

Lloyd's Register 6 Redheughs Rigg South Gyle Edinburgh, EH12 9DQ United Kingdom

T +44 (0)13 1335 6662 E fisheries-ca@lr.org www.lr.org

Japanese Pole and Line skipjack and albacore tuna Fishery



Public Certification Report

Conformity Assessment Body (CAB)	Lloyd's Register
Assessment team	Johanna Pierre and Kevin McLoughlin
Fishery client	Meiho Gyogyo Co., Ltd
Assessment Type	V2.0 Re-scoring of P1 only



Assessment Data Sheet



CAB details

Address

Phone/Fax Email Contact name(s)

Client details

Address

Email Contact name(s)

Assessment Team

Team Leader P1/2 Assessor P2/3 Assessor

Lloyd's Register

6 Redheughs Rigg Edinburgh EH12 9DQ 0131 335 6662 Fisheries-ca@lr.org

Meiho Gyogyo Co., Ltd

3-14-6 Shinhama-cho Shiogama-shi Miyagi 985-0001 Japan matunaga.k@tokai.or.jp Ken Goto

Johanna Pierre Kevin McLoughlin Johanna Pierre



1	Contents				
	1.1	List of Tables	4		
	1.2	List of Figures	4		
2	Glossa	ary	5		
3	Execu	tive summary	6		
4	Repor	t details			
÷.,	4 1	Authorship and peer review details	7		
	4.2	Peer Reviewers			
	4.3	RBF Training	7		
	4.4	Version details	8		
5	Unit(s)	of Assessment and Certification and results overview	9		
Ŭ	5 1	Unit(s) of Assessment and Unit(s) of Certification	9		
	511	Unit(s) of Assessment	9		
	5.1.2	Unit(s) of Certification			
	5.1.3	Scope of assessment in relation to enhanced or introduced fisheries			
	5.2	Assessment results overview			
	5.2.1	Determination, formal conclusion and agreement			
	5.2.2	Principle level scores	11		
	5.2.3	Summary of conditions	11		
	5.2.4	Recommendations	12		
6	Evalua	ation results	13		
	6.1	Eliqibility date	13		
	6.2	Traceability within the fishery	13		
7	Scorin	q	14		
	7.1	Summary of Performance Indicator level scores			
	7.2	Principle 1			
	7.2.1	Principle 1 background			
	3.2.3	Skipjack	17		
	3.2.4	Albacore	25		
	7.2.2	Catch profiles	31		
	7.2.3	Total Allowable Catch (TAC) and catch data	32		
	7.2.4	Principle 1 Performance Indicator scores and rationales	34		
	UoA 1 S	Skipjack Tuna	34		
	UoA 2 I	North Pacific Albacore	47		
8	Appen	dices	59		
	8.1	Assessment information	61		
	8.1.1	Previous assessments	61		
	8.1.2	Small-scale fisheries	61		
	8.2	Evaluation processes and techniques	63		
	8.2.1	Site visits	63		
	8.2.2	Stakeholder participation	63		
	8.2.3	Evaluation techniques	63		



LR Public Certification Report Japanese Pole and Line skipjack and albacore tuna Fishery

8.3	Peer Review reports	66
8.4	Stakeholder input	66
8.5	Conditions – delete if not applicable	67
8.6	Client Action Plan	83
8.7	Surveillance	84
8.8	Risk-Based Framework outputs	85



1.1 List of Tables

Table 1:	Fisheries program documents versions.	Error! Bookmark not defined.
Table 2:	Unit(s) of Assessment (UoA)	
Table 3:	Unit(s) of Certification (UoC)	
Table 4:	Principle level scores	
Table 5:	Summary of conditions	
Table 6:	Traceability within the fishery	Error! Bookmark not defined.
Table 7:	Total Allowable Catch (TAC) and catch data	
Table 8:	Summary of previous assessment conditions	Error! Bookmark not defined.
Table 9:	Small scale fisheries	61
Table 10:	Condition 1	Error! Bookmark not defined.
Table 11:	Fishery surveillance program	
Table 12:	Timing of surveillance audit	
Table 13:	Surveillance level rationale	
Table 14:	CA scoring template	Error! Bookmark not defined.
Table 15:	PSA productivity attributes and scores	Error! Bookmark not defined.
Table 16:	Species grouped by similar taxonomies (if FCP v2.1 Anne	x PF4.1.5 is used).Error! Bookmark not
defined.		
Table 17:	CSA rationale table for PI 2.4.1 Habitats	Error! Bookmark not defined.
Table 18:	SICA scoring template for PI 2.5.1 Ecosystem	Error! Bookmark not defined.
Table 19:	Overlapping fisheries	Error! Bookmark not defined.
Table 20:	Overlapping fisheries	Error! Bookmark not defined.
Table 21:	Scoring differences	Error! Bookmark not defined.
Table 22:	Rationale for scoring differences	Error! Bookmark not defined.
4.0	List of Element	

1.2 List of Figures

Figure 1:

Map of the Unit(s) of Assessment boundary Error! Bookmark not defined.



2 Glossary

View the MSC-MSCI Vocabulary. Insert an optional glossary or list of acronyms used. Note that any terms defined here shall not contradict terms used in the MSC-MSCI Vocabulary.



3 **Executive summary**

- This report is the Public Certification Report which provides details of the V2.01 upgrade MSC assessment process for the Japanese Pole and Line skipjack and albacore tuna fishery for Meiho Gyogyo Co., Ltd. The process began with publication of the announcement on 24th June 2019 and was concluded (to be determined at a later date).
- » Lloyd's Register confirm this fishery continues to meet the MSC requirements and hereafter is certified, subject to successful outcomes of annual surveillance audits.
- » The **Eligibility Date** for this assessment is 17th October 2016.

The assessment team for this fishery assessment comprised of Johanna Pierre who acted as team leader and primary Principle 2 & 3 specialist; and Kevin McLoughlin who was primarily responsible for evaluation of Principle 1 & 2.

Determination

» On completion of the V2.0 Upgrade Process, the assessment team propose that the fishery meets the V2.01 standard for Principle 1 and the fishery remains certified.

Conditions & Recommendations

- » As under V1.3, a number of criteria which contribute to the overall assessment score scored less than the unconditional pass mark, and therefore trigger a binding condition to be placed on the fishery, which must be addressed in a specified timeframe these conditions and timeframes have been harmonised across all certified overlapping fisheries. Full explanation of these conditions is provided in **Section 9.5** of the report, but in brief, the areas covered by these conditions are:
 - Skipjack PI 1.2.1 Harvest strategy
 - > Skipjack PI 1.2.2 Harvest Control Rules
 - Albacore PI 1.2.2 Harvest Strategy
- » In addition, the assessment team made a one recommendations. As these are not the result of a failure to meet the unconditional pass mark, they are non-binding; however, in the opinion of the assessment team, they would make a positive contribution to ongoing efforts to ensure the long term sustainability of the fishery. Details of these recommendations are provided in **Section 5.2.4** of this report.

For interested readers, the report also provides background to the target species and fishery covered by the assessment, supported by full details of the assessment team, a full list of references used and details of the stakeholder consultation process. For the background and scoring for Principle 2 and 3, readers should read the original PCR and following surveillance reports on the <u>Assessment Downloads page</u>. Lloyd's Register confirm that this fishery is within scope.



4 Report details

4.1 Authorship and peer review details

All team members listed below have completed all requisite training and signed all relevant forms for assessment team membership on this fishery.

Assessment team leader: Johanna Pierre

Primarily responsible for assessment under Principles 2 and 3:

Johanna Pierre has more than 15 years' experience working on commercial fishing, in marine and freshwater environments. Her work includes fisheries management, policy, regulation and monitoring. She also conducts sustainability assessments, audits and evaluations of fishery and environmental performance. Johanna has worked for government, academia, non-profit organisations and industry. She has a Ph.D. in environmental biology and ecology (University of Alberta, Canada), and a B.Sc.(Hons) (University of Canterbury, New Zealand) and completed post-doctoral studies at the University of Tokyo (Japan). Johanna has extensive experience living and working on fisheries and other fields of science in Asia and Australasia, including Japan, China, South Korea, Australia and New Zealand.

Johanna is a certified MSC fishery team member, Chain of Custody auditor, and member of the MSC Peer Review College. Johanna's experience covers MSC peer reviews and surveillance audits (P1, P2 and P3), fishery assessments (P2 and P3), and fishery pre-assessments (P1, P2, P3). Recent work includes longline, trawl and purse seine fisheries, both in fisheries under national jurisdiction and those managed by multilateral bodies (such as Regional Fisheries Management Organisations).

Since completing her post-doctoral work, Johanna has continued to grow her links with the science and fisheries sectors in Japan, including developing bilateral science policy, building research collaborations, facilitating visits of Japanese scientists to New Zealand, working alongside Japanese delegations to RFMOs, and auditing Japan's implementation of the fishery performance requirements set out by the Commission for the Conservation of Southern Bluefin Tuna. Johanna has passed MSC training and has no Conflict of Interest in relation to this fishery. Full CV available upon request.

