequate to estimate status with respect to biologically based limits for all retained species. SG60 is met for all species. The information is sufficient to estimate status with respect to biologically based limits for all species. SG80 is met for all species. The information is sufficient to quantitatively estimate status with respect to biologically based limits for bigeye and yellowfin tuna, with a high degree of certainty. Stock assessments are carried out using state-of-the-art MULTIFAN-C assessments (WCPFC, 2014a). SG100 is therefore met for 2 out of 5 retained species, and accounting for approximately 40% of the weight of retained species catch. SG100 is not met.		
c	Guidepost	Information is adequate to support measures to manage main retained species.	Information is adequate to support a partial strategy to manage main retained species.	Information is adequate to support a strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Met?	Y	Y	N
	Justification	There are no main retained species. SG60 and SG80 are therefore scored by default. Information (not verified) is available on pole and line catches such that a strategy could be supported. However, no explicit strategy is in place. For anchovy, information is available to support stock assessment and monitor catches it is not possible to say with a high degree of certainty that the strategy is achieving its objective. SG100 is therefore not met.		
d	Guidepost		Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator score or the operation of the fishery or the effectiveness of the strategy)	Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.
	Met?		Y	Y

PI 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	
	Justification	<p>Information (not verified) is available on pole and line catches such that increases in risk posed by the fishery to retained species could be detected. Purchase records of bait (anchovy) are also available. There is no reason to doubt that these data will continue to be collected and made available. This partially meets the SG80 requirements. Also required to meet SG80 is information related to the outcome indicator score. As there are no main retained species, this results in a default score of SG80. It should be noted, however, that the outcome indicator score depends very little on the UoC data collection continuity but rather on other fisheries data collection. There is no reason to doubt that data used to determine outcome indicator scores will not continue to be collected. The SG80 requirements are met.</p> <p>SG100 applies to the UoC. There is no reason to doubt that the relevant catch records and bait purchase records will be continued in sufficient detail to assess ongoing mortalities due to the UoC. SG100 is met.</p>	
References		WCPFC (2014a)	
OVERALL PERFORMANCE INDICATOR SCORE:			
(a) 80; (b) 80; (c) 80; (d) 100: Use CR Table C2:			85
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 2.2.1

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Main bycatch species are likely to be within biologically based limits (if not, go to scoring issue b below).	Main bycatch species are highly likely to be within biologically based limits (if not, go to scoring issue b below).	There is a high degree of certainty that bycatch species are within biologically based limits.
	Met?	Y	Y	Y
	Justification	There are no bycatch species. SG60, 80 and 100 are met by default.		
b	Guidepost	If main bycatch species are outside biologically based limits, there are mitigation measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding.	If main bycatch species are outside biologically based limits, there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.	
	Met?	(Y/N) Y	(Y/N) Y	
	Justification	There are no bycatch species. SG60 and 80 are met by default.		
c	Guidepost	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.		
	Met?	(Y/N) Y		
	Justification	There are no bycatch species. SG60 is met by default.		
References		Any references? evidence? Can you use anything from other assessment reports?		
OVERALL PERFORMANCE INDICATOR SCORE:				
(a) 100; (b) 80; (c) 60 Use CR Table C2:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.2.2

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to maintain the main bycatch 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.	There is a partial strategy in place, if necessary, that is expected to maintain the main bycatch 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.	There is a strategy in place for managing and minimizing bycatch.
	Met?	Y	Y	Y
	Justification	There are no bycatch species. SG60, 80 and 100 are met by default.		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).	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.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.
	Met?	Y	Y	Y
	Justification	There are no bycatch species. SG60, 80 and 100 are met by default.		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y	Y
	Justification	There are no bycatch species. SG60, 80 and 100 are met by default.		
d	Guidepost			There is some evidence that the strategy is achieving its overall objective.
	Met?			(Y/N) Y

PI 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	
	Justification	There are no bycatch species. SG 100 is met by default.	
References		Any references? evidence?	
OVERALL PERFORMANCE INDICATOR SCORE:			
(a) 100; (b) 100; (c) 100; (d) 100; Use CR Table C2:			100
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 2.2.3

PI 2.2.3		Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Qualitative information is available on the amount of main bycatch species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main bycatch species taken by the fishery.	Accurate and verifiable information is available on the catch of all bycatch species and the consequences for the status of affected populations.
	Met?	Y	Y	Y
	Justification	There are no bycatch species. SG60, 80 and 100 are met by default.		
b	Guidepost	Information is adequate to broadly understand outcome status with respect to biologically based limits	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with respect to biologically based limits with a high degree of certainty.
	Met?	NR	NR	NR
	Justification	There are no bycatch species. SG60, 80 and 100 are met by default.		
c	Guidepost	Information is adequate to support measures to manage bycatch.	Information is adequate to support a partial strategy to manage main bycatch species.	Information is adequate to support a strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Met?	Y	Y	Y
	Justification	There are no bycatch species. SG60, 80 and 100 are met by default.		
d	Guidepost		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).	Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.
	Met?		(Y/N) Y	(Y/N) Y
	Justification	There are no bycatch species. SG80 and 100 are met by default.		
References		Any references? evidence?		

PI 2.2.3	Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch	
OVERALL PERFORMANCE INDICATOR SCORE:		
(a) 100; (b) NR; (c) 100; (d) 100; Use CR Table C2:		100
CONDITION NUMBER (if relevant):		

Evaluation Table for PI 2.3.1

PI 2.3.1		The fishery meets national and international requirements for the 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species.	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.	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.
	Met?	Y	Y	Y
	Justification	There are no ETP species caught. SG60, 80 and 100 are met by default.		
b	Guidepost	Known direct effects are unlikely to create unacceptable impacts to ETP species.	Direct effects are highly unlikely to create unacceptable impacts to ETP species.	There is a high degree of confidence that there are no significant detrimental direct effects of the fishery on ETP species.
	Met?	Y	Y	Y
	Justification	There are no ETP species caught. SG60, 80 and 100 are met by default.		
c	Guidepost		Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.	There is a high degree of confidence that there are no significant detrimental indirect effects of the fishery on ETP species.
	Met?		Y	Y
	Justification	The UoC removes only a small percentage of the skipjack and North Pacific albacore biomass, spread throughout the year across a wide swathe of deep oceanic environment. The total anchovy use by the two UoC vessels is about 70 mt per year, approximately .005% of the recent annual anchovy catch and .0002% of current estimated SSB. Indirect effects have been considered and there is a high degree of confidence that there are no significant detrimental indirect effects of the fishery on ETP species. SG80 and SG100 are met.		
References		Any references? evidence?		
OVERALL PERFORMANCE INDICATOR SCORE:				
				(a) 100; (b) 100; (c) 100; Use CR Table C2: 100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.3.2

PI 2.3.2		The fishery has in place precautionary management strategies designed to: <ul style="list-style-type: none"> • Meet national and international requirements; • Ensure the fishery does not pose a risk of serious harm to ETP species; • Ensure the fishery does not hinder recovery of ETP species; and • Minimise mortality of ETP species. 		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place that minimise mortality of ETP species, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species.	There is a strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species.	There is a comprehensive strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, which is designed to achieve above national and international requirements for the protection of ETP species.
	Met?	Y	Y	Y
	Justification	There are no ETP species caught. SG60, 80 and 100 are met by default.		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.	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.
	Met?	Y	Y	Y
	Justification	There are no ETP species caught. SG60, 80 and 100 are met by default.		
c	Guidepost		There is evidence that the strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y	Y
	Justification	There are no ETP species caught. SG80 and 100 are met by default.		
d	Guidepost			There is evidence that the strategy is achieving its objective.
	Met?			(Y/N) Y

<p>PI 2.3.2</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 harm to ETP species; • Ensure the fishery does not hinder recovery of ETP species; and • Minimise mortality of ETP species. 	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Justification</p>	<p>There are no ETP species caught. SG 100 is met by default.</p>	
<p>References</p>	<p>Any references? evidence?</p>	
<p>OVERALL PERFORMANCE INDICATOR SCORE:</p>		<p>(a) 100; (b) 100; (c) 100; Use CR Table C2: 100</p>
<p>CONDITION NUMBER (if relevant):</p>		<p></p>

Evaluation Table for PI 2.3.3

PI 2.3.3		Relevant information is collected to support the management of fishery impacts on ETP species, including: <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. 		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Information is sufficient to qualitatively estimate the fishery related mortality of ETP species.	Sufficient information is available to allow fishery related mortality and the impact of fishing to be quantitatively estimated for ETP species.	Information is sufficient to quantitatively estimate outcome status of ETP species with a high degree of certainty.
	Met?	Y	Y	Y
	Justification	The catch records provide for ETP recording. No ETP have been recorded. All evidence suggests this is accurate. There are no ETP species caught. SG60, 80 and 100 are met by default.		
b	Guidepost	Information is adequate to broadly understand the impact of the fishery on ETP species.	Information is sufficient to determine whether the fishery may be a threat to protection and recovery of the ETP species.	Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species.
	Met?	NR	NR	NR
	Justification	There are no ETP species caught. SG60, 80 and 100 are met by default.		
c	Guidepost	Information is adequate to support measures to manage the impacts on ETP species.	Information is sufficient to measure trends and support a full strategy to manage impacts on ETP species.	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.
	Met?	Y	Y	Y
	Justification	There are no ETP species caught. SG60, 80 and 100 are met by default.		
References		Any references? evidence?		
OVERALL PERFORMANCE INDICATOR SCORE:				100
				(a) 100; (b) NR; (c) 100; Use CR Table C2:
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.4.1

PI 2.4.1		The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The fishery is unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.
	Met?	Y	Y	Y
	Justification	<p>The UoC pole and line fishery operates entirely at the surface in deep, oceanic water. There is therefore no risk that the fishery contacts the seabed, and any impacts on the pelagic habitat would be imperceptible and highly transient. It is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm. SG60 and 80 are met.</p> <p>The nature of the gear, the areas in which the fishery operates and the species that are landed all provide evidence that the fishery is highly unlikely to ever come in to contact with the seabed, while there is no mechanism by which the fishery could impact pelagic habitats in anything other than an imperceptible and highly transient manner. Based on limited data available for oceanic pelagic species, benthic-pelagic linkages are predictably weak (see, e.g., Grober-Dunsmore <i>et al</i>, 2008). Evidence exists therefore that the fishery is highly unlikely to reduce habitat structure and function to the point where there would be serious or irreversible harm. SG100 is met.</p> <p>As Japanese anchovy is considered against the retained species PIs, there is no further requirement to assess the bait fishery against the habitat PIs.</p>		
References		Grober-Dunsmore <i>et al</i> , 2008		
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.4.2

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	There is a strategy in place for managing the impact of the fishery on habitat types.
	Met?	Y	Y	Y
	Justification	<p>The UoC pole and line fishery operates entirely at the surface in deep, oceanic water. The fishery does not contact the seabed and any pelagic habitat impacts will be imperceptible and highly transient. No additional measures are required in order to achieve the habitat outcome SG80 level. This meets the SG60 level at this PI. An additional partial strategy is also unnecessary in order to achieve the habitat outcome 80 level of performance. This meets the SG80 level at this PI. Overall, the operational features of the fishery can be considered to constitute an operational strategy for managing the impact of the fishery on habitat types, meeting SG100 requirements.</p> <p>As Japanese anchovy is considered against the retained species PIs, there is no further requirement to assess the bait fishery against the habitat PIs.</p>		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).	There is some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and/or habitats involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or habitats involved.
	Met?	Y	Y	Y
	Justification	<p>The UoC pole and line fishery operates entirely at the surface in deep, oceanic water, and the gear does not contact the seabed or impact on any pelagic habitat. This provides both a plausible argument and an objective basis for confidence that the <i>de facto</i> strategy will work to achieve the outcome PI SG80 level. SG60 and SG80 are therefore met.</p> <p>No specific testing of the <i>de facto</i> strategy has been undertaken but the nature of the fishery and the environments in which it operates makes such testing redundant. SG100 is therefore scored.</p>		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y	Y
	Justification	<p>The UoC pole and line fishery operates entirely at the surface in deep, oceanic water. The nature of the gear, the habits of the target species, the areas in which the fishery operates and the retained species profile provide clear evidence that the strategy is being implemented successfully.</p>		
d	Guidepost			There is some evidence that the strategy is achieving its objective.
	Met?			Y

PI 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	
	Justification	Habitat impacts from the UoC pole and line fishery are not monitored because there is no expected impact. There is no possibility of the fishery contacting the seabed, while any pelagic impacts will be imperceptible and highly transient. The SG100 requirements are met.	
References			
OVERALL PERFORMANCE INDICATOR SCORE:		(a) 100; (b) 100; (c) 100; (d) 100; Use CR Table C2:	100
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 2.4.3

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There is basic understanding of the types and distribution of main habitats in the area of the fishery.	The nature, distribution and vulnerability of all main habitat types in the fishery are known at a level of detail relevant to the scale and intensity of the fishery.	The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types.
	Met?	Y	Y	Y
	Justification	One habitat type, the epipelagic zone, occurs throughout the geographic range of this fishery. The habitat is not considered to be vulnerable as evidence exists that it is highly unlikely that the habitat is altered when encounters between pole and line gear and the habitat occur (see also PI 2.4.1). As Japanese anchovy is considered against the retained species PIs, there is no further requirement to assess the bait fishery against the habitat PIs.		
b	Guidepost	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.	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.	The physical impacts of the gear on the habitat types have been quantified fully.
	Met?	Y	Y	Y
	Justification	The extent of any interaction with the gear and the epipelagic zone is known to be negligible and effectively unmeasurable – the gear is non-impacting and vanishingly small compared to the vast expanse of epipelagic zone fished.		
c	Guidepost		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).	Changes in habitat distributions over time are measured.
	Met?		Y	Y
	Justification	The extent of any interaction with the gear and the epipelagic zone is known to be negligible and essentially unmeasurable – the gear is non-impacting and vanishingly small compared to the vast expanse of epipelagic zone fished.		
References				
OVERALL PERFORMANCE INDICATOR SCORE:				
				(a) 100; (b) 100; (c) 100; Use CR Table C2: 100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.5.1

PI 2.5.1		The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The fishery is unlikely 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 highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	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.
	Met?	Y	Y	Y
	Justification	<p>No major impacts have been identified in relation to retained species, bycatch, ETP species and habitat. Key ecosystem elements relative to the scale and intensity of the fishery are, therefore, highly likely to be restricted to removals of the two target species. However, the catch of skipjack is of the order of 0.08% of the total annual skipjack catch in the WCPO, while the catch of North Pacific albacore is of the order of 1.8% of the total NP albacore catch. Both catches are small not just in percentage terms but also in overall tonnages.</p> <p>Consistent with other MSC certifications (e.g., CHMSF, 2015, to which this assessment needs to be harmonized), key elements which need to be considered are the depletion of top predators and potential trophic cascades caused by depletion of albacore as a prey/forage species.</p> <p>Concentrating on North Pacific albacore, for which the UoC takes 1.8% of the total catch, many times more than the 0.08% of the total skipjack catch, extensive research has been carried out on albacore as a top predator in Pacific tuna ecosystem and trophic status studies (Cox <i>et al</i>, 2002a, b; Hinke <i>et al</i> 2004; Sibert <i>et al</i>, 2006). Albacore is not considered to be a common forage species and the body of research which considers albacore tuna as a top predator, suggests that the fishery is highly unlikely to adversely affect the diet of other species.</p> <p>Based on the information provided above, there is evidence that the albacore fishery is highly unlikely to disrupt the relevant key elements (predator–prey, prey–predator relationships) underlying ecosystem structure and function to a point where there would be a serious or irreversible harm. SG100 is awarded.</p>		
References	Cox <i>et al</i> , 2002a, b; Hinke <i>et al</i> 2004; Sibert <i>et al</i> , 2006			
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100; Use CR Table C2:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.5.2

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary.	There is a partial strategy in place, if necessary.	There is a strategy that consists of a plan, in place.
	Met?	Y	Y	Y
	Justification	No impact has been identified on the Ecosystem from any of the key elements identified in relation to the albacore tuna fishery. Therefore, no management strategy is required and the fishery scores SG 100.		
b	Guidepost	The measures take into account potential impacts of the fishery on key elements of the ecosystem.	The partial strategy 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.	The strategy, which consists of a plan, contains 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. 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.
	Met?	Y	Y	Y
	Justification	No impact has been identified on the Ecosystem from any of the key elements identified in relation to the albacore tuna fishery. Therefore, no management strategy is required and the fishery scores SG 100.		
c	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The partial strategy is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved.
	Met?	Y	Y	Y
	Justification	No impact has been identified on the Ecosystem from any of the key elements identified in relation to the albacore tuna fishery. Therefore, no management strategy is required and the fishery scores SG100.		
d	Guidepost		There is some evidence that the measures comprising the partial strategy are being implemented successfully.	There is evidence that the measures are being implemented successfully.

PI 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		
	Met?		Y	Y
	Justification	No impact has been identified on the Ecosystem from any of the key elements identified in relation to the albacore tuna fishery. Therefore, no management strategy is required and the fishery scores SG100.		
References		References – check other assessments?		
OVERALL PERFORMANCE INDICATOR SCORE:				
(a) 100; (b) 100; (c) 100; (d) 100Use CR Table C2:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 2.5.3

PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Information is adequate to identify the key elements of the ecosystem (e.g., trophic structure and function, community composition, productivity pattern and biodiversity).	Information is adequate to broadly understand the key elements of the ecosystem.	
	Met?	Y	Y	
	Justification	The key, perhaps only, element of potential note is trophic structure and function. As noted at PI 2.5.1, however, the catch of skipjack is of the order of 0.08% of the total annual skipjack catch in the WCPO, while the catch of North Pacific albacore is of the order of 1.8% of the total NP albacore catch. Both catches are small not just in percentage terms but also in overall tonnages. Concentrating just on North Pacific albacore, for which the UoC takes 1.8% of the total catch, and ignoring skipjack for which the UoC catch contribution is just 0.08%, extensive research has been carried out on albacore as a top predator in Pacific tuna ecosystem and trophic status studies (Cox <i>et al</i> , 2002a, b; Hinke <i>et al</i> 2004; Sibert <i>et al</i> , 2006). Albacore is not considered to be a common forage species and the body of research which considers albacore tuna as a top predator, suggests that the fishery is highly unlikely to adversely affect the diet of other species. The information is adequate to broadly understand the key elements of the ecosystem; SG80 is met.		
b	Guidepost	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, and have not been investigated in detail.	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information and some have been investigated in detail.	Main interactions between the fishery and these ecosystem elements can be inferred from existing information, and have been investigated.
	Met?	Y	Y	Y
	Justification	Main interactions between the fishery and all of the key elements (trophic structure and function) identified can be inferred from existing information and have been investigated (Cox <i>et al</i> , 2002a, b; Hinke <i>et al</i> 2004; Sibert <i>et al</i> , 2006). SG 100 is met.		
c	Guidepost		The main functions of the Components (i.e., target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are known.	The impacts of the fishery on target, Bycatch, Retained and ETP species are identified and the main functions of these Components in the ecosystem are understood.
	Met?		Y	Y
	Justification	No impacts of the fishery on target, bycatch, retained and ETP species, or habitats, were identified. For target species the impacts are understood (see PI 2.5.1 si(a) and si(b)); for the other elements the impacts are understood to be zero or at least negligible. SG 100 is met.		
d	Guidepost		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.	Sufficient information is available on the impacts of the fishery on the Components and elements to allow the main consequences for the ecosystem to be inferred.
	Met?		Y	Y

PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem		
	Justification	Information on the components (see PI 2.5.1 si(c)) and elements (see PI 2.5.1 (a, b)) lead to the inference that there are no (including 'main') consequences for the ecosystem. SG100 is met.		
e	Guidepost		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).	Information is sufficient to support the development of strategies to manage ecosystem impacts.
	Met?		Y	Y
	Justification	No ecosystem impacts have been identified that result from the fishery and strategies to manage ecosystem impacts are, therefore, not required, including further data collection. SG 100 is met.		
References		Cox <i>et al</i> , 2002a, 2002b; Hinke <i>et al</i> 2004; Sibert <i>et al</i> , 2006		
OVERALL PERFORMANCE INDICATOR SCORE:				
				(a) 80; (b) 100; (c) 100; (d) 100 Use CR Table C2: 100
CONDITION NUMBER (if relevant):				

8.3 Principle 3 Evaluation Tables for Western Pacific Skipjack and Northern Pacific Albacore UoC 1 and UoC 2

NB: The Skipjack and Albacore fisheries under consideration are highly migratory fish stocks and are subject to both national and regional fisheries management measures and policies. International tuna management throughout the WCPO is the responsibility of the WCPFC and IATTC

Evaluation Table for PI 3.1.1

		The management system exists within an appropriate legal and/or customary framework which ensures that it:		
		<ul style="list-style-type: none"> Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and 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. 		
Scoring Issue		SG 60	SG 80	SG 100
A	Guidepost	There is an effective national legal system and a framework for cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2	There is an effective national legal system and <u>organised and effective cooperation</u> with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2.	There is an effective national legal system and binding procedures governing cooperation with other parties which delivers management outcomes consistent with MSC Principles 1 and 2.
	Met?	Y	Y	Y
	Justification	<p>At the national level the overarching legislation is the Fisheries Act No. 267(enacted in 1949). It requires those fishers who plan to operate the designated fisheries, including pole and line skipjack and albacore fisheries, to be licenced by the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF). The number of vessels by tonnage and by fishing area is updated every five years and publicised in the Official Gazette. If fishing in the WPO they must become WCPC-registered and if fishing in other national EEZs must obtain permission from the relevant country and abide by all the legislative requirements. There are detailed regulations that prescribe the permission and control of licenced fisheries, including pole and line, stipulated in Article 52 of the Fisheries Act – Ministerial Ordinance on the Permission, regulation etc. of designated fisheries. For example, VMS being mandatory and the reporting requirement (logbooks).</p> <p>Japan has signed and ratified the UNCLOS, the FSA and FAO Code of conduct for responsible Fisheries.</p> <p>Regional management of the WCP tuna resources is shared by two RFMOs - the WCPFC and IATTC. The WCPFC and IATTC Conventions establish principles of international law related to the conservation and management of living marine resources which are in accordance with MSC Principles 1 and 2.</p> <p>The WCPFC Convention is consistent with the principles and provisions of the United Nations Convention on the Law of the Sea (UNCLOS), the United Nations Fish Stock Agreement (FSA) and Highly Migratory Species (HMS) as well as a range of other relevant international and regional fisheries instruments. These reflect the current international laws and standards relevant to the management of migratory species and the ecosystem and include specific references to the precautionary approach. The Commission seeks input from recognised international law experts to ensure that decision-making is informed in relation to compliance with international law and protocols. All WCPFC members (including Japan) are legally bound to apply the precautionary approach as parties to the WCPFC Convention.</p> <p>At both the national and international level, there are binding procedures in place governing cooperation with other parties and the overarching legal frameworks are effective in delivering management outcomes consistent with MSC Principles 1 and 2, so SG 100 is considered met.</p>		
b	Guidepost	The management system incorporates or is subject by law to a mechanism for the resolution of legal disputes arising within the system.	The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the fishery.	The management system incorporates or 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.
	Met?	Y	Y	N

		<p>The management system exists within an appropriate 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; and • 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. 		
	Justification	<p>At the national level the Japanese management system has well-established mechanisms for the administrative and legal appeals of management decision- making and resolution of legal disputes. These are covered in the Fisheries Act and regulations. The management system includes proactive measures that serve to avoid or minimize fisheries disputes. The Fisheries Policy Council plays a key role and is made up of relevant stakeholders who advise the Minister.</p> <p>At the regional level, Conventions of different RFMOs have specific mechanisms for resolution of legal disputes. For example, WCPFC Convention Annex II states that this group can establish authority to set up review panels to examine decisions made by the Commission to settle disputes between the Commission, and the IATTC. The Antigua Convention Part VII Article 25 talks about settlement of disputes.</p> <p>The WCPFC dispute settlement mechanism is set out under Article 31 of the Convention. Annex II of the Convention establishes the authority to form a panel to review decisions made by the Commission and to settle disputes among members of the Commission. The dispute settlement mechanism outlined in the Convention allows for a transparent process to occur.</p> <p>While the mechanisms for dispute resolution are transparent and considered to be effective in dealing with most issues at both the national and regional level, they have only been tested and proven to be effective at a national level, so only SG 80 is considered met.</p>		
d	Guidepost	<p>The management system has a mechanism to generally respect 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 has a mechanism 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.</p>	<p>The management system has a mechanism to formally commit to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.</p>
	Met?	Y	Y	Y
	Justification	<p>At the national level the Fisheries Act Chapter II "Fishery Rights and Piscaries "(Articles 6 through 51) describes the mechanisms to observe the legal rights created for people dependent on food for livelihood in a manner that is consistent with MSC Principles 1 and 2. The Fisheries Cooperatives in the Prefectures ensure these rights are recognized.</p> <p>At the regional level, the RFMO look after the rights created of people that depend on fishing for food or livelihood. WCPFC Convention Article X states the needs of small developing countries whose economies, food supplies, and livelihoods relying depends on of the exploitation of marine resources must be taken in to account at the time when there is development of criteria for allocation of TACs or other management strategies Article XXX identify the requirements of developing states. IATTC Antigua Convention Part VI Article XXIII states that Commission will adopt measures to assist developing countries in carry out their obligations under the Convention. It will also improve their capacity for fisheries development on their national jurisdictions.</p> <p>The management system at both the national and regional level has a mechanism to formally commit to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2 so SG 100 is considered to be met.</p>		
References		<p>Fisheries Act 1949; IATTC 1990; IATTC 2003; JTRFMO 2009; UNCLOS 1999; WCPFC 2004; WCPFC 2006; WCPC 2013; and, translated Documents no's 15, 17, 18 and 20</p>		
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100; (b) 80: (c) 100. Use CR 2				95
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.1.2

PI 3.1.2		The management system has effective consultation processes that are open to interested and affected parties. The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood.	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.	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.
	Met?	Y	Y	Y
	Justification	<p>At the national level, organisations and individuals involved in the management process have been identified and functions, roles and responsibilities are explicitly defined. The Japanese Government Fisheries Agency is mandated to manage Japanese fisheries. The government research Agency involved with tuna clearly defines projects and direction to carry out the relevant research. All staff have clear job descriptions outlining their roles and responsibilities. The Japanese government consults regularly with the Japan Tuna Fisheries Cooperative Association (JTFC), which communicates with individual members. The Fishery Policy Council has a clearly defined role with relevant stakeholder input.</p> <p>At the international level, Organisations involved in fisheries management are identified and their respective functions are clearly defined. Evidence of this is seen in the IATTC Antigua Convention Articles VI, VII, and XXIII; and the WCPFC Convention Articles IX-XVI, and XXIII XIV.</p> <p>All 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 SG 100 is considered to be met</p>		
b	Guidepost	The management system includes consultation processes that obtain relevant information from the main affected parties, including local knowledge, to inform the management system.	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.	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.
	Met?	Y	Y	Y
	Justification	<p>At the national level, the government interacts throughout the year with industry stakeholders who provide the parties opportunities to inform the management system. In particular, consultation is with the JTFC, the Japan Distant Water Tuna Fishery Association, the Japan Adjacent Sea Tuna Fishery Association and the Japan Far Seas Purse Seine Fishing Association. The Fisheries Policy Council is made up of various stakeholders who meet regularly and as evidenced from meeting records, demonstrate consideration of information and explanation of how it is used.</p> <p>At the international level, consultation fora all regularly seek, accept and consider relevant information from the main affected parties. This is largely acquired by the direct participation of the parties in the consultation processes but extends to written briefs, reports and emails that are provided during or following consultations.</p> <p>The IATTC states that stakeholders such as fishing industry representatives and NGOs, as well as other interested individuals, are included in the IATTC processes. Evidence of this is included in the Antigua Convention Article XVI. The Antigua Convention Annex 2 provides guidelines for observer participation at meetings of the IATTC. WCPFC Convention Article XXII provides that the Commission will collaborate with other relevant organizations; particularly those with similar objectives and which can contribute to the fulfillment of the Convention objectives.</p> <p>As 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, SG 100 is considered to be met</p>		

PI 3.1.2		The management system has effective consultation processes that are open to interested and affected parties.	
		The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties	
C	Guidepost		<p>The consultation process provides opportunity for all interested and affected parties to be involved.</p> <p>The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.</p>
	Met?		<p>Y</p> <p>N</p>
	Justification	<p>In Japan it appears that there is a consultation process that provides opportunity for all interested parties to be involved. The government showed evidence of consultation processes with research, industry and local fishing co- operatives. WWF confirmed that it is involved with the government on tuna issues (e.g., the WWF is involved in the WCPFC Management Objectives Workshop and Commission processes as part of the Japanese delegation). WWF said that the opportunities to cooperate with the Japanese Fisheries Agency were good.</p> <p>The government also seeks the public's views and stakeholder involvement when amending laws and regulations. However, for research planning, stakeholders including eNGOs and the public do not appear to be encouraged to be involved.</p> <p>At the international level the IATTC Antigua Convention Article XVI states that stakeholders such as fishing industry representatives and NGOs, as well as other interested individuals, are included in the IATTC processes. The Antigua Convention Annex 2 provides guidelines for observer participation at meetings of the IATTC. WCPFC Convention Article XXII provides that the Commission will collaborate with other relevant organizations, particularly those with similar objectives and which can contribute to the fulfillment of the Convention objectives.</p> <p>The consultation process provides opportunity for all interested and affected parties to be involved, thus meeting the SG 80 requirements. However, active encouragement is not extended to all stakeholders, so the SG 100 is not met.</p>	
References		IATTC 2003; IATTC 2011a; IATTC 2011b; IATTC – WCPFC 2006; WCPFC 2004; WCPFC 2006; WCPFC 2010a; WCPFC 2010b; WCPFC 2011a; WCPFC 2011b and Translated documents 9 and 21	
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100; (b) 100: (c) 80			95
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 3.1.3

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
A	Guidepost	Long-term objectives to guide decision-making, consistent with the 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.
	Met?	Y	Y	P
	Justification	<p>Clear long-term objectives that guide decision making are set out in the Fisheries Act No. 267 (enacted in 1949). MAFF has policy frameworks with operational guidelines that define clear long-term objectives for fisheries. These are set out in the Annual Report and include those outlined in Section 3.5</p> <p>Long term objectives are explicit within the WCPFC convention (e.g., Article 2 specifies that the Commission has the objective to “ensure through effective management, the long term conservation and sustainable use of highly migratory fish stocks in the WCPO in accordance with the 1982 Convention and Agreement (UNCLoS and FSA respectively). Article 5 of the Convention then provides principles and measures for achieving this conservation and management objective. More specifically Article 5c requires the commission to apply the precautionary approach in decision making and article 6 outlines the means by which this will be given effect including through the application of guidelines set out in Annex II of the FSA. Article 10 of the Convention is consistent with MSC principles and objectives in specifying long term objectives of “maintaining or restoring populations... above levels at which their reproduction may become seriously threatened”). Evidence of these objectives in guiding decision making is provided in various Commission reports and in CMM preambular notes and statements. Commission reports also indicate that explicit action is being undertaken through CMMs to support achievement of objectives.</p> <p>The IATTC Antigua Convention Article IV states that application of the Precautionary Approach shall be done as it is described in the Code of Conduct and/or the 1995 UN Fish Stocks Agreement, for the conservation, management, and sustainable use of fish stocks covered by the Convention.</p> <p>At both the national and regional level management objectives, including the application of the precautionary approach, are explicit in policy and legislation and consistent with MSC Principles and Criteria but while long-term objectives consistent with the precautionary approach are explicit within management policy, it is difficult to agree that the SG100 requirements are fully met in practice. For example, stock assessments for bigeye tuna indicated for a number of years that overfishing was occurring but management action has not been sufficiently precautionary to prevent the stock becoming overfished as indicated in the latest assessment. A partial score at SG100 is given for this scoring issue.</p>		
References		IATTC, 2003; IATTC, 2011; WCPFC, 2004; WCPC, 1995; WCPFC, 2011; WCPFC 2014 and Translated documents 12 and 16		
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100				90
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.1.4

PI 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		
Scoring Issue		SG 60	SG 80	SG 100
A	Guidepost	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 they do not contribute to unsustainable fishing practices.
	Met?	Y	Y	P
	Justification	<p>Nationally unsustainable use of marine resources is generally discouraged by license conditions, taxes and other economic and social restrictions through Fisheries Law and cooperative regulations. Perverse incentives are generally not likely to occur. There are restricted numbers of vessels, which should reduce over-capitalisation of the fishing fleet and theoretically promote stewardship of the resource.</p> <p>The client company received a subsidy from the Government to re-develop its processing factory after the devastating destruction of the port at Shiogama and surrounding areas during the March 2011 tsunami. This is not considered to have any impact on sustainable fishing.</p> <p>The Fundamental roles of RFMOs to promote conservation, sustainability and optimal utilization of HMS fish stocks are supported by science-based information. IATTC and WCPFC organizations have the duties to develop and adopt strategies and management measures to fulfill these objectives. Evidence of this is stated in the Antigua Convention Articles and WCPFC Convention Articles IV and VI, respectively.</p> <p>The WCPFC Convention provides for the allocation of TACs, although formal allocations have not yet been made. There is evidence of effective incentives for sustainable fishing being provided through the work of the WCPFC SC, Technical Compliance Committee and Commission in the development of CMMs.</p> <p>Management policy and procedures at both international and local levels are reviewed regularly to ensure that they do not contribute to unsustainable fishing practices. However, while management policy and procedures are reviewed at international and national levels there is no evidence that these reviews explicitly consider incentives</p> <p>No capital or operating subsidies are known to be offered by governments to the harvesting sector that would give rise to outcomes that are inconsistent with these principles.</p> <p>The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, but does not explicitly considers incentives in a regular review of management policy or procedures to ensure they do not contribute to unsustainable fishing practices. SG 100 is only partially met and a score of 90 is given</p>		
References	IATTC, 2003; IATTC, 2005; WCPFC, 2004; WCPFC, 2011 and Translated documents 3 and 18			
OVERALL PERFORMANCE INDICATOR SCORE: (a) 100				90
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.2.1

PI 3.2.1		The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2		
Scoring Issue		SG 60	SG 80	SG 100
A	Guidepost	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.
	Met?	Y	Y	90
	Justification	<p>At the national level, the government has not defined specific objectives for the pole and line skipjack and albacore fisheries. It has, however, placed a ceiling on the number of licensed vessels. The client group has a clear objective to maintain the overall size of its catch of young skipjack (<1.5 kg) to less than 5% of the catch by weight. Likewise, for albacore to maintain its catch of small albacore (<4.0kg) to less than 10%. These lengths have been decided based on the biology of the species and specifically aim to protect the juvenile stocks for the future. These objectives are carefully monitored and vessels must move on if catching small fish. A similar quantitative management objective is applicable to bycatch of bigeye tuna, where the proportion of catch to the overall catch must be maintained at <1%.</p> <p>At the regional level the IATTC and WCPFC have very well-defined objectives, specified in their respective conventions, which help to support outcomes expressed by Principles 1 and 2. The IATTC's Antigua Convention, which was started on August 27, 2010, is a major step in improving the regulatory framework that governs IATTC. It also updates the legal framework of UNCLOS, Agenda 21 and Rio Declaration, the FAO Compliance Agreement, the Code of Conduct and the UNFSA. The Precautionary Approach is also included in Article IV of the Antigua Convention, as well as the Ecosystem Approach to Fisheries Management envisaged in Articles II and VII of the Antigua Convention, and compatibility of management measures between high seas and Exclusive Economic Zones in Article V of the Antigua Convention. IATTC management considerations include ecosystem effects of fishing; protecting biodiversity; advocacy for ecosystem based approaches to management; and reducing pollution and impacts on both target and non-target or associated or dependent species.</p> <p>WCPFC short term objectives for specific target and non-target species and ETP species are outlined in various CMMs and default reference points for target species. Many of the CMMs, however, are not specified in terms of measurable targets or outcomes, particularly in relation to MSC Principle 2 outcomes.</p> <p>As well-defined short- and long-term objectives are explicit in the management systems, SG 80 is met. SG100 is only partially met as not all objectives are measurable; an intermediate score of 90 is awarded.</p>		
References	IATTC,2003; IATTC, 2005; IATTC, 2011; IATTC, 2013; WCPFC, 2004; WCPFC, 2006; WCPFC, 2010; WCPFC, 2013; UN, 2006 and translated documents 7 and 12			
OVERALL PERFORMANCE INDICATOR SCORE: (a) P100				90
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.2.2

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives.	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.	
	Met?	Y	Y	
	Justification	<p>At the national level there are established decision-making processes that result in measures and strategies to achieve objectives. The process usually starts with information from WCPFC meetings. The Japanese government attends and contributes to these meetings on a regular basis. Fisheries Agency of Japan and JTCFA members are all involved. The fisheries Agency of Japan ensures that appropriate legislation and regulations to implement strategies and measures are in place.</p> <p>The decision-making processes at the regional level are well established and documented. They aim to apply the precautionary approach and best available scientific information. The Conventions of both RFMOs require consensus for decision-making. Evidence of this is documented in the IATTC Antigua Convention Article IX and WCPFC Convention Article XX.</p> <p>SG 80 is met as at both the national and regional level. There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p>		
b	Guidepost	Decision-making processes respond to serious issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take some account of the wider implications of decisions.	Decision-making processes respond to serious and other important 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.	Decision-making processes respond to 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.
	Met?	Y	Y	N
	Justification	<p>At national level, the Japanese government responds to serious issues that have been raised by local researchers and industry as well as by RFMOs. The fisheries management and science processes are supported by well-established and functioning industry consultation and engagement activities, both formal and informal, which contribute to promoting decision-making that is effective and responsive to any potentially serious or other important issues.</p> <p>At the regional level the WCPFC decision-making process usually responds to serious issues that are identified through the SPC stock assessments and other regional reports; e.g., WCPFC introduced measures to mitigate the capture of ETP species such as sharks (CMM 2101-07), seabirds (CMM 2102-07), and sea turtles (CMM 2008-03) through effort controls and prohibitions on FAS-setting by purse seine vessels.</p> <p>The RFMOs follow the precautionary approach and coordinate with each other regulating the fishing capacity of Members, Cooperating Non-members, and Participating Territories whose fishing vessels harvest North Pacific albacore in their respective Convention Areas. Evidence of this is documented at IATTC C-05-02 and WCPFC CMM 2005-3. The RFMOs also take into consideration the findings made by the ISC ALBWG (ISC, 2014) using best available scientific information.</p> <p>It is important to note that there has been an absence of serious issues that would compromise the objectives established for the NP albacore tuna fishery. The resource is healthy and fairly robust and there have not been any reported serious issues such as those related to food safety or public health.</p> <p>SG 80 is met because decision-making processes respond to serious and other important 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 but it could not be determined that decision-making processes respond to all issues identified in relevant research, monitoring, evaluation and consultation, so SG 100 is not met.</p>		