Expert team member: Kevin McLoughlin

Primarily responsible for assessment under Principles 1 and 2

Kevin 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. Kevin was responsible for the production of annual status reports for Australian government-managed fisheries for a number of years. He 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. He was also a delegate at scientific meetings of the Commission for the Conservation of Southern Bluefin Tuna.

Kevin 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 Australia's Northern Prawn Fishery, Western Australia Exmouth Gulf and Shark Bay prawn trawl fisheries, the Parties to the Nauru Agreement WCPFC skipjack and yellowfin fishery, Fiji albacore and yellowfin longline fishery, New Zealand Skipjack Fishery, New Zealand Albacore Fishery, the Tri Marine Western and Central Pacific Skipjack and Yellowfin Tuna Fishery, and Australia's blue grenadier fishery.

Kevin has passed MSC training and has no Conflict of Interest in relation to this fishery. A full CV is available on request.

4.2 **Peer Reviewers**

N/A

4.3 **RBF Training**

N/A



4.4 Version details

Table 1 Fisheries program documents versions

Document	Version number
MSC Fisheries Certification Process	Version 2.1
MSC Fisheries Standard	Version 2.01
MSC General Certification Requirements	Version 2.3
MSC Surveillance Reporting Template	Version 2.01



5 Unit(s) of Assessment and Certification and results overview

5.1 Unit(s) of Assessment and Unit(s) of Certification

5.1.1 Unit(s) of Assessment

Table 2: Unit(s) of Assessment (UoA)

UoA 1	Description
Species	Skipjack tuna (<i>Katsuwonus pelamis</i>)
Stock	Western and Central Pacific Ocean
Geographical area	 0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones Southern quarter: 0- 25 degrees north in latitude, 145- 175 degrees east in longitude Eastern off shore: 35 -45 degrees north in latitude, 165-175 degrees east in longitude Adjacent Sea of Japan (from near Tanegashima to the eastern quarter).
Harvest method / gear	Pole and Line
Client group	Meiho Gyogyo Co., Ltd Vessels: Meiho Maru and Toyokuni Maru
Other eligible fishers	None
UoA 2	Description
UoA 2 Species	Description Albacore tuna (<i>Thunnus alalunga</i>)
UoA 2 Species Stock	Description Albacore tuna (<i>Thunnus alalunga</i>) Western Central and Eastern Pacific Ocean
UoA 2 Species Stock Geographical area	Description Albacore tuna (<i>Thunnus alalunga</i>) Western Central and Eastern Pacific Ocean 0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones 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, 165-175 degrees east in longitude Adjacent Sea of Japan (from near Tanegashima to the eastern quarter).
UoA 2SpeciesStockGeographical areaHarvest method / gear	Description Albacore tuna (<i>Thunnus alalunga</i>) Western Central and Eastern Pacific Ocean 0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones 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, 165-175 degrees east in longitude Adjacent Sea of Japan (from near Tanegashima to the eastern quarter). Pole and Line
UoA 2SpeciesStockGeographical areaHarvest method / gearClient group	Description Albacore tuna (<i>Thunnus alalunga</i>) Western Central and Eastern Pacific Ocean 0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones 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, 165-175 degrees east in longitude Adjacent Sea of Japan (from near Tanegashima to the eastern quarter). Pole and Line Meiho Gyogyo Co., Ltd Vessels: Meiho Maru and Toyokuni Maru

Include a map of the UoAs (style and caption shown below).







5.1.2 Unit(s) of Certification

Table 3:Unit(s) of Certification (UoC)

UoC 1	Description
Species	Skipjack tuna (<i>Katsuwonus pelamis</i>)
Stock	Western and Central Pacific Ocean
Geographical area	 0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones 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, 165-175 degrees east in longitude Adjacent Sea of Japan (from near Tanegashima to the eastern quarter).
Harvest method / gear	Pole and Line
Client group	Meiho Gyogyo Co., Ltd Vessels: Meiho Maru and Toyokuni Maru
UoC 2	Description
Species	Albacore tuna (<i>Thunnus alalunga</i>)
Stock	Western Central and Eastern Pacific Ocean
Geographical area	 0-40 degrees North and 140-170 degrees East. Fishing operations are in three distinct zones Southern quarter: 0- 25 degrees north in latitude, 145- 175 degrees east in longitude Eastern off shore: 35 -45 degrees north in latitude, 165-175 degrees east in longitude Adjacent Sea of Japan (from near Tanegashima to the eastern quarter).



Harvest method / gear	Pole and Line
Client group	Meiho Gyogyo Co., Ltd Vessels: Meiho Maru and Toyokuni Maru

5.1.3 Scope of assessment in relation to enhanced or introduced fisheries

N/A

5.2 Assessment results overview

5.2.1 Determination, formal conclusion and agreement

Following the Upgrade process, LR determine that the P1 scores against V2.0 for North Pacific Albacore and Skipjack tuna continue to meet the MSC standard and the fishery remains certified.

5.2.2 Principle level scores

 Table 4:
 Principle level scores

Principle 1 scoring of skipjack

	Performance indicator						
Score	Score 1.1.1 1.1.2* 1.2.1 1.2.2 1.2.3 1.2.4					Overall P1 score	
2016 v1.3	100	90	70	60	90	95	86.9
2019 v2.0	100	N/A	70	60	90	95	85.8

* Note: PI 1.1.2 has changed between versions.

Principle 1 scoring of north Pacific albacore

	Performance indicator						
Score	1.1.1 1.1.2* 1.2.1 1.2.2 1.2.3 1.2.4					Overall P1 score	
2016 v1.3	100	70	80	60	90	100	83.8
2019 v2.0	80	N/A	85	60	90	100	82.5

5.2.3 Summary of conditions

Table 5: Summary of conditions

Condition number	Condition	Performance Indicator (PI)	Status	PI original score	PI revised score
1	Skipjack	1.2.1	On target	70	70



	By the fourth surveillance audit, demonstrate that the harvest strategy for skipjack tuna is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.				(no change following re- scoring against FS v2.01)
2	Skipjack SI a) By the fourth surveillance audit, demonstrate that well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. SI b) By the fourth surveillance audit, provide evidence that the HCRs are likely to be robust to the main uncertainties. SI c) By the fourth surveillance audit, demonstrate that available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	1.2.2	On target	60	60 (no change following re- scoring against FS v2.01)
3	North Pacific albacore 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 B _{MSY} or some measure or surrogate with similar intent or outcome.	1.1.2	Removed. Performance indicator is no longer applicable under the FS v2.01	70	N/A
4	North Pacific albacore SI a) By the fourth surveillance audit, demonstrate that well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. SI b) By the fourth surveillance audit, provide evidence that the HCRs are likely to be robust to the main uncertainties. SI c) By the fourth surveillance audit, demonstrate that available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	1.2.2	On target	60	60 (no change following re- scoring against FS v2.01)

5.2.4 Recommendations

The client provided information on bait usage for the past year indicating that anchovy was the dominant bait species with some sardine used. Information on the species was available for less than 50% of the bait used in 2018. Preliminary 2019 information provides more detail on the species used. The auditors recommend that the client continues to refine information collected on the amount of each bait species used.



6 Evaluation results

6.1 Eligibility date

The fishery has been certified since the 17th October 2016 and remains so.

6.2 Traceability within the fishery

As described in the original PCR – this rescoring does not impact traceability.



7 Scoring

7.1 Summary of Performance Indicator level scores

Principle 1 scoring of skipjack

	Performance indicator						
Score	1.1.1	1.1.2*	1.2.1	1.2.2	1.2.3	1.2.4	Overall P1 score
2016 v1.3	100	90	70	60	90	95	86.9
2019 v2.0	100	N/A	70	60	90	95	85.8

* Note: PI 1.1.2 has changed between versions.

Principle 1 scoring of north Pacific albacore

	Performance indicator						
Score	1.1.1	1.1.2*	1.2.1	1.2.2	1.2.3	1.2.4	Overall P1 score
2016 v1.3	100	70	80	60	90	100	83.8
2019 v2.0	80	N/A	85	60	90	100	82.5



7.2 Principle 1

7.2.1 Principle 1 background

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





Figure 3 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 4 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 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 5 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 bene 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.

3.2.3 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 interannual 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 2011PNA 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 (lanelli et al, 2012).

The assessment is conducted using the now well-established MULTIFAN-CL program (see: http://www.multifancl.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	F _{X%SPRo} and
	biological (natural mortality, maturity) and fishery	either
	(selectivity) variables are reasonably well estimated.	20%SB _o or
		20%SBcurrent,F=0
Level 3	The key biological and fishery variables are not well	20%SBo or
	estimated or understood.	20%SBcurrent,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 misspecified 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%SBF=0 was considered sufficiently precautionary.

At its 9th Annual Session, the Commission decided to set the LRP for skipjack at Level 3, 20%SBrecent, F=0, where SBrecent, 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=ylast-10 to t2=ylast-1 where ylast 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 Fmsy, i.e. $F/Fmsy \le 1$." This reiterates and replaces the same statement made previously in CMM 2013-01.