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
	Guidepost		Decision-making processes use the precautionary approach and are based on best available information.	
	Met?		Y	
	Justification	<p>The WCPFC requires members of the Commission to apply the precautionary approach as described in Annex 6 and Annex II. Specifically, the Convention requires the Commission be more cautious when information is uncertain, unreliable or inadequate. Decisions are required to be based on the best scientific information available. Evidence that WCPFC is attempting to apply the precautionary approach is found in limitations of various fisheries.</p> <p>The IATTC Antigua Convention requires that members of the Commission, apply the precautionary approach, as described in relevant provisions of the Code of conduct and/or the UN Fish stocks agreement, for the conservation, management and sustainable use of fish stocks. Specifically, the Convention requires the Commission be more cautious when information is uncertain, unreliable or inadequate. Article VII of the Convention requires that the Commission adopts measures that are based on the best scientific knowledge available, this is evidenced from the large numbers of meetings that have been conducted and reports written for the Commission which provide analyses and advice based on best available information.</p> <p>As an example relating to skipjack and North Pacific albacore refer to harvest strategy and justification P1.2.1 "While formal decision rules (harvest control rules) are being developed, and TRP and LRPs further defined, (WCPFC, 2014b; IATTC, 2014), management of North Pacific albacore has operated informally to meet the objectives. The information base is extensive from a wide range of biological studies and from a diverse range of fisheries. The information is sufficient to support a state-of-the-art stock assessment that provides probabilistic estimates of key parameters and their relationship to the implicit reference points. Advice from the stock assessment is provided by the relevant scientific committees (e.g., WCPFC, 2014a; ISC, 2014) and additional work is carried out by the scientific provider, SPC, to the WCPFC, or in-house by IATTC. Annual decision-making, articulated through WCPFC CMM and IATTC Resolutions, is supported by good scientific decision-support materials. The Commissions also receive advice from their respective technical and compliance committees. The most current WCPFC CMM is CMM 2005-03, which lays out a range of effort controls and reporting requirements. IATTC C-05-02 lays out similar measures and is supplemented by IATTC C-13-03. A range of complementary measures exist at both RFMOs. "</p> <p>Management Decision-making processes use the precautionary approach and are based on best available information so SG 80 is met</p>		
d	Guidepost	Some information on fishery performance and management action is generally available on request to stakeholders.	Information on fishery performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	Formal reporting to all interested stakeholders provides comprehensive information on fishery performance and management actions and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
	Met?	Y	Y	N

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
	Justification	<p>At national level, stakeholders are able to access a range of information on the performance of the fishery and management actions through a variety of means, such as by attending formal advisory committee meetings and other local gatherings, workshops, published reports, news services, and from various government-industry-corporate websites.</p> <p>Documents and reports describing management responses to scientific research findings and communications, monitoring, evaluation, and review activity systems are available to all stakeholders at the national and regional levels. The RFMOs and FAJ have publicly accessible websites where documents and scientific reports can be freely downloaded.</p> <p>At the RFMO level, recommendations from research, monitoring and evaluation and performance review are published formally. Likewise, reports of the plenary sessions of meetings are published formally and are publicly available. WCPFC maintains a publicly accessible website where meeting minutes and reports from the commission and subsidiary bodies are posted and freely available for download. These provide a high level of public access and transparency showing how scientific information is used to inform management actions which are then monitored for effectiveness and discussed at the Commission.</p> <p>In both the national and regional situation, while reports are available, it is not clear that they represent all the information that is used. There is no formal, detailed explanation linking the information provided to decisions that result.</p> <p>The SG 80 is met but not the SG100.</p>		
e	Guidepost	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.	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges.
	Met?	Y	Y	Y
	Justification	<p>At the national level there is no evidence to suggest the Japanese government is disrespectful or defiant of legally binding agreements reached at international level. The Japanese management system has well-established mechanisms for administrative and legal appeals of management decision-making and has in place legal and other frameworks to respond to judicial decisions in a timely fashion. FAJ tries to minimize and avoid disputes by consulting with industry and cooperatives.</p> <p>At the regional level, decision-making is based on consensus. This procedure in itself should be a proactive method for avoiding legal disputes. WCPFC and IATTC have not been subject to any court challengers and there are no outstanding international disputes. By resolving disputes through WCPFC and IATTC meetings the members have avoided legal disputes.</p> <p>As the national and regional management system acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges SG 100 is met</p>		
References		IATTC,1990; IATTC 2003; IATTC 2014; ISSF 2013; WCPFC 2004; WCPFC 2006; WCPFC 2014; UNFSA Translated document 5		
OVERALL PERFORMANCE INDICATOR SCORE: (a) 80; (b) 80; (c) 80 ((d) 80 (e) 100				85
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.2.3

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.	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.	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.
	Met?	Y	Y	N
	Justification	<p>At the national level, the monitoring control and surveillance function is the responsibility of MAFF. With regard to distant water skipjack and tuna fisheries, MAFF sets the number of vessels by tonnage and by fishing area to be licensed, with licenses valid for 5 years. All vessels, including the UoC vessels, must carry VMS and provide catch and effort returns. While fishing in other national EEZs, the vessels must obey all fishing rules and regulations of that country. This is set out in the fishing permit conditions, issues through JTfCA. The approval of the licence application is subject to the restrictions and conditions. These are set out in Section 4.</p> <p>Both the WCPFC and IATTC have strategies to improve compliance including vessel registration and catch and effort monitoring and diplomatic and other pressures applied to nation states. Management controls are implemented using Conservation and Management Measures and Resolutions. Most information on compliance comes from port monitoring, observer programs and the vessel monitoring systems. The WCPFC has established a regional scientific and enforcement program with a regional observer program coordinated by the Commission (e.g. CMM 2007-01).</p> <p>The Commission's regional observer program objective is to achieve 5% coverage of the effort in each fishery by 30 June 2012 for vessels operating in high seas areas but this does not include pole and line vessels. The IATTC has the longest established regional scientific and enforcement programme and has a regional observer programme fully coordinated by the Secretariat, with its own observers.</p> <p>For both RFMOs, observers are required to monitor transshipments at sea. There are also at-sea inspections carried out which are reported to WCPFC, but these relatively rare.</p> <p>All vessels over 24m length catching tuna within the region must have VMS. Other requirements include measures to reduce bycatch mortality of seabirds, sea turtles and sharks</p> <p>WCPFC and IATTC, like most of the RFMOs managing tuna and tuna-like species, uses its vessel registers to establish 'positive lists' and identify IUU vessels, information which is shared with other RFMOs.</p> <p>Conservation measures are set by WCPFC but enforcement is carried out by national authorities.</p> <p>A 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. However, at the international level, the system is not comprehensive and cannot be demonstrated to have the ability to consistently enforce relevant management measures.</p> <p>SG80 is met.</p>		
b	Guidepost	Sanctions to deal with non-compliance exist and there is some evidence that they are applied.	Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence.	Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence.
	Met?	Y	Y	N

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with		
	Justification	<p>There are severe penalties for anyone not complying or to be found in violation of the Fisheries Act (Japan) and the fishing permit. Penalties include imprisonment, fines, permit removals or suspensions and the catch, fishing boat or gear or any other things used for gathering or catching aquatic animals and plants illegally, may be confiscated, the corresponding market value may be collected. Neither of the vessels in the UoC under assessment has ever been found to be non-compliant.</p> <p>There are currently no trade sanctions set against nation states. Sanctions are only applied to fishing entities such as IUU vessels and vessels that are detected as being non-compliant with resolutions. WCPFC and IATTC notify flag states of non-compliant vessels, which the Flag states should order to withdraw from the Commission. These sanctions appear to be applied consistently. IUU fishing continues to be a problem, although tightening the Port State Controls has been thought to reduce this problem. There is limited evidence that sanctions are probably effective in that area.</p> <p>SG 80 is met as sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence.</p>		
c	Guidepost	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.	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.	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.
	Met?	Y	Y	Y
	Justification	<p>At the national level, there is sufficient evidence that the two vessels comply with the management system, including providing information of importance to ensure the effective management of the fishery, such as logbook and catch records, assisting in the collection of research data agreeing to observers on the vessels. And participating in Commission meetings. There are no examples of where the fishers haven't complied with the management system.</p> <p>The WCPFC and the IATTC have a permanent working group on compliance that reviews and monitors compliance with WCPFC management measures. Compliance is recorded with regard to albacore and skipjack catch reporting on the IATTC and WCPFC websites. The working groups recommend measures to promote compatibility among the national fisheries management measures, addressing matters relating to compliance with fisheries management measures analyses information on compliance and reports its finding to WCPFC and IATTC. An annual report is produced. The vessels in this assessment have not been found to be non-compliant.</p> <p>Evidence exists to demonstrate that WCP skipjack and North Pacific albacore 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 a high degree of confidence that the Japanese pole and line fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery so SG 100 is met.</p>		
d	Guidepost		There is no evidence of systematic non-compliance.	
	Met?		Y	
	Justification	<p>There is no evidence of systematic non-compliance in the fishery. Log books are completed and analysed. There have been no cases reported of noncompliance concerning the fishery under assessment. The auditors checked with FAJ and were told that the fisheries were fully compliant.</p> <p>Compliance is also recorded with regard to albacore catch reporting on the IATTC and WCPFC websites and skipjack on the WCPFC website.</p> <p>There is no evidence of systematic non-compliance and SG 80 is met</p>		
References		IACCT 2003; WCPFC 2004; Translated documents 1,2 3,4,15,16,17,18,19,20		
OVERALL PERFORMANCE INDICATOR SCORE: (a) 80; (b) 80; (c) 100; (d) 80				85

PI 3.2.3	Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with	
CONDITION NUMBER (if relevant):		

Evaluation Table for PI 3.2.4

PI 3.2.4		The fishery has a research plan that addresses the information needs of management		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2.	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.	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.
	Met?	Y	Y	N
	Justification	<p>In the Fisheries Basic Act there is a requirement that research is carried out, in particular a scheme to collect catch data efficiently and promptly (as required, e.g., at P1 and P2), also to develop methodologies to survey the marine environment (P2) and to establish and maintain bodies, cooperatives and institutes responsible for the management of fisheries (P3).</p> <p>The annual planning process for research involves a meeting (in person or electronically) with FAJ, FRA and NRIFSF and other national and Prefectural research institutes to coordinate and plan activities. Many of those activities are ongoing and the annual research plan includes ongoing and new multi-year projects as well as shorter duration activities. There is a contract for the provision of research by NRIFSF between FAJ and FRA with an allocated budget. There is evidence of an effective research planning process which results in a plan expressed in annual documents.</p> <p>The WCPFC Strategic Research Plan for 2012-16 addresses four overall research and data collection priorities: i) monitoring of fishing activities through the collection, compilation and validation of data from the fishery; ii) monitoring and assessment of target stocks; iii) monitoring and assessment of non-target or associated and dependent species and of pelagic ecosystems of the WCPO; and iv) evaluation of existing CMMs and of potential management options. This plan, along with the SPC, FFA, and national research and monitoring plans, is a strategic approach to ensuring reliable and timely information is available to inform management decisions. The plan itself relates largely to scientific and ecosystem research targeting Principles 1 and 2 rather than to P3</p> <p>The IATTC scientific activities are planned and prioritized by the Director and conducted mostly by the permanent scientific staff, with review provided by the Scientific Advisory Committee as established by Antigua Convention Annex IV. WCPFC strategic planning for albacore research is the responsibility of the ISC ALBWG, which reports to the Northern Committee of the WCPFC. To support robust science within the ISC there is additional review by the Scientific Committee and external peer review (WCPFC-NC6/WP-05). The IATTC collaborates with the ISC on research, stock assessment, and other related activities related to North Pacific albacore and other species in the northern area.</p> <p>Japanese scientists are members of the ALBWG and play key leadership roles.</p> <p>There is a comprehensive research plan providing the management system with a coherent and strategic approach to research across P1, P2 but not P3.</p> <p>SG80 is met but not SG100 as at the regional level the strategic plan is not comprehensive as it does not include P3-related research.</p>		
b	Guidepost	Research results are available to interested parties.	Research results are disseminated to all interested parties in a timely fashion.	Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.
	Met?	Y	Y	N

PI 3.2.4		The fishery has a research plan that addresses the information needs of management	
	Justification	<p>Most of the work on skipjack and albacore is presented in the form of papers to RFMOs where the work is reviewed by the Scientific Committee and may feed into stock assessment and various streams of advice. Research papers are published in scientific journals and on the website and are widely available.</p> <p>At the regional level the WCPFC and SPC research plans and results are widely and publicly available on their respective websites acknowledging the lag between obtaining logbook data from fleets and entry of data. However, changes in the research plan take time to become effective and therefore the information, while widely and publicly available, may not be up to date and timely</p> <p>All research results and related topics are posted on the respective RFMO and the FAJ websites, and are widely and publicly available for download. Many of the research results are also published in peer reviewed scientific journals and as government reports. However, these may not be made publicly available promptly due to administrative processes. SG 80 is met but not SG100.</p>	
References		NRIFSF Research plan; WCPC, 2010; WCPC, 2012	
OVERALL PERFORMANCE INDICATOR SCORE:			80
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 3.2.5

PI 3.2.5		There is a system of 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		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The fishery has in place mechanisms to evaluate some parts of the management system.	The fishery has in place mechanisms to evaluate key parts of the management system	The fishery has in place mechanisms to evaluate all parts of the management system.
	Met?	Y	Y	N
	Justification	<p>At the national level, the scientific stock assessment research is reviewed at the Scientific Committee. The Fisheries Policy Council evaluates fisheries issues as they arise. There is a Fisheries Annual report that reviews activities from the previous year.</p> <p>At the regional level, evaluation may occur at numerous points in both RFMOs. For the WCPFC this includes 1) Scientific Committee with representatives of the Oceanic Fisheries Program of the Pacific Community; the IATTC; and frequently other scientific experts; 2) the Technical and Compliance Committee; 3) ISC Albacore Working Group and Northern Committee; 3) testimony received from stakeholders at WCPFC meetings. For the IATTC this includes 1) Scientific Advisory Committee; 2) Committee for the Review of Implementation of Measures; 3) external scientific experts as needed; 4) testimony received from stakeholders at IATTC meetings.</p> <p>The fishery has in place mechanisms to evaluate key parts of the management system, meeting the SG80, but there does not appear to be evidence that ALL parts are evaluated.</p>		
b	Guidepost	The fishery-specific management system is subject to occasional internal review.	The fishery-specific management system is subject to regular internal and occasional external review.	The fishery-specific management system is subject to regular internal and external review.
	Met?	Y	Y	N

<p>PI 3.2.5</p>	<p>There is a system of 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 style="writing-mode: vertical-rl; transform: rotate(180deg);">Justification</p>	<p>At the national level, FAJ and MAFF are subject to regular internal reviews and external reviews by the Ministry of Internal Affairs</p> <p>At the international level, the scientific system supporting the management is subject to numerous internal and external reviews including, but not limited to:</p> <ol style="list-style-type: none"> 1) those by the Scientific Committee established by WCPFC Convention Article XII with representatives of the Oceanic Fisheries Program of the Pacific Community, the IATTC, and frequently other scientific experts to review stock assessments, status of target, non-target and associated stocks, and scientific information and advice that may be provided by the Commission; 2) the Technical and Compliance Committee established by Convention Article XIV provides the Commission with information, technical advice, and recommendations related to the implementation and compliance with Conservation and Management Measures (CMMs); 3) Convention Article XIII provides for the Commission to engage external scientific experts to carry out periodic peer reviews of scientific information and advice provided by the Commission; 4) Members transmit to the Commission an annual statement of compliance measures, including imposition of sanctions it has taken for any violations; 5) the business and meetings of the WCPFC are transparent and conducted annually and as a consequence, the status of conservation and management objectives are the subject of review of public opinion and subsequent political ramifications; and 6) scientific advice and review specific to North Pacific albacore are provided by the ISC to the Northern Committee. <p>The WCPFC itself does not have a regular programme of external review. However, in 2008 the Commission agreed that an independent performance review be undertaken which was completed in 2011. A schedule of responses and actions were developed in response to the recommendation of the review, which were considered by WCPFC in 2012. A recent independent review of the Commission's transitional science structure and functions (WCPFC, 2009) recommended periodic external review of the stock assessment which has been adopted by the WCPFC. An annual report is provided to the Commission by the Secretariat on compliance of members with the reporting provisions of the Commission. Progress of implementation of CMMs is monitored through reporting provisions within the CMMs themselves or the annual reports of member countries to the Commission.</p> <p>SG 80 is met as the fishery management system is subject to regular internal and occasional external review.</p>	
<p>References</p>	<p>WCPFC, 2009; WCPFC, 2011; and, Translated document 16</p>	
<p>OVERALL PERFORMANCE INDICATOR SCORE:</p>		<p>80</p>
<p>CONDITION NUMBER (if relevant):</p>		

8.4 Appendix 1.2 Risk Based Framework (RBF) Outputs

Risk Based framework was not used in this assessment

8.5 Appendix 1.3 Conditions

Condition 1

Performance Indicator	Skipjack PI1.2.1; scoring issues a
Score	60
Rationale	<p>Scoring Issue (a): The key Guidance for this PI (MSC CR v1.30 GCB2.5) defines the elements of a harvest strategy as i) the control rules and tools in place; ii) the information base and monitoring; and iii) the assessment method. The intention is that these elements should work together effectively to ensure overall performance, measured in terms of achieving outcomes (i.e. meeting objectives).</p> <p>The harvest strategy currently in operation is not formalised but consists of the elements considered at PIs 1.2.2, 1.2.3, and 1.2.4. Each PI is considered below in its own right; this PI is intended to consider how they work together to achieve objectives.</p> <p>First, therefore, it is essential to understand the objectives, as articulated through the reference points. This is covered in PI 1.1.2, above. Explicit LRPs exist for biomass and fishing mortality rate. An implicit (and recently made explicit) MSY-related biomass TRP also exists, with work to agree a higher TRP in train.</p> <p>CMM 2014-01 (WCPFC, 2014c) has the stated objective of ensuring “Compatible measures for the high seas and exclusive economic zones (EEZs) are implemented so that bigeye, yellowfin and skipjack tuna stocks are, at a minimum, 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”, though noting that “The Commission will amend, or replace the objectives with target reference points after their adoption” (the subject of CMM 2014-06; WCPFC, 2014f). Further, CMM 24-01 states that “The Fishing Mortality Rate (F) for skipjack will be maintained at a level no greater than F_{msy}, i.e. $F/F_{msy} \leq 1$”.</p> <p>The objectives of CMM 2014-01 thus reflect the WCPFC-agreed explicit fishing mortality LRP and the implicit biomass TRP (see PI 1.1.2), while also recognizing the biomass TRP will be modified (substantially upwards) to take account of environmental and economic factors. Discussion in the Management Objectives Workshop process (see also PI 1.2.2 Sla and Slc) was aimed at agreement of a spawning stock biomass of 50-60% $SB_{F=0}$ and CMM 2015-06 adopts 50% $SB_{F=0}$ whereas SB_{msy} is approximately 28% $SB_{F=0}$.</p> <p>While formal decision rules (harvest control rules) are being developed under an agreed work plan, management of skipjack has operated informally to meet the objectives. The information base is extensive from a wide range of biological studies and from a diverse range of fisheries. The information is sufficient to support a state-of-the-art stock assessment that provides probabilistic estimates of key parameters and their relationship to the explicit and implicit reference points. Advice is</p>

given not just in relation to skipjack but to implications of management controls across fisheries (especially purse seine and longline) and the likely impacts on all tropical tuna stocks. Advice from the stock assessment is provided by the Scientific Committee (e.g., WCPFC, 2014a) and additional work is carried out by the scientific provider, SPC, to the Commission. Annual decision-making, articulated through Conservation and Management Measures (CMM), is supported by good scientific decision-support materials.

The Commission also receives advice from its Technical and Compliance Committee (see e.g. WCPFC, 2014b). The most current CMM is CMM 2014-01, which lays out a wide range of effort and capacity limitation measures relevant to skipjack fishing (especially by purse seine vessels), catch controls by longliners, FAD usage restrictions, country-specific measures, etc. CMM 2014-01 is supported by a number of other relevant CMM, dealing with vessel monitoring (CMM 2014-02), vessel records (CMM 2013-03), shark measures (CMM 2014-05), compliance and monitoring (CMM 2014-07). The key components relevant to skipjack are the purse seine effort and capacity controls intended to restrict fishing mortality to 2010 (or earlier) levels, well below F_{msy} and more than double SB_{msy} (see Figure 9, panel SKJ5).

Advice flows not just to the WCPFC but also through its constituent parties, notably the Parties to the Nauru Agreement (PNA), under whose purse-seine Vessel Days Scheme (VDS) over 80% of the skipjack catch is taken, with 100% observer coverage. All fishing under the VDS is subject to strict PNA-wide rules, as well as to any national or WCPFC rules in force. The PNA, like the WCPFC, uses scientific, technical, and compliance advice to adjust rules annually to meet objectives, cognizant of changes in advice on skipjack stock status, and on other species also caught in skipjack fisheries (see, e.g., <http://www.pnatuna.com/VDS> for PNA advice on effort limitation for 2015-2017), and (<http://www.ffa.int/node/1543>) for a recent announcement through the Forum Fisheries Agency (FFA), including all PNA members, of an FFA intention to move to full catch controls within ten years.

The current management arrangements, especially the effort and capacity limits for purse seine vessels, are expected to ensure that fishing mortality remains below the F_{msy} target and that spawning biomass remains approximately twice SB_{msy} . **SG60 requirements are therefore met.**

There are no formally agreed harvest control rules yet in place. The primary intended control on fishing mortality is through effort and capacity limitation, with the key constraints imposed through the PNA VDS. The processes for determining VDS Total Allowable Effort (TAE) and Party Allocations of Effort (PAE) are not transparent. More importantly, it is unclear how the TAE are determined, based on stock status advice. There is no clear linkage between potential catch and allocated effort. It is therefore not clear that the harvest strategy, utilizing high quality science and compliance information, and founded on high quality scientific advice, is responsive to the state of the skipjack stock; **SG80 requirements are not met.**

	<p>The harvest strategy is not yet <u>designed</u> to achieve stock management objectives, though CMM 2014-06 is aimed at ensuring this is the case. The SG100 requirements are not met.</p>
<p>Condition</p>	<p>By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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.</p>
<p>Milestones</p>	<p>It is recognised the Client has limited ability directly to ensure the SG80 are met at each scoring issue. The Client will need to work through the FAJ and the JTFCFA. The key issue is transparency of the linkage between catching opportunity (informed by scientific assessments) and the primary control in the fishery (the use of effort controls by the PNA).</p> <p>Milestone 1: By the first annual surveillance, the Client should show clear evidence of advocacy within Japan for support of the WCPFC-agreed work plan for harvest control rules, adopted at WCPFC12 in support of WCPFC CMM 2014-06 (see appendix 8.6). Advocacy is also required that the linkage between catching opportunity and effort limitations are made explicit. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 2: By the second annual surveillance, the Client should show clear evidence of continued advocacy within Japan for participation in and support of the WCPFC-agreed work plan for harvest control rules, adopted at WCPFC12 in support of WCPFC CMM 2014-06, and any modifications to that work plan agreed by the WCPFC. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 3: By third annual surveillance, the Client should show clear evidence of continued advocacy within Japan for participation in and support of the WCPFC-agreed work plan for harvest control rules, adopted at WCPFC12 in support of WCPFC CMM 2014-06, and any modifications to that work plan agreed by the WCPFC. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 4: By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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.</p>
<p>Client action plan</p>	<p>We have established our action plan to get the following done to meet the SG80 requirements by the fourth annual surveillance:</p> <p>Year 1 We will work to ensure that the harvest strategy for skipjack tunas is adopted at WCPFC annual meetings. As a first step, we will actively push</p>

the FAJ to let the Japanese delegation to the WCPFC establish a basis on which the awareness of the necessity to limit the catch of skipjack can be boosted at meetings of the commission in the foreseeable future and the development and adoption of appropriate harvest control rules can be encouraged there as outlined in CMM 2014-06 and the Commission work plan agreed in 2015

Action plans established by the FAJ and relevant organizations such as the JTFA include examination of harvest strategies necessary to achieve their management objectives, which is necessary for appropriate management strategy to be created and submitted to WCPFC annual meetings in line with the agreed work plan. This examination will expressly demonstrate that such organizations in Japan support the process for the development of harvest strategies and harvest control rules.

Year 2 and onwards

We will assess each year progress of the WCPFC and PNA towards meeting the condition and will continue to seek dialogue with FAJ and JTFA to ensure Japanese involvement in and advocacy for development and implementation of a clear harvest strategy involving target and limit reference points (already set), harvest control rules (as in CMM 2014-06), and clear linkage between catch and effort.

当社は、第4回維持審査までにSG80の要求事項を満たすために、以下を成すためのアクションプランを策定した。

1年目

当社は、カツオの漁獲方策が、WCPFC(中西部太平洋まぐろ類委員会)の年次総会で採用されることを確実にするように動く。最初のステップとして、当社は、WCPFCへの日本の代表団としての水産庁が、近い将来の同委員会の総会で、カツオの漁獲制限の必要性の認識を高め得て、かつ、CMM(保護管理措置)2014-06や2015年に合意された同委員会の作業計画で概要が示されたような適切な漁獲管理規則の作成と採用を促し得るような、基盤を確立するように、同庁に対して積極的に働きかける。

水産庁や日本かつお・まぐろ漁業協同組合のような関連団体が策定する行動計画には、彼らの管理目標を達成するために必要な漁獲方策の検証が含まれる。この検証は、上記の合意された作業計画に沿って、適切な管理方策を策定してWCPFCの年次総会に提出するうえで必要である。この検証によって、日本の関連団体が、漁獲方策と漁獲管理規則を策定するためのプロセスを支援していることが、明確に実証されるだろう。

2年目以降

当社は、条件1を満たすために、WCPFCとPNA(ナウル協定)の毎年の進捗状態を評価・検証して、日本が、設定済みのTRP(目標管理基準値)とLRP(限界管

	<p>理基準値)、CMM2014-06 に示されている漁獲管理規則、漁獲努力間の明確な関連性を含む明確な漁獲方策の策定と実施に参与しつつ、それらの権利を擁護することを確実にするために、水産庁や日本かつお・まぐろ漁業協同組合との話し合いを求め続けてゆく。</p>
<p>Consultation on condition</p>	<p>We have approached both FAJ and JTFA. We have attended a skipjack tuna meeting irregularly held by FAJ and JTFA a couple of times since the onsite audit for the full assessment ran in June, 2015. On such an occasion, we have made it a point to keep attendees from the governmental organizations updated on our progress on the full assessment. They are very favourable toward our challenge to the MSC certification as our fishing method--the pole and line fishery--is eco-friendly. However, governmental attendees are not allowed to treat any specific fishery with favouritism as their mission is to keep themselves neutral at all times while impartially showing respect to any fisheries based on different fishing methods--including purse-seine fishery--other than the pole and line fishery. Therefore, we have not received any pragmatic support from both FAJ and JTFA. Our favourability is high among the governmental members, but it remains unofficial among them.</p> <p>今回の本審査以降、水産庁及び日かつ連担当者 3~4 回程度、不定期鯉鯪会議で、話し合いまたは情報交換の機会があり、MSC 審査の進捗状況を説明している。両担当者とも非常に好意的であり個人レベルでは気にしているものの、つねに公正中立が求められる政府関係者として、組織内において、巻き網漁などを含む他の漁業者の手前もあることから、当社は、彼らから何らの実利的な支援をも受けるにはいたっていない。政府関係者の間で、当社を好意的に見る目があっても、非公式な見解に留まっているのが現状。</p>

Condition 2

Performance Indicator	Skipjack PI 1.2.2; scoring issues a, b, and c.
Score	60
Rationale	<p>Scoring Issue (a): There are not yet any well-defined harvest control rules in place and SG80 is not met.</p> <p>Following the MSC Notice, “<i>Scoring of ‘available’ Harvest Control Rules (HCRs) in CRv1.3 fisheries</i>” of 24th November 2014, PI 1.2.2 si(a) is scored using CR v2.0 provisions for SG60 scoring (<i>Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached</i>). We note also, MSC Notice, “<i>Interpretation on Harvest Control Rules (HCR)</i>” of 16 December, 2015.</p> <p>MSC CR v2.0 lays out two conditions for acceptance of HCR being available sufficient to justify scoring at the SG60 level.</p> <p>First, CR v2.0 SA2.5.2a provides for HCR being recognised as available “...if stock biomass has not previously been reduced below B_{msy} or has been maintained at that level for a recent period of time”.</p> <p>As noted at PI 1.1.1 si(c), The MULTIFAN-CL assessment provides probabilistic estimates of parameters of interest, and has been extensively explored using a crosswise grid of sensitivity tests (WCPFC, 2014a). The stock assessment estimates spawning biomass, SB, to be <i>circa</i> $50\%SB_{F=0}$, well above the implicit, and MSC default, TRP of $SB_{msy} = 28\%SB_{F=0}$. The stock is estimated never to have reduced to SB_{msy} and has hence been above SB_{msy} in all years.</p> <p>The CR v2.0 SA2.5.2a condition is therefore met.</p> <p>Second, CR v2.0 SA2.5.3b provides for HCR being recognised as available if “...there is an agreement or framework in place that requires the management body (WCPFC) to adopt HCRs before the stock declines below B_{msy}”.</p> <p>WCPFC Conservation and Management Measure CMM 2014-06 (WCPFC, 2014f) sets out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules or (“harvest control rules”), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The Commission agreed to adopt a work plan at its 2015 annual meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific albacore tunas. The work plan was indeed adopted in December 2015. In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process.</p> <p>According to WCPFC (2014a), paragraph 48, “Future status under status quo projections (assuming 2012 conditions) was robust to assumptions on future recruitment. Under either assumption, spawning biomass remained relatively constant and it is exceptionally unlikely (0%) for the stock to become overfished ($SB_{2032} < 0.2SB_{F=0}$) or for the spawning</p>

biomass to fall below SBMSY, and it is exceptionally unlikely (0%) for the stock to become subject to overfishing ($F > F_{MSY}$)."

The CR v2.0 SA2.5.3b condition is therefore met.

Summary, as conditions at both CR v2.0 SA2.5.2a and CR v2.0 SA2.5.3b are met, a score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.

Scoring issue (b):

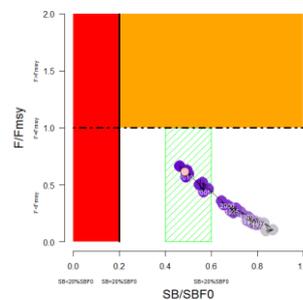
HCR are still under development and neither SG80 nor SG100 is met.

Scoring issue (c):

Following the MSC Notice, "Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries" of 24th November 2014, PI 1.2.2 si(c) is scored using CR v2.0 provisions for SG60 scoring. We note also, MSC Notice, "Interpretation on Harvest Control Rules (HCR)" of 16 December, 2015.

Two MSC CR v2.0 conditions need to be addressed.

First, CR v2.0 SA2.5.6 requires that as part of the evidence that tools are working, "...teams should include current levels of exploitation in the UoA, as measured by fishing mortality rate where available". The best available information on the exploitation rate is in the 2014 SC report (WCPFC, 2014a); the MULTIFAN-CL base case assessment estimates $F_{current}/F_{msy}$ as 0.61 and, as shown in the embedded graphic, F is estimated never to have reached F_{msy} .



While there is concern that F is continuing to increase, CR v2.0. GSA2.5.2-7 as relates to SA2.5.6, notes that current F being "equal to or less than F_{msy} should be taken as evidence that the HCR is effective."

Second, MSC CR v2.0 SA2.5.5b, related to when HCRs are recognized as being available at si(a) at the SG60 level (see above), requires "...a description of a formal or legal agreement to trigger the development of HCR".

As noted at SIa, CMM 2014-06 (WCPFC, 2014f) sets out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules (or "harvest control rules"), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The Commission agreed to adopt a work plan at the 2015 Commission meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific

	<p>albacore tunas. That work plan was adopted at WCPFC12 in December 2015. WCPFC12 also adopted an explicit TRP (WCPFC, 2015) In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process.</p> <p>The CMM has already triggered continuation of HCR development of <i>inter alia</i> skipjack.</p> <p>A score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.</p>
<p>Condition</p>	<p>By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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; b) The selection of the harvest control rules shall take into account the main uncertainties; c) 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>
<p>Milestones</p>	<p>Milestones: It is recognised the Client has limited ability directly to ensure the SG80 are met at each scoring issue. The Client will need to work through the FAJ and the JTFCFA.</p> <p>Milestones for Condition 2 parallel those for Condition 1, with the development of harvest control rules being a subset of harvest strategy development.</p> <p>It is recognised the Client has limited ability directly to ensure the SG80 are met at each scoring issue. The Client will need to work through the FAJ and the JTFCFA. The key issue is transparency of the linkage between catching opportunity (informed by scientific assessments) and the primary control in the fishery (the use of effort controls by the PNA).</p> <p>Milestone 1: By the first annual surveillance, the Client should show clear evidence of advocacy within Japan for support of the WCPFC-agreed work plan for harvest control rules, adopted at WCPFC12 in support of WCPFC CMM 2014-06. Advocacy is also required that the linkage between catching opportunity and effort limitations are made explicit. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 2: By the second annual surveillance, the Client should show clear evidence of continued advocacy within Japan for participation in and support of the WCPFC-agreed work plan for harvest control rules, adopted at WCPFC12 in support of WCPFC CMM 2014-06, and any modifications to that work plan agreed by the WCPFC. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 3: By third annual surveillance, the Client should show clear evidence of continued advocacy within Japan for participation in and support of the WCPFC-agreed work plan for harvest control rules, adopted at WCPFC12 in support of WCPFC CMM 2014-06, and any modifications</p>

	<p>to that work plan agreed by the WCPFC. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 4: By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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.</p>
<p>Client action plan</p>	<p>Consistent with (the same as) the CAP for Condition 1, we have established our action plan to get the following done to meet the SG80 requirements by the fourth annual surveillance:</p> <p>Year 1 We will work to ensure that the harvest strategy for skipjack tunas is adopted at WCPFC annual meetings. As a first step, we will actively push the FAJ to let the Japanese delegation to the WCPFC found a basis on which the awareness of the necessity to limit the catch of skipjack can be boosted at meetings of the commission in the foreseeable future and the development and adoption of appropriate harvest control rules as outlined in CMM 2014-06 and the Commission work plan agreed in 2015</p> <p>Action plans established by the FAJ and relevant organizations such as the JTFA include examination of harvest strategies necessary to achieve their management objectives, which is necessary for appropriate management strategy to be created and submitted to WCPFC annual meetings in line with the agreed work plan. This examination will expressly demonstrate that such organizations in Japan support the process for the development of harvest strategies and harvest control rules.</p> <p>Year 2 and onwards We will assess each year progress of the WCPFC and PNA towards meeting the condition and will continue to seek dialogue with FAJ and JTFA to ensure Japanese involvement in and advocacy for development and implementation of a clear harvest strategy involving target and limit reference points (already set), harvest control rules (as in CMM 2014-06), and clear linkage between catch and effort.</p>
<p>Consultation on condition</p>	<p>We have approached both FAJ and JTFA. We have attended a skipjack tuna meeting irregularly held by FAJ and JTFA a couple of times since the onsite audit for the full assessment ran in June, 2015. On such an occasion, we have made it a point to keep attendees from the governmental organizations updated on our progress on the full assessment. They are very favourable toward our challenge to the MSC certification as our fishing method--the pole and line fishery--is eco-friendly. However, governmental attendees are not allowed to treat any specific fishery with favouritism as their mission is to keep themselves neutral at all times while impartially showing respect to any fisheries based on different fishing methods--including purse-seine fishery--other than the pole and line fishery. Therefore, we have not received any pragmatic support from both FAJ and JTFA. Our favourability is high among the governmental members, but it remains unofficial among them.</p> <p>今回の本審査以降、水産庁及び日かつ連担当者 3~4 回程度、不定期鯉鮪会</p>

議で、話し合いまたは情報交換の機会があり、MSC 審査の進捗状況を説明している。両担当者とも非常に好意的であり個人レベルでは気にしているものの、つねに公正中立が求められる政府関係者として、組織内において、巻き網漁などを含む他の漁業者の手前もあることから、当社は、彼らから何らの実利的な支援をも受けるにはいたっていない。政府関係者の間で、当社を好意的に見る目があっても、非公式な見解に留まっているのが現状。

Condition 3

Performance Indicator	Albacore PI 1.1.2; scoring issues b and c.
Score	70
Rationale	<p>Scoring Issue (b):</p> <p>The WCPFC LRP of $20\%SB_{F=0}$ is arguably <u>set</u> by default following adoption of a hierarchical approach at the 8th Annual Session of the Commission. No equivalent exists as yet for the IATTC. Fmsy is an implicit LRP in both the WCPFC and IATTC, by Convention. However, while the WCPFC has explicitly agreed to use Fmsy as a LRP for skipjack tuna, it has not done so for North Pacific albacore. The ISC has adopted a working LRP of $F_{SSB-ATHL}$ but this has not been adopted in any formal sense by WCPFC or IATTC, though neither RFMO has rejected repeated advice based upon it.</p> <p>The SG requires that LRPs be ‘set’ rather than as at SI1.1.2c, where the language of requirement is more relaxed. As only one of the two RFMOs has in any sense ‘set’ an LRP (and acknowledging that the setting followed meta-analyses to ensure it was precautionary), and noting the need to harmonise assessments with CHMSF (2015), it is considered the SG80 requirements are not met.</p> <p><i>(NB CR v1.30 CB2.3.2.1 can be read to allow wider use of implicit reference points. However, the paragraph refers to usage within management procedures, management strategies or decision rules, and is therefore deemed not relevant here.)</i></p> <p>Scoring Issue (c):</p> <p>Both the WCPFC and IATTC Conventions use language suggesting all fish stocks covered by their Conventions should maintain or restore populations of harvested species at levels of abundance which can produce the MSY, <i>inter alia</i>, through the setting of the total allowable catch and/or the total allowable level of fishing capacity and/or level of fishing effort. Arguably, this creates an implicit MSY-related target.</p> <p>However, this argument, akin to that used above to support implicit LRPs, is not well-tested. Also, given the MSC requirement to harmonise assessments with CHMSF (2015), it is considered the SG80 requirements are not met.</p>
Condition	<p>By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: b) The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity; c) 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>
Milestones	<p>Milestones: It is recognised the Client has limited ability directly to ensure the SG80 are met at each scoring issue. The Client will need to work through the FAJ and the JTFCA.</p>

	<p>Milestone 1: By the first annual surveillance, the Client should show clear evidence of advocacy within Japan for adoption of a clear and time bound plan to enable adoption of limit and target reference points, for North Pacific albacore tuna (as already agreed under harvest strategy development in WCPFC CMM 2014-06 and IATTC, 2014). The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit. Note that unlike skipjack, North Pacific albacore is not included explicitly in the WCPFC-agreed work plan agreed in December 2015 and will rely on input by the Northern Committee (see footnote 1 of CMM 2014-06).</p> <p>Milestone 2: By the second annual surveillance, the Client should show clear evidence of advocacy within Japan for participation in and support of WCPFC and IATTC processes (as already agreed under harvest strategy development in WCPFC CMM 2014-06 and IATTC, 2014), and advice from the Northern Committee. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 3: By third annual surveillance, the Client should show clear evidence of advocacy within Japan for participation in and support of WCPFC and IATTC processes (as already agreed under harvest strategy development in WCPFC CMM 2014-06 and IATTC, 2014), and advice from the Northern Committee. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 4: By the fourth annual surveillance, the Client must be in a position to demonstrate that the SG80 requirements have been met: b) The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity; c) 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>Client plan action</p>	<p>We've established our action plan to get the following done to meet the SG80 requirements within 4 years.</p> <p>Year 1 By way of the JTFA, we will actively push the FAJ as the Japanese delegation to the WCPFC and IATTC to encourage each commission to develop and decide appropriate target reference points and limit reference points for the albacore stock in the North Pacific Ocean as required under WCPFC CMM 2014-06. This work will expressly demonstrate that there is support from Japanese organizations toward the commission's development of albacore harvest strategies.</p> <p>Year 2 and onwards We will assess each year progress of the WCPFC and IATTC towards meeting the condition and will continue to seek dialogue with FAJ and JTFA to ensure Japanese involvement in and advocacy for development and implementation of explicit target and limit reference points as required under WCPFC CMM 2014-06.</p>