The agreed fishing mortality limit of F/Fmsy \leq 1 is consistent with maintaining the skipjack stock at or above Bmsy. 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 SBmsy 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% SBF=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 SBmsy and 20%SBF=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
Ciatest/MSY	1.02	1.16	0.92	0.93
Fcurrent/FMSY	0.61	0.82	0.45	0.52
B_{0}	6,587,000	6,913,000	6,404,000	7,419,000
Bcurrent	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
SBMSY	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
SBcurrent/SBF=0	0.52	0.49	0.54	0.56
SBlatest/SBF=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 6 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%SBF=0 while the government of Japan proposed a TRP of 60%SBF=0. The Commission did not make a decision at WCPFC11. It can be inferred from Figure 8 (i.e. Table SKJ2) that SBmsy=28% based on the latest base case assessment. Both proposals are therefore for TRP of the order of twice Bmsy.

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% SBF=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% SBF=0 is in effect.



Stock status

An updated assessment of skipjack is being undertaken in 2019 for consideration at the 2019 Scientific Committee meeting (see preliminary comments below).

Skipiack tuna stock assessments have been considered in a large number of recent MSC assessments, reassessments additional (see: and surveillances. and several client fisheries are in assessment https://fisheries.msc.org/en/fisheries/@@search?q=skipjack&search). Two of the most recent are: the Western and Central Pacific skipjack and yellowfin purse seine (see: https://fisheries.msc.org/en/fisheries/wpsta-western-andcentral-pacific-skipjack-and-yellowfin-free-school-purse-seine/@@view) and the PNA Western and Central Pacific skipjack and yellowfin, unassociated / non FAD set, tuna purse seine (see: https://fisheries.msc.org/en/fisheries/pnawestern-and-central-pacific-skipjack-and-yellowfin-unassociated-non-fad-set-tuna-purse-seine/). These assessments reflect the currently harmonised Principle 1 assessment for skipjack tuna in the WCPFC using Certification Requirements v2.0. The harmonised scoring for skipjack reflected in these assessments is the same as in the assessment of the client fishery being audited here (apart from the differences between FCR v1.3 and v2.0). Conditions are also compatible. Progress against the conditions is discussed in the tables at Section 3 Results.

Pending the 2019 assessment update, the current status is reflected in McKechnie et al. (2016).

The general conclusions from McKechnie et al. (2016) were that:

- Current catches are lower than but approaching estimated MSY.
- Fishing mortality of all age-classes is estimated to have increased significantly since the beginning of industrial tuna fishing, but fishing mortality still remains below the level that would result in the MSY, and is estimated to have decreased moderately in the last several years.
- Recent levels of spawning biomass are well above the level that will support the MSY, and are well above the limit reference point, 20%SB_{F=0}.
- Depletion-based reference points (including SB_{latest}=SB_{F=0}, SB_{recent}=SB_{F=0} and SB₂₀₁₅=SB_{F=0[2015]}) for the reference case model, sensitivity analyses and uncertainty grid suggest that the skipjack stock is most probably at or close to the interim target reference point of 50%SB_{F=0}.
- Modelling assumptions explored in sensitivity and structural uncertainty analyses had a moderate impact on model output but did not change the broad conclusions about recent stock status.

Current advice to the Commission based on the 2016 assessment is that the stock is currently moderately exploited and fishing mortality level is sustainable. In 2016, WCPFC SC12 noted that the assessment indicated that skipjack spawning biomass was around the adopted TRP and recommended that the Commission take action to keep the spawning biomass near the TRP and advocated for the adoption of harvest control rules based on the information provided.

Preliminary results from the 2019 assessment (Vincent et al., 2019) also conclude that the skipjack stock is not overfished, nor subject to overfishing. However, results indicate that the stock status is currently on average below the interim TRP.

Harvest strategy and harvest 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 7 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 SBmsy and is actively working towards setting a much higher target, in %SBF=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 Fmsy (effectively ensuring the stock is maintained above Bmsy); (ii) ensure the spawning stock does not fall to 20%SBF=0 (which should be assured through meeting objective (i)); and (iii) maintain the stock at least as high as SBmsy (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 form 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 purseseine 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 n 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%SBF=0, approaching twice the SBmsy level of 28%SBF=0, and fishing mortality is estimated to be 0.61Fmsy. Skipjack is also not projected to fall to the SBmsy 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 (SB2032<0.2SBF=0) or for the spawning biomass to fall below SBMSY, and it is exceptionally unlikely (0%) for the stock to become other stock to become subject to overfishing (F>FMSY)." 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.

Update 2019: The general management of skipjack tuna has not changed to any substantial degree since certification that would affect the client fishery. The current harvest strategy relies on annual decision-making processes founded on the core principles of the WCPFC as laid out in its Convention and in a growing body of CMMs (see https://www.wcpfc.int/conservation-and-management-measures). The most important change has been the adoption of CMM 2017-01 in 2017 and subsequently CMM 2018-01 in 2018, replacing CMM 2016-01 and its predecessors. CMM 2018-01 came into effect on 13 February 2019 and shall remain in effect until 10 February 2021 unless replaced earlier or amended by the Commission. It sets conditions of harvest for skipjack, yellowfin, and other tunas. CMM 2018-01 states that: "Pending the establishment of harvest strategies, and any implementing CMM, the purpose of this measure"



is to provide for a robust transitional management regime that ensures the sustainability of bigeye, skipjack, and yellowfin tuna stocks."

WCPFC CMM 2014-06 was adopted to develop and implement a harvest strategy approach for key fish stocks in the WCPO. CMM 2014-06 describes how the WCPFC views harvest strategies and its plans for implementing them for all tropical tuna stocks, including skipjack and yellowfin. The CMM identifies the elements that harvest strategies are to contain (including defined operational objectives, target and limit reference points, acceptable levels of risk of not breaching limit reference points (LRPs), a monitoring strategy, decision rules that aim to achieve the target reference point (TRP) and avoid the limit reference point, and management strategy evaluation). CMM 2014-06 is consistent with MSC definitions and requirements and outlines an intention to move towards a harvest strategy with well-defined harvest control rules ('decision rules' in WCPFC terminology). The CMM required the development of a workplan for its implementation, first adopted at WCPFC12 (WCPFC, 2016; Attachment Y). A LRP for skipjack of 0.2SB_{F=0}, was adopted in 2012 and an interim TRP (0.5SB_{F=0}) was adopted in 2015.

The harvest strategy workplan has been amended at subsequent Commission meetings and a number of the required outcomes have been delayed. In 2017 the Commission adopted an updated harvest strategy workplan (WCPFC, 2018; Attachment L; <u>https://www.wcpfc.int/meetings/wcpfc14</u>) extending out to 2021 to allow for the ongoing work towards adoption of harvest strategies for the four key stocks (skipjack, yellowfin, bigeye and south pacific albacore). This workplan was further amended at WCPFC15 in December 2018 (WCPFC, 2019; Attachment I; <u>https://www.wcpfc.int/meetings/15th-regular-session-wcpfc</u>). WCPFC15 agreed that the annual meeting in 2019 would be a 6-day meeting with additional time devoted for the Commission to discuss harvest strategies. Progress on aspects of the workplan is shown in the WCPFC14 Summary Report (WCPFC, 2018; Attachment L). The CAB Variation Request and Response indicates a deadline of 2021 for the P1 conditions for skipjack to be met.

Updated harvest strategy workplan items for skipjack (WCPFC, 2018; Attachment L)

	Skipjack
2018	 Develop harvest control rules (e) and Management strategy evaluation (f) SC provide advice on performance of candidate harvest control rules. (ongoing). TCC consider the implications of candidate harvest control rules. (ongoing). Commission consider advice on progress towards harvest control rules. (ongoing).
2019	 Develop harvest control rules (e) and Management strategy evaluation (f) SC provide advice on performance of candidate harvest control rules. (ongoing). TCC consider the implications of candidate harvest control rules. (ongoing). Commission consider advice on progress towards harvest control rules. (ongoing). ["TRP shall be reviewed by the Commission no later than 2019" – CMM 2015-06]
2020	 Develop harvest control rules (e) and Management strategy evaluation (f) 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. Adopt a Harvest Control Rule
2021	Harvest Strategy for skipjack in place

3.2.4 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	F _{X%SPRo} and
	biological (natural mortality, maturity) and fishery	either
	(selectivity) variables are reasonably well estimated.	20%SB _o or
		20%SBcurrent,F=0
Level 3	The key biological and fishery variables are not well	20%SBo or
	estimated or understood.	20%SBcurrent,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 misspecified 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%SBF=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%SBF=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 Fmsy.

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 FSSB-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 SSBATHL 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, and MSY. Advice to the WCPFC and IATTC is framed in terms of these quantities.