Consultation on condition	<p>We have approached both FAJ and JTFA. We have attended a skipjack tuna meeting irregularly held by FAJ and JTFA a couple of times since the onsite audit for the full assessment ran in June, 2015. On such an occasion, we have made it a point to keep attendees from the governmental organizations updated on our progress on the full assessment. They are very favourable toward our challenge to the MSC certification as our fishing method--the pole and line fishery--is eco-friendly. However, governmental attendees are not allowed to treat any specific fishery with favouritism as their mission is to keep themselves neutral at all times while impartially showing respect to any fisheries based on different fishing methods--including purse-seine fishery--other than the pole and line fishery. Therefore, we have not received any pragmatic support from both FAJ and JTFA. Our favourability is high among the governmental members, but it remains unofficial among them.</p> <p>今回の本審査以降、水産庁及び日かつ連担当者 3~4 回程度、不定期鯷鮪会議で、話し合いまたは情報交換の機会があり、MSC 審査の進捗状況を説明している。両担当者とも非常に好意的であり個人レベルでは気にしているものの、つねに公正中立が求められる政府関係者として、組織内において、巻き網漁などを含む他の漁業者の手前もあることから、当社は、彼らから何らの実利的な支援をも受けにはいたっていない。政府関係者の間で、当社を好意的に見る目があっても、非公式な見解に留まっているのが現状。</p>
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Condition 4

Performance Indicator	Albacore PI 1.2.2; scoring issues a, b, and c.
Score	60
Rationale	<p>Scoring Issue (a):</p> <p>There are not yet any well-defined harvest control rules in place through WCPFC and/or IATTC; SG80 is not met.</p> <p>Following harmonization requirements with CHMSF (2015) and the MSC Notice, “Scoring of ‘available’ Harvest Control Rules (HCRs) in CRv1.3 fisheries” of 24th November, PI 1.2.2 Sla is scored using CR v2.0 provisions for SG60 scoring (Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached). We note also, MSC Notice, “<i>Interpretation on Harvest Control Rules (HCR)</i>” of 16 December, 2015.</p> <p>MSC CR v2.0 lays out two conditions for acceptance of HCR being available sufficient to justify scoring at the SG60 level.</p> <p>First, CR v2.0 SA2.5.2a provides for HCR being recognised as available “...if stock biomass has not previously been reduced below Bmsy or has been maintained at that level for a recent period of time”.</p> <p>As noted at PI 1.1.1 si(c), The SS3 assessment provides probabilistic estimates of parameters of interest, and has been extensively explored sensitivity tests (ISC, 2014). The stock assessment estimates spawning stock biomass, SSB/SSBmsy to be 2.2 with no overlap in confidence intervals. The stock is estimated never to have reduced to SSBmsy and has hence been above SSBmsy in all years.</p> <p>The CR v2.0 SA2.5.2a condition is therefore met.</p> <p>Second, CR v2.0 SA2.5.3b provides for HCR being recognised as available if “...there is an agreement or framework in place that requires the management body (WCPFC and IATTC) to adopt HCRs before the stock declines below Bmsy”.</p> <p>WCPFC CMM 2014-06 (WCPFC, 2014f) sets out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules or (“harvest control rules”), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The Commission agreed to adopt a work plan at the 2015 Commission meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific albacore tunas. In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process.</p> <p>According to ISC (2014), projections at constant fishing mortality and average historical recruitment indicate the stock will remain relatively stable at between the 25th and median historical percentiles over the short- and long-term, suggesting also the stock will remain above SSBmsy.</p> <p>The CR v2.0 SA2.5.3b condition is therefore met.</p>

Summary, as conditions at both CR v2.0 SA2.5.2a and CR v2.0 SA2.5.3b are met, a score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.

NB CHMSF (2015) invokes SA2.5.3a as a supporting condition in preference to SA2.5.3a (either can be used). The SA2.5.3a condition is "*HCRs are effectively used in some other UoAs, that are under the control of the same management body and of a similar size and scale as the UoA.*" The justification used here is different but not incompatible. The resulting score and condition are the same.

Scoring Issue (b):

HCR are still under development and neither SG80 nor SG100 is met.

Scoring Issue (c):

Following harmonization requirements with CHMSF (2015) and the MSC Notice, "*Scoring of 'available' Harvest Control Rules (HCRs) in CRv1.3 fisheries*" of 24th November, PI 1.2.2 si(a) is scored using CR v2.0 provisions for SG60 scoring. We note also, MSC Notice, "*Interpretation on Harvest Control Rules (HCR)*" of 16 December, 2015.

Two MSC CR v2.0 conditions need to be addressed.

First, CR v2.0 SA2.5.6 requires that as part of the evidence that tools are working, "*...teams should include current levels of exploitation in the UoA, as measured by fishing mortality rate where available*". The best available information on the exploitation rate is in ISC (2014); the SS3 base case assessment estimates F/F_{msy} as 0.52 and, as shown in Figure 1.1.1c, F is estimated never to have reached F_{msy} . R v2.0. GSA2.5.2-7 as relates to SA2.5.6, notes that current F being "*equal to or less than F_{msy} should be taken as evidence that the HCR is effective.*"

Second, MSC CR v2.0 SA2.5.5b, related to when HCRs are recognized as being available at Sla at the SG60 level (see above), requires "*...a description of a formal or legal agreement to trigger the development of HCR*".

As noted at si(a), CMM 2014-06 and IATTC (2014) set out definitions of harvest strategies to be developed and implemented. The definitions include target and limit reference points and decision rules or ("harvest control rules"), with a clear intention that harvest control rules, tested using simulation approaches, will be part of the implemented harvest strategies. The WCPFC agreed to adopt a work plan at the 2015 Commission meeting, with potential revision in 2017, with application to skipjack, bigeye, yellowfin, Pacific Bluefin, and South and North Pacific albacore tunas. In fact, work towards establishing reference points and harvest control rules is already well underway through the Management Objectives Workshop (MOW) process. IATTC (2014) has also adopted measures to progress development and adoption of TRP, LRP, and HCR.

The WCPFC CMM and IATTC adoption of an approach has already triggered continuation of HCR development of inter alia North Pacific albacore.

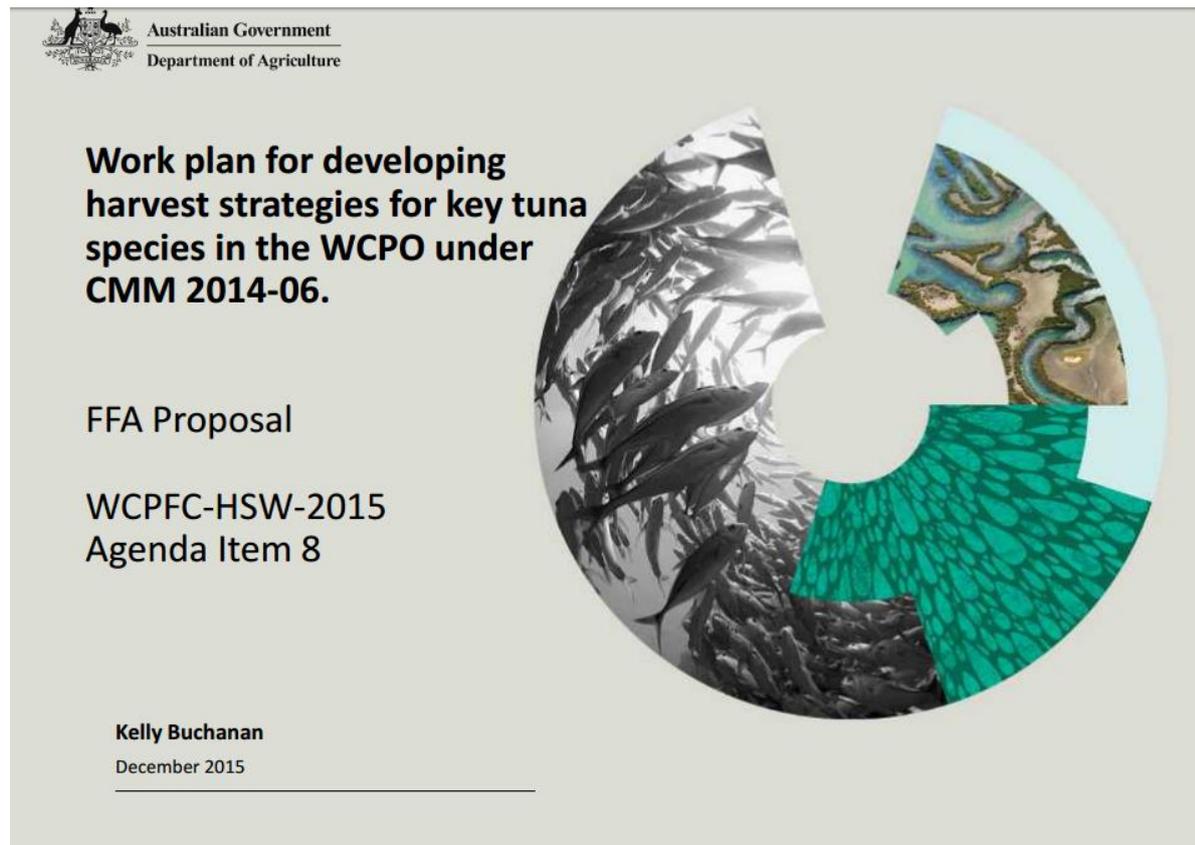
A score of SG60 is awarded, using CR v2.0 provisions for SG60 scoring.

NB The CHMSF (2015) assessment uses a somewhat different

	<p>justification for SG60 scoring using CR v2.0; that justification does include the first condition used here. The resulting score and condition are the same.</p>
<p>Condition</p>	<p>By the fourth annual surveillance, the client must be in a position to demonstrate that the SG80 requirements have been met: a) 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; b) The selection of the harvest control rules shall take into account the main uncertainties; c) 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>
<p>Milestones</p>	<p>Milestones: It is recognised the Client has limited ability directly to ensure the SG80 are met at each scoring issue. The Client will need to work through the FAJ and the JTFCFA.</p> <p>Milestone 1: By the first annual surveillance, the Client should show clear evidence of advocacy within Japan for adoption of a clear and timebound plan to enable adoption of a harvest strategy (including limit and target reference points and harvest control rules) for North Pacific albacore tuna (as already agreed under harvest strategy development in WCPFC CMM 2014-06 and IATTC, 2014). The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit. Note that unlike skipjack, North Pacific albacore is not included explicitly in the WCPFC-agreed work plan agreed in December 2015 and will rely on input by the Northern Committee (see footnote 1 of CMM 2014-06).</p> <p>Milestone 2: By the second annual surveillance, the Client should show clear evidence of advocacy within Japan for participation in and support of WCPFC and IATTC processes (as already agreed under harvest strategy development in WCPFC CMM 2014-06 and IATTC, 2014), and advice from the Northern Committee. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 3: By third annual surveillance, the Client should show clear evidence of advocacy within Japan for participation in and support of WCPFC and IATTC processes (as already agreed under harvest strategy development in WCPFC CMM 2014-06 and IATTC, 2014), and advice from the Northern Committee. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would likely not result in a change in score at this surveillance audit.</p> <p>Milestone 4: By the fourth annual surveillance, the Client must be in a position to demonstrate that the SG80 requirements have been met: b) The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity; c) The target reference point is such that the stock is maintained at a level consistent with BMSY or some measure or s</p>
<p>Client action plan</p>	<p>We've established our action plan to get the following done to meet the SG80 requirements within 4 years.</p>

	<p>Year 1 We will work to ensure that the harvest strategy for albacore tuna in the North Pacific is adopted at WCPFC and IATTC annual meetings. As a first step, we will actively push the FAJ to let the Japanese delegation to the WCPFC found a basis on which the awareness of the necessity to limit the catch of albacore tuna can be boosted at meetings of the commission in the foreseeable future and the development and adoption of appropriate harvest control rules as outlined in CMM 2014-06. We will push in the first year for the FAJ to propose adding a specific work plan for albacore in the North Pacific (as it was not included in December 2015).</p> <p>Action plans established by the FAJ and relevant organizations such as the JTFA include examination of harvest strategies necessary to achieve their management objectives, which is necessary for appropriate management strategy to be created and submitted to WCPFC and IATTC annual meetings. This examination will expressly demonstrate that such organizations in Japan support the process for the development of harvest strategies and harvest control rules.</p> <p>Year 2 and onwards We will assess each year progress of the WCPFC and IATTC towards meeting the condition and will continue to seek dialogue with FAJ and JTFA to ensure Japanese involvement in and advocacy for development and implementation of a clear harvest strategy involving target and limit reference points and harvest control rules (as in CMM 2014-06).</p>
<p>Consultation on condition</p>	<p>We have approached both FAJ and JTFA. We have attended a skipjack tuna meeting irregularly held by FAJ and JTFA a couple of times since the onsite audit for the full assessment ran in June, 2015. On such an occasion, we have made it a point to keep attendees from the governmental organizations updated on our progress on the full assessment. They are very favourable toward our challenge to the MSC certification as our fishing method--the pole and line fishery--is eco-friendly. However, governmental attendees are not allowed to treat any specific fishery with favouritism as their mission is to keep themselves neutral at all times while impartially showing respect to any fisheries based on different fishing methods--including purse-seine fishery--other than the pole and line fishery. Therefore, we have not received any pragmatic support from both FAJ and JTFA. Our favourability is high among the governmental members, but it remains unofficial among them.</p> <p>今回の本審査以降、水産庁及び日かつ連担当者 3~4 回程度、不定期鯉鮪会議で、話し合いまたは情報交換の機会があり、MSC 審査の進捗状況を説明している。両担当者とも非常に好意的であり個人レベルでは気にしているものの、つねに公正中立が求められる政府関係者として、組織内において、巻き網漁などを含む他の漁業者の手前もあることから、当社は、彼らから何らの実利的な支援をも受けるにはいたっていない。政府関係者の間で、当社を好意的に見る目があっても、非公式な見解に留まっているのが現状。</p>

8.6 Consultation Documents



OUTLINE

- The need for a work plan under CMM 2014-06
- Elements of a harvest strategy under CMM 2014-06 (used as basis for the draft plan)
- Process
- How the plan is structured
- Species (stock) focus vs fishery focus
- Draft work plan under CMM 2014-06

NEED

CMM 2014-06 to develop and implement a harvest strategy approach for key fisheries and stocks in the WCPO

Paragraph 13

- *The Commission shall agree a workplan and indicative timeframes to adopt or refine harvest strategies for skipjack, bigeye, yellowfin, South Pacific albacore, Pacific bluefin and northern albacore tuna by no later than the twelfth meeting of the Commission in 2015.*
- *This workplan will be subject to review in 2017.*
- *The Commission may agree timeframes to adopt harvest strategies for other fisheries or stocks.*

This draft plan covers skipjack, bigeye, yellowfin and South Pacific albacore. It is anticipated that the Northern Committee will be responsible for Pacific bluefin and NP albacore.

Elements of a harvest strategy (CMM 2014-16)

Paragraph 7

- a. Defined **operational objectives**, including timeframes, for the fishery or stock ('management objectives')
- b. Target and limit **reference points** for each stock ('reference points')
- c. Acceptable **levels of risk** of not breaching limit reference points ('acceptable levels of risk')
- d. A **monitoring** strategy using best available information to assess performance against reference points ('monitoring strategy')
- e. **Decision rules** that aim to achieve the target reference point and aim to avoid the limit reference point ('harvest control rules'), and
- f. An **evaluation of the performance** of the proposed harvest control rules against management objectives, including risk assessment ('management strategy evaluation').

Stock focus vs fishery focus

- a. Workplan designed to allow for both stock and fishery specific decisions.
- a. Limit reference points, target reference points, acceptable levels of risk developed for each stock.
- a. Harvest control rules?

Draft plan (1)

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2015	<p>Record management objectives for the fishery or stock (a).</p> <p>Agree Target Reference Point (b).</p> <p>Agree acceptable levels of risk (c).</p> <ul style="list-style-type: none"> • SC provide advice on implications of a range of Target Reference Points for south Pacific albacore. • Commission record management objectives for south Pacific albacore noting advice provided by the SC on a range of target reference points • Commission agree to acceptable levels of risk for breaching Limit Reference Point for south pacific albacore. • Commission agree a Target Reference Point for south pacific albacore. 	<p>Record management objectives for the fishery or stock (a).</p> <p>Agree Target Reference Point (b).</p> <p>Agree acceptable levels of risk (c).</p> <ul style="list-style-type: none"> • Commission record management objectives for skipjack noting advice provided by the SC on a range of target reference points • Commission agree to acceptable levels of risk for breaching Limit Reference Point for skipjack. • Commission agree to a Target Reference Point for skipjack. 	<ul style="list-style-type: none"> • Commission task SC to determine a biologically reasonable timeframe for rebuilding bigeye tuna to [or above] its limit reference point 	<p>Agree acceptable levels of risk (c).</p> <ul style="list-style-type: none"> • Commission agree to acceptable levels of risk for breaching Limit Reference Point for yellowfin tuna.

Draft plan (2)

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2016	<p>Agree monitoring strategy (d).</p> <p>Develop harvest control rules (e).</p> <p>Management strategy evaluation (f)</p> <ul style="list-style-type: none"> SC provide advice on a monitoring strategy to assess performance against reference points. SC provide advice on a range of performance indicators to evaluate performance of harvest control rules. Commission agree to a monitoring strategy to assess performance against reference points. Commission agree performance indicators to evaluate harvest control rules 	<p>Agree monitoring strategy (d).</p> <p>Develop harvest control rules (e).</p> <p>Management strategy evaluation (f)</p> <ul style="list-style-type: none"> SC provide advice on a monitoring strategy to assess performance against reference points. SC provide advice on a range of performance indicators to evaluate performance of harvest control rules. Commission agree to a monitoring strategy to assess performance against reference points. Commission agree performance indicators to evaluate harvest control rules 	<p>Record management objectives for the fishery or stock (a).</p> <p>Agree acceptable levels of risk (c).</p> <ul style="list-style-type: none"> Commission agree timeframes to rebuild stock to limit reference point. Commission agree acceptable levels of risk for breaching Limit Reference Point for bigeye tuna. Commission record management objectives for bigeye and ask SC for advice on a range of target reference points. 	<p>Record management objectives for the fishery or stock (a).</p> <ul style="list-style-type: none"> Commission record management objectives for yellowfin and ask SC for advice on a range of target reference points.

Draft plan (3)

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2017	<p>Develop harvest control rules (e).</p> <p>Management strategy evaluation (f).</p> <ul style="list-style-type: none"> SC provide advice on candidate harvest control rules based on agreed reference points. Commission consider advice on progress towards harvest control rules. 	<p>Develop harvest control rules (e).</p> <p>Management strategy evaluation (f).</p> <ul style="list-style-type: none"> SC provide advice on candidate harvest control rules based on agreed reference points. Commission consider advice on progress towards harvest control rules. 	<p>Agree Target Reference Point (b).</p> <ul style="list-style-type: none"> SC provide advice on a range of Target Reference Points for bigeye. Commission agree a Target Reference Point for bigeye. 	<p>Agree Target Reference Point (b).</p> <ul style="list-style-type: none"> SC provide advice on a range of Target Reference Points for yellowfin. Commission agree a Target Reference Point for yellowfin.