It should be noted that FSSB-ATHL is currently close to the fishing mortality rate associated with 20%SSB0. Superficially, this could be interpreted as an interim LRP consistent with the MSC default of 20% SSB0. However, SSBATHL is more than double the estimated SSBmsy. If MSC CR v1.3 CB2.3.3.4 were applied, given SSBmsy is estimated below 20%SSB0, the accepted MSC default LRP would be 75%SSBmsy = approximately 7%SSB0. To summarise, the estimated SSBmsy 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				
Fmed	1.30	156,291	74,640				
F10%	0.63	22,867	96,590				
F20%	0.71	54,530	105,418				
F30%	0.81	86,192	99,612				
F40%	0.94	117,855	89,568				
F _{50%}	1.13	149,517	77,429				
F ₂₀₀₂₋₂₀₀₄ (F	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				
Fmed	1.34	156,291	69,288				
F10%	0.71	22,867	93,303				
F20%	0.80	54,530	101,135				
F30%	0.92	86,192	94,712				
F40%	1.07	117,855	84,296				
F 50%	1.29	149,517	72.059				

Figure 8 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 SSBmsy to be $49,680 \pm 6,739$ mt; and female SSBATHL to be 117,835 mt, more than twice the female SSBmsy. The 2012 total SSB was estimated to be 220,202 (95% CI 187,180-251,042) mt. F/Fmsy is estimated as 0.52, and F/FSSB-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/SSBmsy and SSB/20%SSB0. Measured against either determinant, the North Pacific albacore stock is estimated never to have reduced to SSBmsy, 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 Fmsy, 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 SSBmsy and 20%SSB0 in all years.

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







Figure 9 Kobe Plots for North Pacific Albacore, sourced from ISC (2014). Left Panel: Plot of F/Fmsy vs SSB/SSBmsy;

Right Plot: Plot re-expressed in terms of 1-SPR/ (1-SPR20%) vs SSB/SSB20%.



Figure 10 Estimated recruitment of the 2014 base case assessment model. Dashed lines indicate 95% confidence intervals. (Source: ISC, 2014)

Update 2019: As reported in the 2nd surveillance audit report for the client fishery, the Northern Committee of the WCPFC reassessed the stock of north Pacific albacore in 2017. This audit does not consider the stock assessment in detail. A summary of the findings is given in the WCPFC14 Commission summary report (<u>https://www.wcpfc.int/meetings/wcpfc14</u>):

"The North Pacific albacore stock was likely not overfished and overfishing was likely not occurring. If constant fishing intensity was applied to the stock, median female spawning biomass was expected to undergo a moderate decline with a <0.01% probability of falling below the WCPFC established LRP by 2025. However, expected catches in this scenario would be below the recent average catch level for this stock."

Two of the most recent Principle 1 MSC assessments of north Pacific albacore are for the *Canadian Highly Migratory Species Foundation (CHMSF) British Columbia albacore tuna North Pacific*, released in July 2019 (see: https://fisheries.msc.org/en/fisheries/canada-highly-migratory-species-foundation-chmsf-british-columbia-albacore-tuna-north-pacific/@@view) and the *Ishihara Marine Products Albacore and Skipjack Pole and Line Fishery*, released in March 2019 (https://fisheries.msc.org/en/fisheries/ishihara-marine-products-albacore-and-skipjack-pole-and-line-fishery/@@view). The CHMSF report is an update assessment undertaken as part of the 4th surveillance audit of the fishery as per the CAB-initiated Variation Request. These assessments reflect the currently harmonised Principle 1 assessment for north pacific albacore using Certification Requirements v2.0.

The harmonised scoring for skipjack reflected in these assessments is the same as in the assessment of the client fishery being audited here (apart from the differences between FCR v1.3 and v2.0). Conditions are also compatible.

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 Fmsy (effectively ensuring the stock is maintained above Bmsy); (ii) ensure the spawning stock does not fall to 20%SSBF=0; and (iii) maintain the stock at least as high as SSBmsy (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 form 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.

Update 2019:

The major regional north Pacific albacore management measures (harmonised between WCPFC and IATTC) are CMM 2005-03 (WCPFC) and Resolution C-05-02 (IATTC) which have the same requirements; i.e. that fishing effort should not be increased above current levels. Japan catches over half of total north Pacific albacore catch and has set limits



on the number of licences available for vessels to fish the species. Licences are required to be renewed every five years. A total number of licences is agreed by the FAJ prior to the renewal process and the total fishing capacity of licensed vessels is taken into account in setting the licence limit.

WCPFC14 considered an update on the status of the harvest strategy work plan for north Pacific albacore provided by the Northern Committee (WCPFC, 2018):

NC13 recommends that the Commission adopt the attached revision to the title of the previously adopted Precautionary Management Framework for North Pacific albacore (Attachment H), so that it may be recognized as a Harvest Strategy. In addition, NC13 recommends that the Commission direct the Secretariat to make this harvest strategy available, as a stand-alone harvest strategy document, on a web page dedicated to this and other harvest strategies, including interim harvest strategies, adopted by the Commission."

The Commission adopted the Interim Harvest Strategy for north Pacific Albacore Fisheries (WCPFC-NC 2017 Summary Report, Attachment H), noting that it modifies and replaces the previously adopted precautionary management framework for North Pacific albacore and is to be recognised as a harvest strategy. Attachment I of the NC13 summary report outlines the work program for the Northern Committee to develop the harvest strategy. That work program for the years 2019 to 2021 is updated in the summary report of the 14th Regular Session of the Northern Committee (WCPFC-NC 2018 Summary Report, Attachment G): The CAB Variation Request and Response indicates a deadline of 2023 for the P1 conditions for north Pacific albacore to be met.

Work programme for the Northern Committee (north Pacific albacore elements)

	North Pacific albacore
Objectives 2019-2021	 (A) Review members' reports on their implementation of CMM 2005-03. (B) Implement the Interim Harvest Strategy, including: (1) monitor if LRP is breached; (2) continue to work to establish TRP and other elements of harvest strategies, if appropriate based on MSE; (3) recommend any changes to CMM 2005-03.
Tasks	Continue to support ISC MSE work to complete Task (B)(2).
2019	Recommend any necessary changes to CMM 2005-03. (Task (B) (3))
Tasks	Continue to support ISC MSE work to complete Task (B)(2).
2020	Obtain the new assessment results from ISC and recommend any necessary changes to CMM 2005-03 (Task (B) (3)).
Tasks	Continue to support ISC MSE work to complete Task (B)(2).
2021	Recommend any necessary changes to CMM 2005-03. (Task (B) (3)).

At WCPFC14, the Secretariat provided WCPFC14-2017-14 (Rev1) Reference Document for Review of CMM 2005-03 and for the Development of Harvest Strategies under CMM 2014-06 North Pacific albacore, but no regulation changes were introduced.

WCPFC has adopted an LRP for north Pacific albacore (20%SSB_{current, F=0)}. No TRP has been set for north Pacific albacore. One of the goals of the north Pacific albacore Management Strategy Evaluation currently underway is to advise the Northern Committee on a TRP for north Pacific albacore. LRPs for fishing intensity or F-based reference points for north Pacific albacore have not been adopted by either the IATTC or WCPFC.

At the end of 2018, formal harvest control rules had not yet been defined for north Pacific albacore by WCPFC or IATTC.

7.2.2 Catch profiles

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.

LR Public Certification Report Japanese Pole and Line skipjack and albacore tuna Fishery



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 11 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 12 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)

7.2.3 Total Allowable Catch (TAC) and catch data

The total catch of skipjack in the WCPFC statistical area was 1,795,048 t (WCPFC-SC15-2019/ST-IP-1; https://www.wcpfc.int/node/42923), of which 5,410 t were caught by vessels that are members of the client group. A total 49,300 t of north Pacific albacore tuna were reported as caught in 2017 (ISC, 2019). Of the 49,300 t caught, 662 t were caught by client group vessels.

Catches in tonnes by each UoC in recent years are shown in the table, below. There is no total allowable catch set for skipjack or north Pacific albacore tuna in the WCPFC.



Table 6. Recent UoC skipjack and north Pacific albacore catches

YEAR	UoC Skipjack (t)	UoC NP Albacore (t)
2014	2,308	942
2015	2,541	659
2016	2,801	303
2017	3,061	841
2018	5,410	662

Total Allowable Catch (TAC) and catch data Table 7. Catch data for the skipjack UoC

TAC	Year		N/A	
UoA share of TAC	Year	2018	N/A	
UoA share of total TAC	Year	2018	N/A	
Total green weight catch by UoC	Year (most recent)	2018	Amount	5,409 t
Total green weight catch by UoC	Year (second most recent)	2017	Amount	3,061 t

Table 8. Catch data for the North Pacific albacore UoC

TAC	Year		N/A	
UoA share of TAC	Year	2018	N/A	
UoA share of total TAC	Year	2018	N/A	
Total green weight catch by UoC	Year (most recent)	2018	Amount	660 t
Total green weight catch by UoC	Year (second most recent)	2017	Amount	841 t

At the time of certification of the fishery, two Meiho Gyogyo (MG) vessels were operating in the fishery (Toyokunimaru and Meiho-maru 22). A third vessel (Shoki-maru) was added in 2017 and a fourth (Meiho-Maru 37) in 2018. The additional vessels are of a similar length and capacity as the original two vessels and fish in the same areas with similar provisioning and operations. In the past year also, fishing areas were broadly unchanged, except for one exploratory trip to the Tasman Sea.