Draft plan (4)

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2018	<p>Develop harvest control rules (e)</p> <p>Management strategy evaluation (f)</p> <ul style="list-style-type: none"> SC provide advice on performance of candidate harvest control rules. TCC consider the implications of candidate harvest control rules. Commission consider advice on progress towards harvest control rules. 	<p>Develop harvest control rules (e)</p> <p>Management strategy evaluation (f)</p> <ul style="list-style-type: none"> SC provide advice on performance of candidate harvest control rules. TCC consider the implications of candidate harvest control rules. Commission consider advice on progress towards harvest control rules. 	<p>Agree monitoring strategy (d).</p> <p>Develop harvest control rules (e).</p> <p>Management strategy evaluation (f).</p> <ul style="list-style-type: none"> SC provide advice on a monitoring strategy to assess performance against reference points. SC provide advice on a range of performance indicators to evaluate performance of harvest control rules. Commission agree to a monitoring strategy to assess performance against reference points. Commission agree performance indicators to evaluate harvest control rules 	<p>Agree monitoring strategy (d).</p> <p>Develop harvest control rules (e).</p> <p>Management strategy evaluation (f).</p> <ul style="list-style-type: none"> SC provide advice on a monitoring strategy to assess performance against reference points. SC provide advice on a range of performance indicators to evaluate performance of harvest control rules. Commission agree to a monitoring strategy to assess performance against reference points. Commission agree performance indicators to evaluate harvest control rules

Matur suksma
(thankyou)

**Work plan for developing
harvest strategies for key tuna
species in the WCPO under
CMM 2014-06.**

FFA Proposal

WCPFC-HSW-2015
Agenda Item 8



9 APPENDIX 2. PEER REVIEW REPORTS

9.1 Peer Reviewer 1

Performance Indicator Review

Overall Opinion

Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?	Yes	Certification Body Response
<i>Justification:</i> The report is well written and provides clear information on the fishery and its impacts. Evidence is provided to support the conclusion that the fishery achieves the standards for certification with conditions.		<u>None</u>
Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe?	Yes	Certification Body Response
<i>Justification:</i> The conditions raised follow the wording of the scoring guide and the milestones are appropriate. As for a number of tuna fisheries in the Pacific, achieving SG80 outcomes depends on progress being made at WCPFC. There is a good level of harmonization with other fisheries harvesting the same resources.		<u>None. We note the extensive harmonisation undertaken during 2015 and then in the pilot process during April 2016.</u>

If included:

Do you think the client action plan is sufficient to close the conditions raised?	Yes	Certification Body Response
<i>Justification:</i> The client action plan is satisfactory. As with MSC assessments of other RFMO tuna fisheries, the conditions require agreement to be reached by RFMO representatives on scientific and management committees. However, the action plan aligns with the work plan agreed by the WCPFC in 2015 and processes in progress at IATTC. The milestones and the client action plan recognize that the client cannot guarantee outcomes at the RFMOs and focus client advocacy for change. Whilst this is appropriate there should be some consideration at surveillance audits whether progress is being made against RFMO work plans in adopting harvest strategies and harvest control rules.		<u>Agree</u>

General Comments on the Assessment Report (optional)

Overall, the report is well written and the information presented is sufficiently comprehensive to allow evaluation against the MSC certification requirements. The version I read requires a number of minor editorial corrections which are not highlighted here, but these do not affect consideration of the certification outcome.

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
Principle 1 Skipjack					
1.1.1	Yes	Yes	NA	The latest stock assessment supports the conclusions and this PI has been appropriately scored.	None
1.1.2	Yes	Yes	NA	The assessment team has taken relevant information into account and the PI is appropriately scored.	None
1.1.3	NA	NA	NA		
1.2.1	Yes	Yes	Yes	<p>Scores and justifications for all scoring elements are appropriate and harmonised with other relevant fisheries.</p> <p>Scoring issues 1.2.1a and 1.2.1b should be described as "Not scored" at the SG100 level given SG80 not being met for 1.2.1a.</p> <p>Addressing the condition raised will require development of the harvest strategy through WCPFC processes. This is an ongoing issue for tuna fisheries under the jurisdiction of RFMOs.</p>	Noted and "Not scored" used as suggested.

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
1.2.2	Yes	Yes	Yes	<p>A score of 60 for 1.2.2a is appropriate (under revision CR v2.0). A generally understood harvest rule is not in place, but is available should the stock approach the point of recruitment impairment. In addition, available information indicates that the stock is very unlikely to become overfished or fall below SBMSY under 2012 status quo projections. Harmonisation with other fisheries for this PI is noted.</p> <p>Scores and justifications for 1.2.2b and 1.2.2c are appropriate.</p> <p>SG100 level issues should be described as 'Not scored'.</p> <p>Addressing the condition raised will require adoption of harvest control rules through WCPFC processes. This is an ongoing issue for tuna fisheries under the jurisdiction of RFMOs. It is a positive outcome that in 2015 WCPFC adopted a work plan to progress the requirements of this PI.</p>	Noted and "Not scored" used as suggested.
1.2.3	Yes	Yes	NA	<p>Scoring and justification on information to support the harvest strategy for this PI are appropriate.</p> <p>The assessors suggest that a higher SI score may be warranted for 1.2.3 but a score of 80 is given due to harmonisation with the PNA fishery. Although not finalised at the time of this report, the Tri Marine purse seine and Solomon Island</p>	Noted

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
				skipjack and yellowfin fishery assessments also score 80 for this scoring issue and present additional justification for this score.	
1.2.4	Yes	Yes	NA	<p>The model-based assessment is appropriate for the stock and takes into account the major features relevant to the biology of the species and the nature of the fishery, meeting SG100 requirements for 1.2.4a.</p> <p>Although uncertainty remains in aspects of the assessment there has been an appropriate investigation of sources of uncertainty, meeting 12.2.4d.</p> <p>Scores and justifications for other scoring issues are also appropriate.</p>	None
Principle 1 Albacore					
1.1.1	Yes	Yes	NA	The latest stock assessment supports the conclusions and this PI has been appropriately scored.	None
1.1.2	Yes	Yes	Yes	The assessment team has taken relevant information into account and correctly scored	Noted. As commented upon, the scoring follows harmonisation. This was done in 2015 but confirmed in April 2016 harmonisation

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
				this PI. It is debatable whether the score should be 65 rather than 70, however the score of 70 is harmonised with other fisheries.	processes.
1.1.3	NA	NA	NA		
1.2.1	Yes	No	Yes	It is noted that meeting SG80 for 1.2.1a is harmonised with other fisheries targeting northern Pacific albacore, in particular the Canadian Highly Migratory Species Fishery (CHMSF) for North Pacific albacore. However, it is difficult to see that the justification is stronger here than for skipjack which does not meet SG80. The justification for albacore relies largely on the processes at WCPFC and IATTC which are common to skipjack. A point of difference appears to be WCPFC CMM 2005-03 and IATTC C-2005-02 which are in place for albacore, however the section of the report on "Harvest Strategy and Control Rules" states that "Neither WCPFC CMM 2005-03 nor IATTC C 2005-02 constitute a harvest strategy as defined, for example, by WCPFC CMM 2014-06.....". The justification needs to be clearer. Scores and justifications for other 1.2.1 scoring issues are appropriate.	See comment at 1.2.4 re harmonisation timing; this applies here as well. The difference between skipjack and NP albacore is the reliance for skipjack on ht epNA VDS, and the lack of transparency of the linkage between catcvh availability and effort allowances. This does not apply for NP albacore. In main scoring, it does not seem appropriate to refer to why another P1 stock did not score SG80 to justify that NP albacore does.
1.2.2	Yes	Yes	Yes	The scoring and conditions raised are harmonised with other relevant fisheries. The assessment team has taken relevant	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
				information into account and the PI is appropriately scored.	
1.2.3	Yes	Yes	NA	The assessment team has taken relevant information into account and the PI is appropriately scored.	None
1.2.4	Yes	Yes	NA	The assessment team has taken relevant information into account and the PI is appropriately scored.	None
Principle 2					
2.1.1	Yes	Yes	NA	Reported retained catches other than albacore are at very low levels. Relevant information has been taken into account and the PI has been appropriately scored.	None
2.1.2	Yes	Yes	NA	The PI has been appropriately scored.	None
2.1.3	Yes	Yes	NA	The PI has been appropriately scored.	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
2.2.1	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None
2.2.2	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None
2.2.3	Yes	No	NA	There is a lack of information to support scoring issues meeting SG100 in relation to bycatch. However, the fishing method and available information do support this being appropriate for several scoring issues. The lack of information on bycatch make it difficult to support a score of 100 for 2.2.3d which requires that "Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species". SG80 is met for 2.3.3d given there are no main bycatch species, however it would be preferable that some level of independent monitoring is undertaken in future to provide confidence that there is no bycatch in the fishery (either from observer coverage or e-monitoring).	Please see response at 2.3.3.
2.3.1	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
2.3.2	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None
2.3.3	Yes	No	NA	<p>As for 2.2.3d, it is difficult to support a score of 100 for 2.3.3c given the lack of information to verify that there are no ETP interactions. For example, the use of live bait for chumming raised the possibility of seabird interaction. Bugoni (2008) examines information from hook-and-line fisheries off southeastern Brazil. Whilst pole-and-line fishing did not result in seabird capture, seabird injury and mortality is reported as a result of the use of metal pieces attached to poles to scare birds away. There is no indication that this is an issue for the fishery under assessment, but there is a lack of information to verify this.</p> <p>Bugoni, L., Neves, T. S., Leite, N. O. Jr, Carvalho, D. and others (2008) Potential bycatch of seabirds and turtles in hookand- line fisheries of the Itaipava Fleet, Brazil. Fish Res. 90: 217–224.</p>	<p>This is a well-made point. Gear seen during the site visit, and on video, does not show modifications as indicated in the cited example. See, e.g.: https://www.youtube.com/watch?v=SBvYBbzZ6aE</p> <p>During the site visit and discussions with FAJ and scientists at FRA, as well as with WWF in Tokyo, there was good agreement that there are no interactions with ETP.</p> <p>As noted in section 3.2, observation for each vessel is typically every 2-3 years. That is, every 6-9 trips on average. There is no indication from any source of ETP interactions.</p> <p>Given the high cost of scientific observation for trips typically lasting of the order of 6 weeks, and for which all indications are of zero interaction (for ETP and bycatch species other than those reported at PI2.1), scientific observation to collect data comprised of zeros will always be a low priority.</p> <p>Scoring is difficult throughout Principle 2 because while data per se are limited, information is arguably high, with many years of consistent messages from multiple sources that interactions do not occur.</p>
2.4.1	Yes	Yes	NA	Given the nature of the fishery and fishing gear, relevant information has been taken into	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
				account and the PI has been appropriately scored.	
2.4.2	Yes	Yes	NA	The PI has been appropriately scored.	None
2.4.3	Yes	Yes	NA	The PI has been appropriately scored.	None
2.5.1	Yes	Yes	NA	Given the scale of the fishery, relevant information has been taken into account and the PI has been appropriately scored.	None
2.5.2	Yes	Yes	NA	The PI has been appropriately scored.	None
2.5.3	Yes	Yes	NA	The PI has been appropriately scored.	None
Principle 3					
3.1.1	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
3.1.2	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None
3.1.3	Yes	No	NA	A partial score at SG100 is suggested for this scoring issue. Whilst long-term objectives consistent with the precautionary approach are explicit within management policy, it is difficult to agree that the SG100 requirements are fully met in practice. For example, stock assessments for bigeye tuna indicated for a number of years that overfishing was occurring but management action has not been sufficiently precautionary to prevent the the stock becoming overfished as indicated in the latest assessment.	Agree that while while long-term objectives consistent with the precautionary approach are explicit within management policy, it is difficult to agree that the SG100 requirements are fully met in practice.. A partial score of 90 has been given and the text revised
3.1.4	Yes	No	NA	Whilst management policy and procedures are reviewed at international and national levels there is no evidence that these reviews explicitly consider incentives as required to meet SG100.	Agree that while management policy and procedures are reviewed at international and national levels there is no evidence that these reviews explicitly consider incentives. The score has been changed to 90 and the text has been revised
3.2.1	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
3.2.2	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None
3.2.3	No	No	NA	<p>Further justification is required is required for the scoring at 3.2.3a and 3.2.3b. At 3.2.3a there is a statement that WCPFC's regional observer program objective is to achieve 5% coverage of the effort in each fishery by 30 June 2012 for vessels operating in high seas areas. This does not currently apply to the pole-and-line fishery. There is also a statement at 3.2.3a that comprehensive MCS has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. This may well be the case but it is difficult to arrive at this conclusion given that much of the reporting to the WCPFC Technical and Compliance Committee is confidential. 3.2.3a is more appropriately score as satisfying SG80 requirements.</p> <p>In addition, as the report states in the section on MCS "Conservation measures are set by WCPFC but enforcement is carried out by national authorities." This is addressed appropriately in relation to the Japanese authorities. However, the report indicates that some fishing occurs under permits signed with some Pacific nations. The Federated States of Micronesia and the Marshall Islands, both members of the Parties to the Nauru</p>	<p>The 5% observer coverage does not apply to the pole and line fishery and to avoid confusion this has been removed from the text.</p> <p>3.2.3 (a) has been rescored as it is agreed that at the international level, the system is not comprehensive and cannot be demonstrated to have the ability to consistently enforce relevant management measures.</p> <p>The peer Reviewer says reliance on TCC is hard because it is confidential. This is true, however evidence is primarily through lack of issues raised on the fishery under assessment through annual TCC processes. Interpretation of annually repeated lack of notified issues is that enforcement of management measures etc has been demonstrated.</p> <p>Fishing does occur in several other nation's waters under permits signed by the relevant nations. These nations are members of the PNA . The PNA skipjack isheries have current MSC certification However the PNA purse seine fishery uses different gear and catches much greater volumes over a much wider geographic area. No harmonisation is required at this PI which relates solely to the fishery under certification..</p> <p>The monitoring control and surveillance function is the responsibility of MAFF Japan. With regard to distant water skipjack and tuna fisheries, MAFF sets the number of vessels by tonnage and by fishing area to be licensed. A vessel fishing within the waters of a foreign country's jurisdiction authority shall obtain</p>

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
				Agreement (PNA), are given as examples of where fishing has taken place in recent years. The PNA fisheries have current MSC certification. This is potentially a consideration across other P3 scoring issues but is most relevant here. There should be some discussion of the role of FSM and the Marshall Islands in relation to MCS and the application of sanctions.	a fishing permit from that country and comply with all statutory and regulatory conditions, including regulations specifically on foreign vessel fishing operations within the relevant waters
3.2.4	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None
3.2.5	Yes	Yes	NA	Relevant information has been taken into account and the PI has been appropriately scored.	None

Any Other Comments

Comments	Certification Body Response
It is probably a function of developments taking place over the period of the writing of the report, but the section in the body of the report on reference points for skipjack is confusing with the discussion of an implicit TRP and the debate about TRP setting, whereas the end of the section acknowledges that a TRP has been adopted.	Agreed. Adoption of the SB TRP took place after the site visit and after most harmonisation discussions. We have tried to make this clearer in making small changes to the text but are reluctant to change in such a way as loses the initial logic on which scoring took place – because the adoption of the TRP for skipjack has yet to see any effect.

The report indicates that some fishing occurs under permits signed with some Pacific nations. The Federated States of Micronesia and the Marshall Islands, both members of the Parties to the Nauru Agreement (PNA), are given as examples of where fishing has taken place in recent years. The PNA fisheries have current MSC certification. This is potentially a consideration across other several P3 performance indicators, however it is most relevant at PI 3.2.3 and some comment there is warranted.

Fishing by the two Japanese pole and line vessels does occur in PNA member countries' waters under permits signed by the relevant nations. The PNA skipjack fisheries have current MSC certification. However the PNA purse seine fishery uses different gear and catches much greater volumes over a much wider geographic area.

With regard to distant water skipjack and tuna fisheries, MAFF (Japan) sets the number of vessels by tonnage and by fishing area to be licensed. The approval of the licence application is subject to the restrictions and conditions as set out in Section 3.5 of this report. This includes that a vessel fishing within the waters of a foreign countries jurisdiction authority shall obtain a fishing permit from the country and comply with all statutory and regulatory conditions including regulations specifically for foreign vessels.

9.2 Peer Reviewer 2

Performance Indicator Review

Overall Opinion

<i>Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?</i>	Yes	Certification Body Response
<u>Justification:</u> Yes – there is a high degree of harmonisation across similar stocks / fisheries that has strongly influenced the results, eps in P1.		<u>None</u>

<i>Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe?</i>	Yes	Certification Body Response
<u>Justification:</u>		<u>None</u>

If included:

<i>Do you think the client action plan is sufficient to close the conditions raised?</i>	Yes	Certification Body Response
<u>Justification:</u> As noted in the milestones for all four conditions that “It is recognised the Client has limited ability directly to ensure the SG80 are met at each scoring issue. The Client will need to work through the FAJ and the JTFCA”. This is a necessary caveat.		<u>Agree</u>

General Comments on the Assessment Report (optional)

Minor editorials IN SEPARATE WORD DOC:

Useful to have a map showing the geographical range of the fishing operations.

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
1.1.1 SKJ	Yes	Yes	N/A	N/A	None
1.1.1 ALB	Yes	Yes	N/A	N/A	None
1.1.2 SKJ	Yes	Yes	N/A	N/A	None
1.1.2 ALB	Yes	Yes	Yes	N/A	None
1.1.3 SKJ	N/A	N/A	N/A	N/A	
1.1.3 ALB	N/A	N/A	N/A	N/A	
1.2.1 SKJ	Yes	Yes	Yes	N/A	None
1.2.1 ALB	Yes	Yes	N/A	N/A	None
1.2.2 SKJ	Yes	Yes	Yes	N/A	None
1.2.2 ALB	Yes	Yes	Yes	N/A	None
1.2.3 SKJ	Yes	Yes	N/A	N/A	None
1.2.3 ALB	Yes	Yes	N/A	N/A	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
1.2.4 SKJ	Yes	Yes	N/A	N/A	None
1.2.4 ALB	Yes	Yes	N/A	N/A	None
2.1.1	Yes	Yes	N/A	N/A	None
2.1.2	Yes	Yes	N/A	N/A	None
2.1.3	Yes	Yes	N/A	N/A	None
2.2.1	Yes	Yes	N/A	N/A	None
2.2.2	Yes	Yes	N/A	N/A	None
2.2.3	Yes	Yes	N/A	N/A	None
2.3.1	Yes	Yes	N/A	N/A	None
2.3.2	Yes	Yes	N/A	N/A	None
2.3.3	Yes	Yes	N/A	N/A	None
2.4.1	Yes	No	N/A	It would be good to see an explicit statement that this fishery does not use Fish Aggregating	Section 3.2 includes the statement: "The permits for fishing in (e.g.) FSM waters (see translated document no.3) prohibit fishing

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
				Devices (FADs) or other form of habitat modification.	within the 12mile Territorial Seas, within one nautical mile of the edge of submerged reefs, within two nautical mile of any Fish Aggregating Device (FAD) , or in any way that might disrupt local fishing." While FADs are not used, it is noted that FAD usage is in principle more relevant at Pls 2.1, 2.2, and 2.3 than at PI 2.4.
2.4.2	Yes	Yes	N/A	N/A	None
2.4.3	Yes	Yes	N/A	N/A	None
2.5.1	No	Yes	N/A	We note that the PNA SKJ assessment scores this at 80 with essentially the same key sources e.g. Sibert et al (2006). No new evidence is presented to justify an increase in score to 100, although this higher score may reflect the smaller size of the SKJ and ALB UoC's. We suggest that further consideration is given to harmonising these scores.	The PNA purse seine fishery uses different gear and catches much greater volumes over a much wider geographic area. No harmonisation is required at this PI which relates solely to the fishery under certification.
2.5.2	Yes	Yes	N/A	N/A	None
2.5.3	Yes	Yes	N/A	N/A	None
3.1.1	Yes	Yes	N/A	N/A	None

Performance Indicator	Has all the relevant information available been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.	Certification Body Response
3.1.2	Yes	Yes	N/A	N/A	
3.1.3	Yes	Yes	N/A	N/A	While long-term objectives consistent with the precautionary approach are explicit within management policy, it is difficult to agree that the SG100 requirements are fully met in practice.. A partial score of 90 has been given and the text revised as suggested by PR 1
3.1.4	Yes	No	N/A	To achieve SG100a, the management system must explicitly consider incentives “in a regular review of management policy or procedures” to ensure they do not contribute to unsustainable fishing practices. Further evidence of this “regular review” is required to justify the 100 score, especially at national level.	Agree that whilst management policy and procedures are reviewed at international and national levels there is no evidence that these reviews explicitly consider incentives. The score has been changed to 90 and the text has been revised
3.2.1	Yes	Yes	N/A	N/A	None
3.2.2	Yes	Yes	N/A	N/A	None
3.2.3	Yes	Yes	N/A	N/A	None
3.2.4	Yes	Yes	N/A	N/A	None
3.2.5	Yes	Yes	N/A	N/A	None

Any Other Comments

Comments	Certification Body Response
None	

10 APPENDIX 3. STAKEHOLDER SUBMISSIONS

10.1 Letter from WWF following meeting (See Stakeholder Meetings):



for a living planet[®]

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July 28th, 2015

Interek Certification Japan Ltd.