Total UoC catches have been around 3,000 t per year in recent years but were higher at 3,902 t in 2017 and 6,072 t in 2018. These increases are mainly due to higher skipjack catches as a result of the additional vessels in the fishery. There has been some variation in the relative percentage of these two species in client fishery catches (skipjack tuna catch was 89.6% of the total in 2016, 76.5% in 2017 and 88.1% in 2018. The client considered that the change in proportion of skipjack and albacore catch in recent years was not due to changes in fishery practice or targeting but was a reflection of species availability during operations.



7.2.4 Principle 1 Performance Indicator scores and rationales UoA 1 Skipjack Tuna

UoA 1 (skipjack tuna): PI 1.1.1 – Stock status

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			
	Stock sta	k status relative to recruitment impairment					
а	Guidep ost	It is likely that the stock is above the point where recruitment would be impaired (PRI).	It is highly likely that the stock is above the PRI.	There is a high degree of certainty that the stock is above the PRI.			
	Met?	Υ	Y	Υ			
	Justific ation	The latest assessment of skipjack (McKechnie et al., 2016) was presented at the 2016 SC meeting (WCPFC-SC 2016). The reference case model of the 2016 stock assessment estimated the 2015 level of spawning potential to be at approximately 58% of the unfished level for the reference case model, well above the LRP of 20%SB _{F=0} agreed by WCPFC. SB _{latest} /SB _{F=0} was relatively close to the adopted interim target reference point ($0.5SB_{F=0}$) for all models explored in the assessment (structural uncertainty grid: median = 0.51 , 95% quantiles = 0.39 and 0.67) (WCPFC 2016). As with previous assessments, the 2016 stock assessment examines structural uncertainty using a crosswise grid of model runs incorporating the main sources of uncertainty (54 models). The results of the structural uncertainty analysis are consistent with the results of previous assessments of tuna stocks in the WCPO that used the same uncertainty axes. The quantiles across the full grid for all quantities suggested a relatively closely around the target reference point and well away from the limit reference point, and no models met, or even approached the thresholds of formal definitions of "overfishing" or "overfished" (Figure 52 of McKechnie et al., 2016). Stochastic 10-year projections using the proposed reference case model and assuming future status quo catches at 2015 levels were performed for the 2016 assessment. In 2025, median SB/SB _{F=0} was estimated to be 0.49, and there was zero risk of the stock falling below the limit reference point (McKechnie et al., 2016). Overall, there is a high degree of certainty that the stock is above the PRI, meeting the requirements of the accertaint of the corting regulation of SC600 SC600 and SC6100 levels					
	the requirements of the scoring issue at the SG60, SG80 and SG100 levels. Stock status in relation to achievement of MSY						
b	Guidep ost		The stock is at or fluctuating around a level consistent with MSY.	There is a high degree of certainty that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.			
	Met?		Y	Y			
	Justific ation	The skipjack assessment provides probabilistic estimates of parameters of interest and uncertainty has been extensively explored using a crosswise grid of sensitivity tests (WCPFC-SC 2016). The 2016 assessment estimates of spawning biomass are above the level that will support the MSY (SB ₂₀₁₅ /SB _{MSY} = 2.56 and SB ₂₀₁₁₋₂₀₁₄ /SB _{MSY} = 2.31 for the base case) (WCPFC 2016b). Fishing mortality has generally been increasing over time, however, current fishing mortality is below the MSY level (F _{2011- 14} /F _{MSY} =0.45 for and range 0.40–0.59 across the sensitivities for the reference case). In 2015, CMM 2015-06 was adopted at the Commission, setting the TRP for skipjack tuna at an (initial) value of 50%SB _{F=0} , subject to review no later than 2019. The 2016 stock assessment estimates spawning biomass to be close to this level. The auditors					

LR Public Certification Report Japanese Pole and Line skipjack and albacore tuna Fishery



note, however, that the preliminary 2019 stock assessment suggests that the spawning biomass is below the interim TRP (Vincent et al., 2019). Overall, assessment outputs indicate that SG80 and SG100 requirements are met.

References McKechnie et al. 2016, WCPFC-SC 2016, Vincent et al. 2019

Stock Status relative to Reference Points

	Type of reference point	Value of reference point	Current stock status re reference point	lative to		
Reference point used in scoring stock relative to PRI (SIa)	a) Level of spawning biomass in the absence of fishing	a) 20%SB _{F=0}	a) SB _{recent} = 52%SB _{F=0} ; SB _{latest} = 58%SB _{F=0} ; where 'recent' is over th 2011-14 and 'latest' is 2	e period 015.		
Reference point used in scoring stock relative to MSY (SIb)	a) Level of spawning biomass in the absence of fishing b) F _{MSY}	a) 50%SB _{F=0} b) F(28%SB _{F=0})	a) SB _{recent} = 52%SB _{F=0} ; SB _{latest} = 58%SB _{F=0} SB _{latest} /SB _{MSY} = 2.56 SB _{recent} /SB _{MSY} = 2.31 b) F _{recent} /F _{MSY} = 0.45			
OVERALL PERFORMANCE INDICATOR SCORE:						
CONDITION NUMBER (if relevant):						


UoA 1 (skipjack tuna): PI 1.1.2 – Stock rebuilding

PI 1.1	1.2	Where the stock is reduced timeframe	I, there is evidence of stock	rebuilding within a s	specified
Scorin	g Issue	SG 60	SG 80	SG 100	
а	Rebuildi	ng timeframes			
	Guidep ost	A rebuilding timeframe is specified for the stock that is the shorter of 20 years or 2 times its generation time. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest pra- rebuilding timefr specified which c exceed one gen time for the st	cticable ame is loes not eration ock.
	Met?	Not scored		Not scored	
	Justific ation	ustific tion The skipjack tuna stock is not reduced, hence this PI is not scored.			
b	Rebuildi	ng evaluation			
	Guidep ost	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is evidence that the rebuilding strategies are rebuilding stocks, or it is likely based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.	There is strong of that the re- strategies are re- stocks, or it is hig based on si modelling, exp rates or performance that be able to rebuild to within the se timeframe.	evidence ebuilding ebuilding hly likely mulation ploitation previous they will the stock specified
	Met?	Not scored	Not scored	Not score	b
	Justific ation	Stific The skipjack tuna stock is not reduced, hence this PI is not scored.			
Refere	References				
OVER	ALL PER	FORMANCE INDICATOR SO	CORE:		N/A
COND	ITION NU	IMBER (if relevant):			N/A



UoA 1 (skipjack tuna): PI 1.2.1 – Harvest strategy

PI 1.2.1		There is a robust and precautionary harvest strategy in place					
Scoring Issue		SG 60	SG 80	SG 100			
а	Harvest	strategy design					
G	Guidep ost	The harvest strategy is expected to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in PI 1.1.1 SG80.			
	Met?	Υ	Ν	Ν			
	Justific ation	MSC guidance defines a harvest strategy as the combination of monitoring, assessment, harvest control rules and management actions. It is intended that elements work together towards achieving management objectives. The cultariest strategy is not formalised but consists of the elements considered a 1.2.2, 1.2.3, and 1.2.4.					
		The operational harvest str components, with WCPFC, actions being supported by frameworks. CMM 2018-01 harvest strategy for skipjack of a harvest strategy for skipjack of a harvest strategy for big in accordance with the wor Work Plan for the Adoption aim of CMM 2018-01 in rela- tuna is to be maintained or reference point of 50% of 2018-01 lays out catch cont limitation measures. Tools seine fisheries, FAD closure fisheries. Explicit LRPs have been a December 2015, the Comm this point, harvest control information base from a wid fisheries. The information is that provides probabilistic reference points. Advice fr Committee and additional w Commission. Annual decision direction for strengthening th control rules, and a work pla As indicated above, there a mortality for purse seine fish is the PNA Vessel Day Sche and Party Allocations of Effe A meeting was held in Hong components of tuna fishe management measures are biomass remain at levels the SG60 requirements. Howe	arvest strategy as the combination of monitoring, sto of rules and management actions. It is intended that the owards achieving management objectives. The curre malised but consists of the elements considered at F rategy for WCPO skipjack tuna has several contributi PNA and national and archipelagic waters manageme y a robust stock assessment and extensive monitori 1 and its predecessors are fundamental in the curre k tuna. This measure is to create a bridge to the adopti geye, skipjack, and yellowfin tuna stocks and/or fisheri rk plan and indicative timeframes set out in the Agre n of Harvest Strategies under CMM 2014-06. The stat ation to skipjack is that the spawning biomass of skipja on average at a level consistent with the interim targ the spawning biomass in the absence of fishing. CM trols, measures for FAD set managements, and capaci adopted by WCPFC include effort limits in major pur es, high seas closures, and a discard ban in purse sei adopted for biomass and the fishing mortality rate. hission adopted an explicit MSY-related biomass TRP. rules have not been adopted. There is an extensi de range of biological studies and from a diverse range estimates of key parameters and their relationship rom the stock assessment is provided by the Scienti work is carried out by the scientific provider, SPC, to t ion-making is articulated through CMMs and is support an has been agreed to implement this. are measures in place that are intended to control fishin hing, including effort and capacity limits. A major measu- eme (VDS) which determines Total Allowable Effort (TA fort (PAE). g Kong in April 2016 to consider harmonisation of the leries in the Pacific. It was agreed that the curre e expected to ensure that fishing mortality and spawn				
		biomass remain at levels the SG60 requirements. Howe subsequent harmonisation concluded that SG80 require	at will achieve the stock man- ever, the outcome of the discussions on the harvest ements are not met for PI 1.2	agement objective, meeting Honk Kong meeting and strategy for skipjack have 2.1a.			



PI 1.2.1		There is a robust and precautionary harvest strategy in place			
		Overall, harmonisation outcomes conclude there is insufficient evidence that the harvest strategy is responsive to the state of the stock and that the elements of the harvest strategy work together towards achieving management objectives. One consideration in harmonisation discussions relates to whether harvest control rules are in place rather than just available (see PI 1.2.2 requirements). Some CABs consider that a harvest control rule needs to be in place rather than just available in order for all requirements of PI 1.2.1a SG80 to be met.			
	Harvest	strategy evaluation			
D	Guidep ost	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	Ν	
	Justific ation	The harvest strategy management objectives for skipjack are to ensure that the spawning stock does not fall to the LRP ($20\%SB_{F=0}$); to ensure fishing mortality does not exceed F _{MSY} (F/F _{MSY} <1); and to maintain the stock at least as high recently adopted interim TRP ($50\%SB_{F=0}$). The latest assessment (McKechnie et al., 2016) indicates that the stock is well above the biomass LRP and that fishing mortality is well below F _{MSY} . Recent biomass is estimated to be $52\%SB_{F=0}$, just above the TRP. Also, stock projections suggest that by 2025 median SB/SB _{F=0} was estimated to be 0.49, and there was zero risk of the stock falling below the limit reference point (McKechnie et al., 2016). The auditors note, however, that the preliminary 2019 stock assessment suggests that the spawning biomass is below the interim TRP (Vincent et al., 2019). The requirements for SG80 are met. The performance of the harvest strategy has			
с	Harvest	strategy monitoring			
	Guidep ost	Monitoring is in place that is expected to determine whether the harvest strategy is working.			
	Met?	Y			
	Justific ation	WCPFC has monitoring systems in place to record catch and effort for all vessels catching skipjack tuna in the WCPO. Monitoring of the purse seine fishery includes mandatory logbooks with records of catch and effort for each fishing operation, a VMS, 100% observer coverage of most fishing operations including detailed recording of catch composition, tagging data, biological studies and port inspections. These monitoring systems support a sophisticated stock assessment process that provides robust estimates of stock status that are sufficient to determine whether the harvest strategy is working. SG 60 requirements are met.			
d	Harvest	strategy review			
	Guidep ost			The harvest strategy is periodically reviewed and improved as necessary.	
	Met?			Not scored	
	Justific ation	Since SG80 SIa is not met tuna has not been formalise	, this SI is not scores. The h ed and is not subject to a for	arvest strategy for skipjack mal review process. SG100	



PI 1.2.1		There is a robust and precautionary harvest strategy in place			
		is potentially not met on this basis. However, there is ongoing review of the elements of the harvest strategy and revisions are made as evidenced by the adoption of updated CMMs and the adoption of an LRP and TRP.			
е	Shark fin	ining		-	
	Guidep ost	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 certainty that shark finni is not taking place.	
	Met?	Not relevant	Not relevant	Not relevant	
	Justific ation	Sharks are not a target spec	cies in the client fishery, and	so this SI is not sco	red.
f	Review of	of alternative measures			
	Guidep ost Met?	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.	
	Justific ation	This fishery targets skipjack (and north Pacific albacore) specifically, and there are no requirements such as minimum or maximum landing sizes or quotas which could lead to any of this catch being unwanted. Discarding rates for skipjack are minimal, according to the stock assessment report. Hence there is no 'unwanted catch' of skipjack in this fishery.			
Refere	ences	McKechnie et al. 2016, Vinc	ent et al. 2019, WCPFC-SC	2016, WCPFC CM	VIS.
OVER	ALL PER	FORMANCE INDICATOR SO	CORE:		70
CONDITION NUMBER: By the fourth surveillance audit, demonstrate that the harvest strategy for skipjack tuna is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.				1	



UoA 1 (skipjack tuna): PI 1.2.2 – Harvest control rules and tools

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place			
Scoring Issue		SG 60	SG 80	SG 100	
а	HCRs de	esign and application			
	Guidep ost	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.	Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	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.	
	Met?	Y	Ν	N	
	Met? Justific ation	Y CMM 2014-06 established however, well-defined harver met. Following the MSC Notice, CRv1.3 fisheries" of 24th M CRv2.0 provisions for SG60 several tuna fisheries. MSC notice of 16 December, 201 MSC CRv2.0 lays out two co to justify scoring at the SG6 First, CR v2.0 SA2.5.2a pro- biomass has not previously level for a recent period of t The reference case model of spawning potential to be at a case model, well above the SB _{latest} /SB _{F=0} was relatively (0.5SB _{F=0}) for all models e median = 0.51, 95% quantil The CRv2.0 SA2.5.2a cond 'available'. Second, CR v2.0 SA2.5.3 "there is an agreement or to adopt HCRs before the s	needs. N shed a process for the adoption of harvest control rules, narvest control rules are not currently in place and SG80 is not tice, "Scoring of 'available' Harvest Control Rules (HCRs) in 4th November 2014, PI 1.2.2 SI(a) has been scored using SG60 (as above) scoring for a number of fisheries, including WSC have also provided further comment on HCRs with their , 2015 "Interpretation on Harvest Control Rules (HCR)". wo conditions for acceptance of HCR being available sufficient SG60 level (MSC 2014). a provides for HCR being recognised as available, "if stock usly been reduced below B _{MSY} or has been maintained at that d of time". del of the 2016 stock assessment estimated the 2015 level of e at approximately 58% of the unfished level for the reference e the LRP of 20%SB _{F=0} agreed by WCPFC (WCPFC 2016). tively close to the adopted interim target reference point els explored in the assessment (structural uncertainty grid: uantiles = 0.39 and 0.67) (WCPFC-SC 2016). condition is therefore met and HCRs are considered to be 2.5.3b provides for HCR being recognised as available if, ent or framework in place that requires the management body he stock declines below B _{MSY} ".		
		r target and limit reference a clear intention that harvest be part of the implemented nt to adopt a workplan with meeting, with application to tuna, and South and North eference points and harvest adopted for skipjack tuna). s agreed (WCPFC 2015, support from the Scientific the agreed CMM 2014-06			



PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
		As indicated above, the curr indicate that the stock will re 2014-06 workplan. The CR In summary, as the requirem met, a HCR can be conside	ent stock assessment and pro emain above SSB _{MSY} over the /2.0 SA2.5.3b requirement is nents of both CRv2.0 SA2.5.2 red to be "available" and a so	ojections of future stock size e period agreed in the CMM therefore met. 2a and CRv2.0 SA2.5.3b are core of SG60 is awarded.
b	HCRs ro	bustness to uncertainty		
	Guidep ost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a wide range of uncertainties including the ecological role of the stock, and there is evidence that the HCRs are robust to the main uncertainties.
	Met?		Ν	Ν
	Justific ation	HCRs are still under develo	pment. SG80 and SG100 are	e therefore not met.
с	HCRs ev	valuation		
	Guidep ost	There is some evidence that tools used or available to implement HCRs 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 HCRs.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Υ	Ν	Ν
Met? Y N N Justific ation The rationale for this SI needs to address two CRv2.0 (MSC 2014) requirem First, CR v2.0 SA2.5.6 requires that as part of the evaluation of the effective HCRs, "teams shall include consideration of the current levels of exploitati UoA, such as measured by the fishing mortality rate or harvest rate, where an MSC CRv2.0 SA2.5.6 guidance (GSA2.5.2-7) states that "Evidence that cur equal to or less than FMSY should usually be taken as evidence that the effective". Evidence to support this is provided by the 2016 assessment indicat overfishing is not occurring (F _{current} /FMSY < 1 across the grid of model runs) (2016).				ISC 2014) requirements. ation of the effectiveness of t levels of exploitation in the invest rate, where available". t "Evidence that current F is evidence that the HCR is assessment indicating that grid of model runs) (WCPFC quires that where HCRs are reement or legal framework rs and trigger levels that will of harvest strategies to be opt a work plan at the 2015 with application to skipjack, Pacific albacore tunas. Work has been in progress over Vorkshop (MOW) process. ck. Following discussions at tachment Y). No additional ed. 60 is awarded. SG80 refers are 'available', the tools are



PI 1.2.2	2.2 There are well defined and effective harvest control rules (HCRs) in place			
References McKechnie et al. 2016, MSC 2014, WCPFC 2015, WCPFC-SC 2016.				
OVERALL PERFORMANCE INDICATOR SCORE:				
CONDITION NU SI a) By the four that ensure that to keep the sto SI b) By the four robust to the m SI c) By the four that the tools in required under	MBER: rth surveillance audit, demonstrate that well defined HCRs are in place to the exploitation rate is reduced as the PRI is approached, are expected ck fluctuating around a target level consistent with (or above) MSY. with surveillance audit, provide evidence that the HCRs are likely to be a nucertainties. with surveillance audit, demonstrate that available evidence indicates on use are appropriate and effective in achieving the exploitation levels the HCRs.	2		