Nihonbashi-N Bldg.,
1-4-2 Nihonbashi Horidome-cho
Chuo-ku, Tokyo 103-0012 Japan

Subject: Letter on Fishery Assessment to Meiho Gyogyo Japanese Skipjack and Albacore Pole and Line

Dear Messrs Interek Certification Japan Ltd.

Generally, as a cofounder of the MSC and a prominent NGO engaged in tuna conservation work, WWF maintains a vested interest in ensuring the integrity and credibility of the MSC process. Specifically, WWF has a discrete interest in ensuring the sustainability of the North Pacific albacore and Skipjack fishery through market based mechanisms as well as regulatory measures. WWF acknowledges the North Pacific Albacore fishery and Skipjack fishery represent those of the most important fisheries with respect to the economic well-being of the Northern Pacific Ocean and the Western and Central Pacific Ocean region as well as a principal fishery for ensuring ecological sustainability in the region as one of the largest and most widespread pole and line fisheries. Furthermore, WWF has regularly engaged in the MSC process on several other albacore fisheries in the region.

WWF considers that the certification of this fishery without adequately applying the requirements set out by MSC will result in a negative consequence for the management and conservation of tuna in the Pacific Ocean.

To be specific, currently, WWF has strong concerns in evaluating the harvest strategy under PI 1.2.1. The harvest strategy for both North Pacific Albacore and Skipjack have not been formally tested and, as such, there is no objective way to determine its effectiveness. WWF noted the North Pacific Albacore and Skipjack stock do not have a target reference point that can be used to gauge whether the strategy is achieving objectives.

WWF believes that appropriately following the procedure laid down by MSC on scoring, stakeholder consultation and condition setting would have resulted in enhancing sustainable fishery ensuring ecological sustainability as well as economic well-being in the region.

Sincerely,

Aiko Yamauchi

山内 愛子

10.2 WWF Submission to Pilot Harmonisation Meeting



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www.panda.org/smartfishing

Email to:
MRAG Americas
SAI Global
SCS Global
Acoura
MEP

21 March 2016

RE: Pilot Process for Harmonisation of Pacific Tunas

Dear CAB,

Thank you for inviting WWF to participate in the upcoming MSC pilot process for harmonisation of Principle 1 scores for Western and Central Pacific tuna stocks.

WWF is committed to improving the way that Regional Fisheries Management Organizations (RFMOs) address sustainability issues in tuna fisheries. We view credible ecolabelling schemes as powerful tools for effecting such change. However, WWF believes that this pilot process is not consistent with the FAO Guidelines for the Ecolabelling of Fish¹. WWF does not recognize the current pilot harmonisation process as valid for ensuring that tuna fisheries will attain or maintain certification against the MSC standard.

WWF takes this position for the following reasons, among others:

- 1) The proposed exercise is nominally a "pilot process" (i.e. for experimental purposes) and the MSC Board explicitly approved this initiative only as a "limited trial over 2016-2017." Therefore, it does not carry the weight of a *bona fide* assessment process within the MSC certification scheme, with sufficient review and stakeholder consultation, and the results should not be applied as such;
- 2) An independent facilitator will be appointed (with no specification given to the process of this appointment) to oversee a harmonized scoring processes and will ultimately be empowered to provide "a decision that CABs must accept." However, this will undermine the authority of the CABs in making certification decisions as defined in ISO 17065 (clause 7.6.1), and more generally it could serve to erode stakeholder confidence in the objectivity and impartiality of related fishery assessments;

- 3) MSC as the standard setter has become so directly involved in the processes revolving around the certification of one industry sector (MSC is described in the pilot process document as observer, facilitator, and covering costs of expert participation). This could be perceived as unmitigated

¹ Clauses 2.4, 46, 54-56, 63, 111 and various others

conflict of interest, which would undermine MSC's consistency with ISEAL Credibility Principle 6: Impartiality:

- 4) We persist in asserting that assessment teams should assess the existence of harvest control rules (HCRs) in a fishery based on *prima facie* evidence according to the requirements already established in FCR2.0 (Outlined by WWF CAB Advisory 1)- not by referencing the MSC's "interpretation" (16 Dec 2015), because this recent annotation to the MSC Standard was not done in accordance with ISEAL requirements (e.g. see ISEAL Standard Setting Code).

WWF recognizes that the MSC is eager to see more consistent scoring of Principle 1 for tuna RFMOs. However, we believe that, in the first instance, an assessment team's job is to assign accurate scores. Much like the difference between accuracy and precision, we would argue that it is more important to reach the *correct* conclusion than it is to reach the *same* conclusion as everyone else did and every time.

We draw your attention to the relevant Independent Adjudication decision against Acoura Marine:
"Ultimately, I cannot accept that the CR's goal of ensuring consistency in outcomes should trump proper application of the CR's substantive scoring requirements. That overlapping fisheries subject to harmonization may have been certified based upon a prior CAB's scoring of PI 1.2.2 cannot automatically make it right for the scoring of future fisheries. Otherwise, harmonization becomes a rationale for perpetuating error. Consistency is one thing where matters of technical judgment are at issue but quite another where what is at stake is misapplication of scoring requirements as a matter of law, and the notion that, because a CAB may have proceeded in error in the past, the error must be carried forward into the future would scarcely be a very uplifting mantra for the MSC. While the fishery client and the Foundation suggest that it is "unfair" effectively to call into question certifications previously made for other fisheries, I see no alternative, in order to maintain the integrity of the assessment process, to setting aside a scoring determination that I find to be based upon an incorrect application of the MSC's scoring requirements."

Based on Principle 1 scoring and rationale provided by various CABs to date, which have been recognized by many including MSC as incorrect but accepted application of the MSC standard, we are incredibly concerned that the proposed harmonisation process will result in scoring decisions for tuna fisheries that are based on continued misapplication of the MSC requirements. This will consequently lower the sustainability bar for tuna fisheries and their management systems and effectively lower the integrity and credibility of the MSC. Our concerns are only heightened by the proposed removal of key aspects of stakeholder engagement in any harmonized scoring decisions.

We hope your assessment team gives primacy to accuracy over precedent when reviewing the objective evidence for the effective management of tuna stocks. We hope you will set aside scoring determinations that are based upon an incorrect application of the MSC's scoring requirements. And going forward, we will encourage MSC to use their pilot experiments as a learning tool to more clearly define and elaborate thresholds in their normative documents (e.g. ISO 17007) so that the scheme will yield greater precision.

In addition to our concerns about the interpretation and application of the standard, we feel that the procedure laid out for the harmonization process is very unclear. In particular, it is very unclear to us how decisions will be made in the face of an anticipated lack of consensus both within the expert groups and with stakeholders. Especially with the appointment of an independent expert to potentially provide binding arbitration, and only a 15-minute opportunity each for stakeholders to voice their concerns, and no opportunities to provide input on peer reviewers, meeting attendees, facilitation, and decision-making, we do not see any assurance that stakeholder views will truly be considered in accordance with the ISEAL code.

Notwithstanding our concerns presented above, we do look forward to our continued engagement with your team in the 'normal' steps of MSC fishery assessments such as commenting on the appointment of expert

team members, participating in site visits, reviewing public comment draft reports, reviewing final assessment reports, and attending surveillance audits. To assist CABs in scoring Principle 1 during 'normal' assessments we have developed WWF CAB Advisory 1 and WWF CAB Advisory 1 Background (attached).

Should your team choose to incorporate the results from the MSC pilot processes (or any other informal activities) within the 'normal' assessment framework, we will endeavor to provide our review and comments at the relevant stage (e.g. PCDR) and where appropriate and relevant voice our objection to those conclusions (e.g. Final Report), as provided for in the existing and credible MSC assessment framework.

Regards,



Alfred Schumm
Leader
WWF Smart Fishing Initiative

On behalf of the Tuna Programme Manager, Alfred "Bubba" Cook, WWF Western and Central Pacific (WCP), and the WWF Western and Central Pacific (WCP) Tuna Working Group representing:

TRAFFIC
WWF Australia
WWF China
WWF Coral Triangle
WWF European Programme Office
WWF Indonesia
WWF Japan
WWF Korea
WWF New Zealand
WWF Pacific Programme Office
WWF Philippines
WWF Solomon Islands
WWF US

References

FAO Guidelines for the ecolabelling of fish and fishery products from marine capture fisheries, revision 1, 2009

ISEAL Code of Good Practice: Setting Social and Environmental Standards v5.0. 20 p.

ISEAL Credibility Principles. June 2013, Version 1.0, 18 p.

ISO 17007 Conformity assessment – Guidance for drafting normative documents suitable for use in conformity assessments. First Ed. 2009-09-15.

ISO/IEC 17065 Conformity assessment – Requirements for bodies certifying products, processes, and services. First Ed 2012-09-15, 34 p.

MSC CAB Update - Scheme Document Feedback Form, Scoring Harvest Control Rules, Fisheries Updates, 2014

MSC Independent Adjudicator Final Remand: In the matter of objections to the final report and determination on the proposed certification of the Echebatar Indian ocean purse seine skipjack, yellowfin and bigeye tuna fishery under the MSC principles and criteria for sustainable fishing 2015.

MSC Interpretation on Harvest Control Rules (HCRs) Version: Final, as distributed to CABs, 16 December 2015, 3 p.

MSC (2016) Pilot processes for harmonization. Marine Stewardship Council, 18 January 2016, 18 p.

WWF CAB Advisory 1, 2015 (attached)

WWF CAB Advisory 1 Background, 2015 (attached)

10.3 CAB response (agreed by all CABS):

CAB response to WWF Harmonization Comments

After the CABS received the WWF harmonization comments, we jointly prepared the response below. As a group, we compete at the business level, but cooperate and collaborate on issues of common interest that do not have a competitive aspect. On that basis, we offer these thoughts to WWF on the engagement of WWF in the MSC process. The CABS have long appreciated the engagement of WWF in the MSC process, which, while it has always been robust, has also always been constructive. We are, however, starting to sense a shift in the tone of some WWF interactions with the MSC process in a direction that we find less constructive. As those at the sharp end of the process, we would be the first to admit that the MSC process is not perfect. We strongly believe, however, that it is the best game in town as far as driving change on the water. We recognize that a few assessments have contained errors in the past, and this harmonization process (among other things) is part of MSC's ongoing effort to improve. We, the CABS, believe that the shift in the relationship between WWF and those involved in MSC has the potential to be detrimental to all parties – and more importantly to the achievement of our joint objectives around more sustainable and better managed fisheries. We would be open to any discussions that might help to continue a positive working relationship, and if you have suggestions as to what form that should take, we would like to hear from you.

From: WWF Advisory 001: Background How the MSC Fisheries Standard Establishes Essential Elements of a Harvest Control Rule

WWF

It should further be noted that at this stage we base our clarifications exclusively on text from valid MSC scheme documents. We have not attempted to incorporate the myriad of informal communications from MSC relating to HCRs, nor the varied interpretations arising from numerous fisheries experts.

CAB response

The CABS contend that the guidance and interpretations are an integral part of the MSC process. While the CR take precedent over the guidance and interpretations, the CR cannot be used in isolation. The guidance and interpretations must be used unless the CAB has a good justification for not doing so. Therefore, the CR, guidance, and interpretations work together to form the basis of the CAB scoring. Because the MSC is an 'expert' system, differences in interpretation can and do happen, requiring guidance and interpretations.

WWF

The MSC definition is 'normative' and it is altogether unambiguous in stating that an HCR must consist of rules which have been pre-agreed. In apparent contradiction, MSC guidance on p.411 suggests that HCRs should "...achieve a 60 score in cases where they can be shown to have been applied in some way in the past, but have not been explicitly defined or agreed." It stretches credulity to suggest that an HCR which is neither agreed nor defined can still be considered a 'rule' in any common sense of the word. However, since requirement trumps guidance, the answer is unambiguous. WWF recognizes the validity of the MSC definition and not the latter instance of qualifying guidance, which also fundamentally diverges from the common understanding of HCRs as it relates to fisheries management in general.

CAB response

From MSC Interpretations Log (<http://msc-info.accreditation-services.com/questions/what-are-the-msc-requirements-on-harvest-control-rules-hcrs-including-generally-understood-and-available-multiple-questions/>)

"The Certification Requirements Table SA5 are explicit and definitive in this regard. The definition of HCRs currently given in the MSC vocabulary applies at the SG80 level, not at the SG60 level."

Rather, it stretches credulity that WWF does not accept the explicit descriptions of the SG60, 80, and 100 scoring issues and the guidance for generally understood.

WWF

The MSC definition clearly states that an HCR must consist of well-defined rules. In contrast, MSC guidance on p.411 (as cited above) implies that HCRs need not be explicitly defined. Similar to above, WWF concludes that the MSC definition is valid and takes priority over any auxiliary guidance.

CAB Response

This is an unfortunate definition, but cannot realistically over-ride the language of the scoring guideposts in Table SA2.5.

WWF

Or to put it in more technical terms: given a set of clear audit criteria, any suitably trained auditor will evaluate the objective evidence and make an unambiguous decision as to whether or not an auditee complies with the standard. Given the same evidence, every auditor should reach the same conclusion.

CAB Response

In the case of MSC fishery assessments, suitably trained means sufficient knowledge and experience to evaluate fisheries against the CR. The requirements for MSC assessors, in this case P1, address the expertise needed to conduct the assessments. The whole premise of the MSC assessments requires expert judgement and refutes the contention that a simple set of audit criteria can reach the correct conclusion. For this reason, CABs hire well-trained assessors with the education, experience, and training to conduct MSC assessments.

From CAB Advisory: 001: How the MSC Fisheries Standard Establishes Essential Elements of a Harvest Control Rule

Step 1

Establish whether or not HCRs exist for the fishery under assessment. Any presumed HCR must meet MSC's definition which is:

"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." (MSC-MSCI Vocabulary, V1, 1st October 2014).

Are actions or rules triggered when indicators change in relation to RPs?
Are those actions or rules 'well-defined'?

CAB Response

The requirements of the SG for scoring issues of PI 1.2.2 take precedence over this definition, as the PIs are the core of the MSC assessment process. With the combination of guidance and

interpretation logs, the intent is very clear. Therefore, Step 1 is too limited, as it must allow for reaching the SG60 level.

GSA 2.4 issue a provides an alternate view of HCR: "In data-poor fisheries which are managed without such input/output controls, management may comprise only technical measures such as size limits, gear restrictions, closed seasons and closed areas. In these cases, the specific terms of the technical measures are usually set and fixed for a relatively long period of time (several years), based on occasional strategic stock assessments, that are shown to deliver defined target and/or limit reference points. Such an arrangement may be regarded as equivalent to a dynamic HCR operating over a longer time scale in cases where some indicators are monitored to confirm that the HCRs are delivering the intended targets for the stock." There is no reason that these mechanistic measures cannot be applied to fisheries not data poor, as a way to simplify the management of the fisheries.

Step 2

Are there well defined HCRs? As established in Step 1

CAB Response

Same as for Step 1.

Step 3

Proceed to assess the fishery against scoring issue (a):

CAB Response

The flow chart offers a good conceptual framework for making decisions, except that it does not accommodate the issues identified in the CAB Response to Step 1.

Step 4

Proceed to assess the fishery against scoring issue (c):

CAB Response

The flow chart offers a good conceptual framework for making decisions, except that it does not accommodate the issues identified in the CAB Response to Step 1.

From WWF Letter to CABs

WWF does not recognize the current pilot harmonisation process as valid for ensuring that tuna fisheries will attain or maintain certification against the MSC standard.

CAB response

CABs concur with MSC letter from Jim Humphreys (11 March 2016). The harmonization process has our support.

However, we believe that, in the first instance, an assessment team's job is to assign accurate scores. Much like the difference between accuracy and precision, we would argue that it is more important to reach the *correct* conclusion than it is to reach the *same* conclusion as everyone else did and every time.

CAB Response

The CABs also intend to reach the correct conclusion. That is the point of the harmonization. Furthermore, as we are sure you are aware, the MSC have set out clear and exhaustive harmonization requirements to ensure assessments by different auditors achieve the same

outcome. However, we intend to consider and apply as appropriate the guidance and interpretation to supplement the CR.

Based on Principle 1 scoring and rationale provided by various CABs to date, which have been recognized by many including MSC as incorrect but accepted application of the MSC standard, we are incredibly concerned that the proposed harmonisation process will result in scoring decisions for tuna fisheries that are based on continued misapplication of the MSC requirements. This will consequently lower the sustainability bar for tuna fisheries and their management systems and effectively lower the integrity and credibility of the MSC.

CAB Response

The CABs intend to use the language of the CR (either V1.3 or V2.0, depending on circumstances), the guidance to CR, and the interpretation log to reach a conclusion with regard to all performance indicators.

We stress that it is not within the remit of the CABs to question the terms set by the standard setter (MSC) but that we simply aim to apply the MSC Fisheries Certification Requirements as rigorously and consistently as possible. Our work comes under the repeated scrutiny of not only stakeholders such as yourselves, but also peer reviewers, MSC Technical Oversight, and ASI. We invite WWF to actively participate in the upcoming pilot harmonization meeting and look forward to a constructive cooperation.

10.4 Stakeholder Meetings

Below are the meeting records, as agreed (via email and signatures) by the various stakeholders:

MSC Fishery Assessment Stakeholder Interview Record FAJ

Assessment Team	Names
Lead Assessor	Jo Akroyd
P1 Team Member	Kevin Stokes
P2 Team Member	Kevin Stokes
P3 Team Member	Jo Akroyd
Translator (Intertek Japan)	Kohei Nagano

Meeting Location	Japan Fisheries Agency, Tokyo	
Date	22 nd June 2015	
Stakeholders Name	Affiliation	
Shuichi Hirahara	Manager, Japan Fisheries Co-op Association	
Shingo Fukui	Assistant Director, Fisheries Management Division, FAJ	
Takeru Iida	Section Chief, Fisheries Management Division, FAJ	
Kenji Matsunaga	President Meih Gyogyo	
Andreas Hermawan	Translator, Rikihou Japan on the Meih Gyogyo end	

Comments:

The Assistant Director of the Fisheries Management Division and the Section Chief for Large Scale Longline/Pole and Line vessels from the Fisheries Management Division provided a written document (in Japanese) in response to questions sent by Acoura Marine prior to the site visit.