UoA 1 (skipjack tuna): PI 1.2.3 – Information and monitoring

PI 1.2.3		Relevant information is collected to support the harvest strategy			
Scoring Issue		SG 60	SG 80	SG 100	
0	Range of	f information			
a	Guidep ost	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant info1mation 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, UoA 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	
Justific ation Monitoring systems in place provide a comprehensive range the current harvest strategy and inform the stock assessme includes mandatory logbooks, with records for each fishing coverage, a requirement for 100% observer coverage for the tuna catch, and port inspections. Information is available on key aspects of skipjack tuna biolog provides information on stock structure. The tagging data sampling are key inputs to the MULTIFAN-CL model which p reference points against which stock status can be evalu advice provided. Data on environmental conditions is colled important for understanding shifts in the distribution of the These data have been used to produce complex models of (e.g., Ecopath and SEAPODYM). There is considerable in and distribution of oceanic habitats (see, e.g., Banks et al., 20 between the oceanic environment and tuna is well studied (e. The available information is considered to meet the requirem and SC100 lowels.				age of information to support ment. Available information ng operation, detailed VMS the majority of the skipjack ology and extensive tagging data and size composition ch provides for estimation of valuated and management ollected and is known to be the stock and the fishery. Is of the ecological system e information on the nature ., 2011) and the relationship d (e.g. Lehodey et al., 1997). rements of the SG60, SG80	
b	Monitorir	ng			
D	Guidep ost	Stock abundance and UoA removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and UoA 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	Ν	
	Justific ation	As indicated at PI 1.2.3 SIa, of accuracy and coverage measures. The information control decisions based on range of assumptions. The I	stock abundance and remove that is sufficient to support enables estimates of stoce the available data using the MULTIFAN-CL based assess	vals are monitored at a level the current harvest control k abundance and harvest e stock assessment and a sment estimates abundance	



PI 1.2	1.2.3 Relevant information is collected to support the harvest strategy				
		using catch and effort, size composition, and tagging data. Abundance indices (CPUE) for purse seine and pole-and-line fisheries are derived for use in the assessment model. Overall, data used are from all fisheries and cover the entire skipjack tuna stock. Catches are monitored at a level of accuracy and coverage consistent with assessment requirements to enable management decision-making. Effort data units for purse seine fisheries are defined as days fishing/or searching, and are allocated to set type (associated or unassociated) in logbook data. The majority of catches are taken by purse-seine vessels under PNA VDS arrangements. Since 2010, these vessels are subject to 100% observer coverage at sea. Port and transhipment monitoring are also required. A review of sampling protocols has improved catch and size composition accuracy (Cordue 2013).			
		However, there are aspects of the data collection which do not meet SG100 requirements. There are delays in the collation of data from the most recent year that prevent their inclusion in the assessment. For a short-lived species such as skipjack tuna, this could lead to a mismatch between estimates of stock status from the assessment, management actions, and the actual stock status (Rice et al., 2014). In addition, the Japanese pole-and-line fishery, which provides the standardised CPUE indices in regions 1, 2, and 3, represents less than 10% of the total catch of skipjack tuna and even less in the main equatorial zone, but remains the only fishery that can provide long-term information on relative biomass levels (McKechnie et al., 2016). Also, operational level data are not provided by some WCPFC members (although some who do not provide it to WCPFC make their country's data available for assessment purposes).			
	Compreh	nensiveness of information			level.
с	Guidep ost		There is good information on all other fishery removals from the stock.		
	Met?		Y		
	Justific ation Other removals from the stock across the WCPO include catches by other WCP members, again predominantly by purse seine but also by other fishing gea Catches by members are required to be reported to the WCPFC. Article 5 of Convention requires CCMs to "collect and share, in a timely manner, complete a accurate data concerning fishing activities on, inter alia, vessel position, catch target and non-target species and fishing effort, as well as information from natio and international research programmes."				WCPFC g gears. 5 of the lete and catch of national
	The original PNA skipjack tuna MSC assessment (Banks et al., 2011) comment on shortcomings in the information coming from some countries, in particul Indonesia. Since that assessment there has been additional work to improve the le of data available from other sources, including non-purse seine fisheries. There improved data from the diverse fisheries of Indonesia, Philippines, and Vietna including estimates of total catch, size and some effort data as a result of proje such as the Global Environment Facility funded West Pacific East Asia Project wh has provided technical assistance and financial support to the participating countr (Indonesia, Philippines and Vietnam) for tuna data collection, annual tuna ca estimation, and capacity building to refine legal, institutional and policy arrangeme				nmented articular, the level There is /ietnam, projects ect which countries na catch gements
		Overall, there is good inform	ation on other removals and S	SG80 requirements	are met.
Refere	ences	Cordue 2013, Lehodey et al 2015.	. 1997, McKechnie et al. 201	6, Rice et al. 2014,	WCPFC
OVER		FORMANCE INDICATOR SC	CORE:		90
COND		MBER (if relevant):			N/A



UoA 1 (skipjack tuna): PI 1.2.4 – Assessment of stock status

PI 1.2.4		There is an adequate assessment of the stock status				
Scorin	g Issue	SG 60	SG 80	SG 100		
	Appropri	ateness of assessment to sto	ock under consideration			
а	Guidep ost		The assessment is appropriate for the stock and for the harvest control rule.	The assessment takes into account the major features relevant to the biology of the species and the nature of the UoA.		
	Met?		Y	Y		
	Justific ation	Stock assessments of skipjack tuna are undertaken regularly, most recently in 2016 (McKechnie et al., 2016); before that in 2014 (Rice et al., 2014) and in 2011 (Hoyle et al., 2011). An updated 2019 assessment is in progress. The assessment takes into account major features relevant to the biology and the nature of the UoA and the wider WCPO. It is implemented using MULTIFAN-CL, fitting an age- and spatially-structured model to catch, effort, size composition, and tagging data. The model first developed for skipjack tuna in 1998 and has been continually fine-tuned and improved. The skipjack tuna assessment is appropriate for the WCPO stock, accounting for spatial and temporal distributions, using appropriate biological assumptions, and accounting for diverse fisheries. The assessment is appropriate for the generally understood harvest control rules that are being applied and for the range of formal HCPs that are likely to be adopted; SC80 and SC100 requirements are met				
h	Assessm	nent approach				
b	Guidep ost	Theassessmentestimatesstockstatusrelativetogenericreferencepointsappropriateto the speciescategory.	The assessment estimates stock status relative to reference points that are appropriate to the stock and can be estimated.			
	Met?	Υ	Υ			
	Justific ation	The assessment is used to estimate stock status relative to a wide range of indicators including the agreed reference points. The SG60 and SG80 requirements are met.				
<u>ر</u>	Uncertai	nty in the assessment				
С	Guidep ost	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?	Υ	Υ	Y		
	Justific ation	The skipjack assessment explicitly explores sources of uncertainty. Two approaches are used to describe the uncertainty. The first estimates statistical uncertainty within a given assessment model. In addition, structural uncertainty in the assessment is examined by considering the variation in a crosswise grid of model runs which include many of the options of uncertainty explored during model development (Rice et al., 2014, McKechnie et al., 2016). The structural uncertainty includes examination of factors including steepness, the length composition weighting data, the assumed tag mixing period and the tagging data weighting, resulting in a grid of 54 models. Model outputs are provided in a probabilistic way. SG60, SG80 and SG100 requirements are met.				
	Evaluation of assessment					



PI 1.2.4		There is an adequate assessment of the stock status				
d	Guidep ost			The assessment h tested and show robust. Alt hypotheses assessment app have been ris explored.	as been n to be ernative and roaches gorously	
	Met?			Y		
	Justific ation	The SPC Oceanic Fisheries Programme provides an ongoing programme of review of assessment assumptions and approaches. Model structure has been updated to reflect the availability of new data or new interpretations of existing data. A suite of sensitivity analyses are undertaken to explore the impact of options such as changing assumptions for fixed parameters or different treatments of the data. Furthermore, retrospective analyses have been undertaken to explore any systematic biases in the model and the results used to adjust the reference case. Aspects of uncertainty examined include stock-recruitment steepness, alternate growth assumptions, alternate mixing assumptions and changes in weighting factors (Rice et al., 2014, McKechnie et al., 2016). The assessment for skipjack tuna has been shown to be robust. The SG100 requirements are met.				
е	Peer revi	Peer review of assessment				
	Guidep ost		The assessment of stock status is subject to peer review.	The assessment h internally and e peer reviewed.	as been xternally	
	Met?		Y	Ν		
	Justific ation	The WCPFC science and assessment processes have been externally reviewed (WCPFC 2009). The stock assessment itself is subject to internal peer review through the annual pre-assessment workshop and WCPFC SC annual processes. An external review of bigeye tuna (lanelli et al., 2012) had implications for the skipjack assessment and the SPC has taken advantage of that review to further develop all tuna assessments, including for skipjack (Rice et al., 2014, McKechnie et al., 2016). SG80 requirements are met. However, the skipjack assessment itself has not been specifically subject to external peer review, preventing a score of 100 for this scoring issue.				
Refere	ences	Hoyle et al. 2011, Rice et al. 2009.	2014, McKechnie et al. 2016	, lanelli et al. 2012,	WCPFC	
OVER		FORMANCE INDICATOR SO	CORE:		95	
COND		MBER (if relevant):			N/A	