The Managers also provided additional information as below

2. Status

What is the nature of the organisations interest in the fishery?

Government Fisheries Management Agency

3. Purpose of the Meeting

Jo Akroyd (Acoura Marine Lead Auditor) welcomed and thanked all participants, then outlined the purpose of the meeting while also explaining the MSC purpose and processes and how this meeting fit within those processes.

4. Acoura Marine Assessment Team Questions

Assessment team questions for stakeholders

a. Legal and/or Customary Framework

- List of local, national or international laws, acts, policies and regulations that have an impact on these fisheries and its management
- Is there any particular group (customary) that depends on these fisheries for food and/or livelihood?
- Is there an effective mechanism for the resolution of legal disputes?

b. Consultation, Roles & Responsibilities

- List of organisations (statutory, commercial, NGO or other) involved in the fishery and their roles
- Details of the consultation process used for the management of these fisheries
- Is there evidence of stakeholder consultation/participation?
- Is there evidence of feedback to stakeholders and consideration of their views?

c. Long-term Objectives for fisheries

- Where are these stated (e.g. fisheries basic Act) and what do they say? Are they considered to be precautionary?

d. Fishery-specific Objectives

- Are objectives specific to skipjack and albacore specifically identified e.g. in a Fisheries Management Plan?
- Are there policy documents specifically related to these fisheries?
- What are the regulations specific for these fisheries?

e. Decision-making Processes

- How are decisions made to achieve the objectives of the fishery, how do they respond to issues raised by research and monitoring?
 - Is there formal reporting of fishery performance and management actions?
- Information on availability of information to stakeholders

f. Compliance & Enforcement

- Details of types and frequency of inspections at sea and portside
- Observer reports
- Details of any finding of non-compliance with outcome (e.g. prosecutions) and actions taken to rectify
- Education programs

g. Research Plan

-Is there a research plan that includes specific research for the fisheries under assessment?

-Are Results of research disseminated to interested parties.?

h. Monitoring and Management Performance Evaluation

How is this carried out/by who

Corrective actions

Annual reports

Peer reviewed reports on aspects of the management system

5. Stakeholder Key Issues

A written document was provided (in Japanese) in response to the questions above

Further discussion was held as below

a. Legal

The Fisheries Law (enacted in 1949) requires those fishers who plan to operate the designated fisheries, including P&L skipjack fisheries, to be licensed by the Minister of MAFF.

The number of vessels by tonnage and by fishing area is updated every 5 years and publicized in the Official Gazette.

The current number of P&L vessels licensed to operate fishing is 59 (offshore) and 46 (in far seas—worldwide) is 59 respectively, which was publicized in 2012.

If fishing in WCP they must get WCPFC- registered and if fishing in other EEZs must obtain permission from relevant country and abide by all the legislative requirements

There are detailed regulations that prescribe the permission and control of the licensed fisheries including P&L skipjack fisheries stipulated on Article 52 of the Fisheries Law, which is Ministerial Ordinance on the Permission, Regulation, Etc. of Designated Fisheries. The detailed regulations, for example, include VMS being mandatory and the reporting requirements (logbooks)

b. Consultation

The government consults regularly with the Japan Tuna Fisheries Cooperative Association, which communicates with the individual members, and also communicates directly with each of them.

The government also has regular meetings with the research organization.

The government also seeks the public's views and seeks stakeholder involvement when amending laws and acts. Minutes of a meeting were provided as evidence. The minutes are open up to the public.

c. Long term objectives

These are set out in the Basic Fisheries Act

d. Fishery Specific Objectives

There are no specific objectives for the P&L SKJ or ALB fisheries as provided by government.

Although there are no specific objectives for the P&L SKJ or ALB fisheries as provided by government, the government puts the ceiling on the number of licensed P&L vessels while restricting the relevant fisheries with Ministerial Ordinance on the Permission, Regulation, Etc. of Designated Fisheries.

e. Decision Making process

The decision-making process starts with information from the WCPFC meetings. The Japanese government attends these meetings regularly. When asked to make a suggestion on fisheries and fish species control rules during the relevant meetings, then the government makes remarks to make such rules appropriate ones while taking into

consideration views from Japan Tuna Fisheries Cooperative Association, which communicates with individual membership fisher.

Once conservation and management measures get adopted through discussion at international meetings, the FAJ posts on its website planned amendments to relevant laws and regulations and seeks public/stakeholder input on (via internet communication) to make the internationally adopted measures reflected on the Japanese laws and regulations concerned. Such input is provided to the Fisheries Policy Council. This Council is made up of academics, fisheries Cooperative members and "influential and intellectuals." The council will make a decision and inform the Minister of MAFF of their decision made. This is process for the government to amend laws and regulations.

f. Compliance

Any new measures as required by the WCPFC are communicated to relevant Japanese companies by FAJ. Any infringements are analysed by FAJ and punishments are available and applicable e.g. loss of license and anchorage. No Pole and Line vessels have infringed.

g. Research Plan

FAJ are involved in research planning which is entrusted to the Fisheries Research agencies. These agencies are funded by government and research information is widely disseminated

h. Monitoring and Evaluation

FAJ's performance is regularly monitored and evaluated by the department of Internal Affairs and Communications

6. Closing

Acoura Marine Lead Assessor summarized the key points, explained the process and timeline for the remainder of the assessment and thanked the participants

7. Confirmation of record of meeting:

Acoura Marine Lead Assessor Signature:



Stakeholder Signature:

福井 真吾

MSC Fishery Assessment Stakeholder Interview Record: NRIFSF

Assessment Team	Names
Lead Assessor	Jo Akroyd
P1 Team Member	Kevin Stokes
P2 Team Member	Kevin Stokes
P3 Team Member	Jo Akroyd
Translator (Intertek Japan)	Kohei Nagano

Meeting Location	National Research Institute of Far Seas Fisheries (NRIFSF)	
Date	24 th June 2015	
Stakeholders Name	Affiliation	
Hiroshi Nishida	Head, Tuna and Skipjack division	
Hidetada Kiyofuji	Snr Researcher, Tuna and skipjack section	

1. Comments:

Introductions were made. A record of attendance was circulated.

Jo Akroyd (Acoura Marine Lead Auditor) welcomed and thanked all participants, then outlined the purpose of the meeting while also explaining the MSC purpose and processes and how this meeting fit within those processes.

2. Status

Government-related Research Institute

3. Stakeholder Key Issues and Acoura Marine response

Hiroshi Nishida explained the structure of the FRA, NRIFSF, and Tuna and Skipjack section. The section covers tunas and skipjack but not northern and southern Bluefin tunas.

Kevin Stokes introduced the P1 issues for SKJ and ALB and explained harmonisation. He asked NRIFS for any comments and opinions on information and assessment, reference points and control rules, and on status. All agreed that the status of SKJ and ALB is good and that the information is sufficient for good quality stock assessments by the ISC and SPC. It was acknowledged that reference point setting and control rule adoption is now more a political than scientific mater.

Kevin stokes introduced P2 scope and needs and asked specifically about scientific observers aboard P&L vessels (he had understood from the client that scientific observers were present regularly on the P&L fleet). Some discussion followed in which it was clarified that the P&L fleet is observed by compliance officers within the EEZ's being fished (and the Meiho Maru had been observed in FSM in February 2015). However, NRIFSF clarified that there have been no scientific observers on board P&L vessels and that there is therefore no data.

Kevin Stokes said that the company catch records showed only SKJ and ALB, YFT, BET, dolphinfish and amberjack and no other species. He asked NRIFSF if they thought any other

species, included protected species, might be caught from time to time. NRIFSF said that although there are overlaps with other species distributions, the fishing gear (size of barbless hooks) and targeting practices were such that the fishery is highly selective. NRIFSF was not aware of any other species of fish, sharks, seabirds, etc. being caught.

It was noted in discussion that no data and zero data are different and zero data is good evidence while having no data can be a problem. However, it was also noted that no data are collected because it is recognised any data collection would provide zeros (which is not cost effective and unlikely to be a priority compared to other activities).

A similar discussion was held on issues of habitat and ecosystem processes and function. All recognised that the P&L fishery generally, and especially for the two Meiho Gyogyo vessels, would have negligible impact. The fishery is widespread in space and time, uses only surface gear, and takes small volumes of SKJ and ALB. Kevin Stokes asked if NRIFSF was aware of any issues of lost gear and ghost fishing or of other ecosystem impacts; the answer was 'no data'.

NRIFSF agreed to send any references it might have related to PI2.4 and 2.5. a paper on predator and prey data was provided in Japanese.

Discussion then turned to research planning. Hiroshi Nishida explained the annual processes. The NRIFSF and the tuna and skipjack section have a budget provided through FRA. A meeting takes place annually (in person or electronically) in which FAJ, FRA, NRIFSF and other national and Prefectural research institutes coordinate and plan activities. Many of those activities are ongoing and the annual plan includes ongoing and beginning multi-year projects as well as shorter duration activities. The plan and meeting records are not public. During the site visit, the auditors were shown the Contract for NRIFSF services (between FAJ and FRA) and records of the planning meeting from 2012 (as an example). The documents were in Japanese but translation was made by Kohei Nagano; the auditors were satisfied that an effective research planning process was being followed, leading to a clear plan, expressed in annual documents. It was noted, however, that industry and other stakeholders were not involved.

Most of the work on skipjack and albacore is presented in the form of papers to RFMOs where the work is reviewed by the Scientific Committee and may feed in to stock assessments and various streams of advice. Some work also results in peer reviewed academic publications. Papers are also posted on the NRIFSF website (CHECK). It was noted that NRIFSF scientists are required to participate in the WCPFC Scientific Committee to present and discuss their work but their participation in Commission meetings is not mandatory, though some attend at times. Overall, there are clear routes to dissemination of work and results.

6. Closing

The Acoura Marine Lead Assessor summarized the key points and explained the assessment process and timeline.

The auditors invited the NRIFSF to send by e-mail any references or materials they consider useful/relevant.

7. Confirmation of record of meeting:

Acoura Marine Lead Assessor Signature:



Stakeholder Signature:

Hiroshi Nishida

MSC Fishery Assessment Stakeholder Interview Record Yaizu Fish Market

Assessment Team	Names
Lead Assessor	Jo Akroyd
P1 Team Member	Kevin Stokes
P2 Team Member	Kevin Stokes
P3 Team Member	Jo Akroyd
Translator (Intertek Japan)	Kohei Nagano

Meeting Location	Yaizu Fisheries Cooperative Association (a.k.a. Yaizu Fisheries Market)	
Date		
Stakeholders Name	Affiliation	
Shingo Suzuki	Director Yaizu Fish Market	
Yoshiyuki Kimpara	Deputy Director Yaizu Fish Market	

1. Comments:

Jo Akroyd (Acoura Marine Lead Auditor) welcomed and thanked all participants, then outlined the purpose of the meeting (information gathering) while also explaining the MSC purpose and processes. The client's fish must "go through" the Yaizu market prior to it being processed by the client group. Much of the discussion involved aspects of traceability. The meeting participants observed the operation including arrival of fish, grading of fish and release of fish to client. Documents and labelling was witnessed.

2. Status

Fisheries Cooperative Market

3. Stakeholder Key Issues

In 2014 there were 149 landings of skipjack into Yaizu Fisheries market which comprised 33,601 tonnes. There are 23 pole and line vessels (~ 57m length) that have voyages of 30-50 days and catch 100-400 tonnes of skipjack and albacore each trip.

The client has two vessels the Meihio Maru and the Toyokuni Maru (contracted from Toyokuni). They land their fish in either Yaizu Fisheries Market or Shiogama, Fisheries market. The markets are dedicated points of landing through which product must pass. Typically, fish would be auctioned through the market but the MSC-Toyokuni contract specifies the fish will be bought by MSC and its and the Meihio Maru catch is all taken by MG, by-passing the auction. The combined landing of the two vessels is ~ 3,500 tonnes/year. Both skipjack and albacore are targeted though it is clear from catch records that there is a high degree of separation and that SKJ is the primary target.

At all stages of landing, grading, storage and trucking there is clear documentation and labelling to ensure there is no mixing of fish with fish caught from any other vessel. There is a dedicate "line" for each individual vessel. The documentation includes name of vessel, date of landing, species and weight of fish and ownership.

6. Closing

Acoura Marine Lead Assessor summarized the key points and thanked the participants.

7. Confirmation of record of meeting:

Acoura Marine Lead Assessor Signature:



Stakeholder Signature:

S. S u z u k i

MSC Fishery Assessment Stakeholder Interview Record

Assessment Team	Names
Lead Assessor	Jo Akroyd
P1 Team Member	Kevin Stokes
P2 Team Member	Kevin Stokes
P3 Team Member	Jo Akroyd
Translator (Intertek Japan)	Kohei Nagano

Meeting Location	WWF Japan, Tokyo Offices	
Date	22 nd June 2015	
Stakeholders Name	Affiliation	
Aiki Yamauchi	WWF	
Makoto Yoshida	WWF	
Satoshi Maekawa	WWF	

1. Comments:

Prior to the meeting, WWF (Yamauchi) asked Acoura Marine if it was appropriate for the client (Meiho Gyogyo) to be present. Acoura Marine (Akroyd) said that the meeting was set up as a meeting for WWF and that WWF could choose for the meeting to be just between Acoura Marine and WWF or for the client to be present. WWF expressed the view that it was preferable to include the client as this could help with some of the fishery explanations. The meeting proceeded on that

Jo Akroyd (Acoura Marine Lead Auditor) welcomed and thanked all participants, then outlined the purpose of the meeting (information gathering) while also explaining the MSC purpose and processes and how this meeting fit within those processes. Items covered included the MSC Principles, scoring, use of Versions, and harmonisation

2. Status

WWF is an eNGO

3. Stakeholder Key Issues and Acoura Marine response

In response to a question from WWF, it was clarified that the stocks under consideration at P1 are Skipjack tuna in the WCPFC region and Northern Pacific Albacore, which is jointly assessed and managed through the WCPFC and IATTC. It was clarified that Southern Pacific albacore is not under consideration.

The fishery and Unit of Certification (UoC) was discussed. It was clarified by the client that the UoC consists of just two Pole and Line (P&L) vessels, one owned by Meiho Gyogyo and the other contracted to Meiho Gyogyo through its parent company. There are no plans for certificate sharing with other P&L vessels/companies. WWF expressed the view that Japanese MSC clients were always very small units and that it would like to see encouragement of UoC expansion and that this could also help to gain government support. The client was clear that at this time there are no intentions to expand the UoC.

Discussion took place on issues related to each of P1, P2, and P3.

Kevin Stokes (Acoura Marine Auditor) explained that for both Skipjack and NP Albacore, other

fisheries are already certified and in the process of certification. The MSC required that fisheries be harmonised. This means that much of the P1 scoring and justification will draw on existing certifications – the PNA non-associated Purse Seine fishery for skipjack in the WCPFC is the key for that species while the American and Canadian NP Albacore fishery certifications are relevant for that species. Issues to do with scoring at PI1.1.2 and especially P1.2.2 were noted and WWF and Acoura Marine had clear understanding of those issues and the wider concerns of WWF International, current objections processes, etc. WWF and Acoura Marine are also very clear as to progress towards reference point setting in the WCPFC and the Japanese position expressed in the Management Objectives and Commission meetings in late 2014. WWF expressed a view at this point, which was taken also to be general, that it was very positive and supportive of the certification of the client fisheries. This positive and supportive approach was noted and recognised.

WWF agreed to send written comments on P1 issues, including the Japanese position on the choice of reference points for skipjack. This was welcomed by Acoura Marine and the auditors asked if any written submission could be made this week. WWF said this should be possible. It was noted any submission would be attached to this meeting record and would form part of the final PCR documents. WWF (Yamauchi) noted that for Pacific tuna, 'Bubba' Cook, based in New Zealand, had overall WWF oversight and that it would be appropriate to pass any comments through him.

For P2 needs, it was explained that the Risk Based framework (RBF) was not going to be used, but that the default assessment tree would be followed. The lack of information was recognised by WWF and Acoura Marine. Each of P2.1, 2.2, 2.3, 2.4, and 2.5 were discussed. Acoura Marine asked if WWF had comments on any of these or information that could be relevant. Discussion was positive and no concerns were expressed with a recognition that the fishing method (P&L) is a low impact one and highly selective. WWF did not suggest there were any concerns with the identified retained species or bait fishery. No indication of ETP species was made. WWF agreed to send suggested references for additional, relevant materials. (Note that following the meeting, Satoshi Maekawa e-mailed the Acoura Marine auditors suggesting two recent reports and one older Japanese one. The e-mail is attached below.)

Jo Akroyd (Acoura Marine Lead Auditor) explained P3 needs and focus and specifically asked WWF about opportunities for consultation. Aiko Yamauchi explained the opportunities for WWF generally to consult on fisheries in Japan and said they were greater for tuna than elsewhere. She explained the WWF involvement in the Management Objectives and Commission processes as part of the Japanese delegation. She said the dialogue opportunities with the Japanese Fisheries Agency are good (CHECK) but noted dialogue with industry was typically limited to discussions around certification (CHECK). Despite comments above, Dr Yamauchi also noted that opportunities to discuss skipjack-related issues were limited somewhat because the Japanese government was more focused on bigeye tuna issues at the WCPFC.

With respect to Fishery Management Plans and research Plans, Dr Yamauchi noted WWF had informal involvement and had had meetings with the FAJ but generally had little influence. As above, she noted this was somewhat better for tuna than for other fisheries/species. She noted that no records of meetings were kept.

4. Closing

Acoura Marine Lead Assessor summarized the key points and explained the process and timeline. Akroyd is to send WWF the proposed revised timeline

The auditors invited WWF to send written submissions on any of the matters discussed and were grateful for the positive and constructive attitude expressed.

7. Confirmation of record of meeting:

Acoura Marine Lead Assessor Signature:



**Stakeholder Signature:
(Agreement via email)**

11 APPENDIX 4. SURVEILLANCE FREQUENCY

1. The report shall include a rationale for determining the surveillance score.
2. The report shall include a completed fishery surveillance plan table using the results from assessments described in CR 27.22.1

Table 1: Surveillance Score for the Fishery

Criteria	Surveillance Score	Japanese Pole and Line Skipjack and Albacore Fishery
1. Default Assessment Tree		
Yes	0	
No	2	2
2. Number of Conditions		
Zero Conditions	0	
1-5 Conditions	1	1
>5 Conditions	2	
3. Principle Level Scores		
≥ 85	0	
<85	2	2
4. Conditions on outcome PIs?		
Yes	2	2
No	0	

Table 2: MSC Fishery Surveillance levels

Surveillance score	Surveillance level	Years after certification or re-certification				
		Year 1	Year 2	Year 3	Year 4	
2 or more	Normal surveillance	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & recertification visit	
1	Remote surveillance	Option 1	Off-site surveillance audit	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit & recertification visit
		Option 2	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit	
0	Reduced surveillance	Review new information	On-site surveillance audit	Review new information	On-site surveillance audit & recertification visit	

Table 3: Fishery Surveillance Plan

Score from CR Table C3	Surveillance Category	Year 1	Year 2	Year 3	Year 4
7	Normal Surveillance	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & re-certification site visit

12 APPENDIX 5. CLIENT AGREEMENT

(REQUIRED FOR PCR)

The report shall include confirmation from the CAB that the Client has accepted the PCR. This may be a statement from the CAB, or a signature or statement from the client.

(Reference: CR: 27.19.2)

13 APPENDIX 6 OBJECTIONS PROCESS

(REQUIRED FOR THE PCR IN ASSESSMENTS WHERE AN OBJECTION WAS RAISED AND ACCEPTED BY AN INDEPENDENT ADJUDICATOR)

The report shall include all written decisions arising from an objection.

(Reference: CR 27.19.1)