Updated Principle 1 scoring for skipjack under MSC v2.0 upgrade

1.1.1	1.2.1	1.2.2	1.2.3	1.2.4	Overall P1 score
100	70	60	90	95	85.8



UoA 2 North Pacific Albacore

UoA 2 (north Pacific albacore tuna): PI 1.1.1 – Stock status

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	
а	Stock sta	atus relative to recruitment im	pairment		
α	Guidep ost	It is likely that the stock is above the point where recruitment would be impaired (PRI).	It is highly likely that the stock is above the PRI.	There is a high degree of certainty that the stock is above the PRI.	
	Met?	Y	Y	Ν	
	Justific ation	The most recent stock assessment by the ISC Albacore Working Group (ALBWG) was undertaken in 2017. A summary of the findings is given in the WCPFC14 Commission summary report (WCPFC 2018): "The North Pacific albacore stock was likely not overfished and overfishing was likely			
		spawning biomass was ex probability of falling below th catches in this scenario wou	pected to undergo a mode ne WCPFC established LRP Ild be below the recent avera	arate decline with a <0.01% by 2025. However, expected age catch level for this stock."	
		The 2015 base case spawn the 2017 assessment is 20%SSB _{current,F=0} (the 2017 compared with the limit of 3	ing stock biomass (mature for s approximately 2.5 time assessment estimates the b 4,374 t (ISC 2017).	emale biomass) estimated in es the WCPFC LRP of ase case SSB to be 80,618 t	
		The 2017 assessment indicates that it is highly likely that the stock is above hence SG60 and SG80 requirements are met. However, uncertainty in the e female SSB was relatively large with confidence intervals overlapping the some of the estimates (ISC 2017), hence SG100 requirements are not met.			
		Note that the 2016 certifi assessment and found that harmonised outcome under	cation of the fishery was SG100 requirements were the current assessment.	based on an earlier stock met for this SI. SG80 is the	
b	Stock sta	atus in relation to achievemer	nt of MSY		
	Guidep ost		The stock is at or fluctuating around a level consistent with MSY.	There is a high degree of certainty that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.	
	Met?		Y	Ν	
	Justific ation	The 2017 stock assessment estimated current spawning stock biomass, SSB ₂₀₁₅ , to be approximately 3.3 times the MSC default TRP of SSB _{MSY} . SSB _{MSY} is actually estimated to be lower than the MSC default LRP of 20%SSB ₀ . The stock is estimated to never have been reduced to SSB _{MSY} and has hence been above the default TRP in all years (and has also been above the more precautionary proxy for SSB _{MSY} of 2xLRP except for a sensitivity run which the ALBWG did not consider plausible). SG80 requirements are met. The 2017 assessment uses age and sex-specific natural mortality. Natural mortality was considered to be the most important axis of uncertainty in the assessment. For the M=0.3 y ⁻¹ sensitivity SSB ₂₀₁₅ is estimated to be 1.31*LRP or 0.26SSB _{F=0} . It is therefore highly likely that SSB is at or above a level consistent with MSY, as defined in a precautionary way by MSC, but there may not be a 'high degree of certainty' that the stock is above that level. SG100 requirements are not met			



PI 1.1.1 The stock is at a level which maintains high productivity and has a low pr recruitment overfishing		ctivity and has a low prob	ability of		
	Note that the 2016 certification of the fishery was based on an earlier stock assessment and found that SG100 requirements were met for this SI. SG80 is the harmonised outcome under the current assessment.		er stock 30 is the		
References	eferences WCPFC 2018, ISC 2017				
Stock Status re	ative to Reference Points				
	Type of reference point	Value of reference point	Current stock status re reference point	lative to	
Reference point used in scoring stock relative to PRI (SIa)	Spawning biomass in the absence of fishing	20%SSB _{current,F=0}	SSB ₂₀₁₅ /20%SSB _{current,F} i.e. 80,168 t / 32,614 t =	=0 • 2.47	
Reference point used in scoring stock relative to MSY (SIb)	None set. Default – spawning stock producing MSY.	SSB _{MSY}	SSB ₂₀₁₅ / SSB _{MSY} i.e. 80,168 t / 24,770 t = 3.3		
OVERALL PERFORMANCE INDICATOR SCORE:					
CONDITION N	JMBER (if relevant):			N/A	



UoA 2 (north Pacific albacore tuna): PI 1.1.2 – Stock rebuilding

PI 1.1.2 Where the stock is reduced, there is evidence of stock rebuilding within a s timeframe			specified		
Scorin	g Issue	SG 60	SG 80	SG 100	
а	Rebuildi	ng timeframes			
	Guidep ost	A rebuilding timeframe is specified for the stock that is the shorter of 20 years or 2 times its generation time. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest prac rebuilding timefr specified which d exceed one gen time for the st	cticable ame is oes not eration ock.
	Met?	Not scored		Not scored	
	Justific ation				
b	Rebuildi	ng evaluation		-	
0	Guidep ost	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is evidence that the rebuilding strategies are rebuilding stocks, or it is likely based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.	There is strong e that the re- strategies are re- stocks, or it is hig based on si modelling, exp rates or performance that be able to rebuild t within the si timeframe.	evidence ebuilding ebuilding hly likely mulation ploitation previous they will he stock specified
	Met?	Not scored	Not scored	Not scored	ł
	Justific ation				
Refere	ences				
OVER	ALL PER	FORMANCE INDICATOR SO	CORE:		N/A
COND		IMBER (if relevant):			N/A



UoA 2 (north Pacific albacore tuna): PI 1.2.1 – Harvest strategy

PI 1.2.1		There is a robust and precautionary harvest strategy in place			
Scorin	g Issue	SG 60	SG 80	SG 100	
а	Harvest	strategy design			
ŭ	Guidep ost	The harvest strategy is expected to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in PI 1.1.1 SG80.	
	Met?	Υ	Υ	Ν	
	Met? Justific ation	Y MSC defines the elements place; ii) the information ba- intention is that these elem- performance, measured in the The current harvest strategy by the Northern Committee WCPFC CMM 2005-03 / IAT focus of the interim harvest target reference points are established. Given that CH effectively the operational heat harvest strategy is essential the fishery). The elements of the NP alba- • Limit reference point (20% • Management target: status • Data collection on the stock • Stock assessment process • 'Available' HCR (see 1.2.2 • Monitoring of implement gathering and reporting to W These management measure meetings. Japan takes more than hall harvest strategy is also releven implements 2005-03/C-05-00 increase. Licences are re-at- licences and fishing capacit The elements described at stock management objective	Y of a harvest strategy as i) the se and monitoring; and iii) the eerms of achieving outcomes y comprises: i) the interim has and accepted by WCPFC in a TTC Resolution C-05-02, which strategy is the development of harvest control rules and MM 2005-03 and C-05-02 harvest strategy, this PI is so ly the same as that assessed acore harvest strategy are as $SB_{current, F=0}$; s quo; avoiding LRP with high sk and fishery (considered in s (considered in PI 1.2.4 below b); to date management tools tation of CMM 2005-03/Ref VCPFC / IATTC. ares are reviewed annually of the catch of north Pacific vant. The Japanese harvest b2) is to ensure that fishing cat tributed every 5 years, with a y. bove and their implementation es, meeting SG60 requirement	N he control rules and tools in e assessment method. The effectively to ensure overall (i.e. meeting objectives). arvest strategy as proposed 2017 (WCPFC 2018) and ii) ch are both still in force. The of management objectives, hd a work plan has been are still in place and are cored against them (i.e. the d for the 2016 certification of a follows: h probability; PI 1.2.3 below); w); have not been required; solution C-05-02 via data during Northern Committee albacore, so the Japanese strategy (by which means it pacity for albacore does not a limit on the total number of on are expected to achieve ents.	
		SG80 requires that the har Given that the stock status series, no response has be agreed harvest control rules science and compliance info considered to be responsive position for the north Pacific requirements are considered harmonised score of 80 is needs to be in place rather th SG80 to be met and this is	vest strategy be responsive a has varied very little over een required. Nevertheless, s yet in place, the harvest st prmation, and founded on hig to the state of the albacore s c albacore harvest strategy (d to be met. The auditors not given, some CABs consider han just available in order for a factor in 1.2 1a not meeting	to the status of the stock. the stock assessment time while there are no formally rategy, utilizing high quality h quality scientific advice, is tock. This is the harmonised see Section 4.2) and SG80 , however, that although the that a harvest control rule all requirements of PI 1.2.1a	



PI 1.2.1		There is a robust and precautionary harvest strategy in place			
		The harvest strategy is not y workplan is in place to stren and HCRs, and involves th requirements are not curren	yet designed to achieve stock gthen the harvest strategy the le use of management strate htly met.	c management objectives. A rough the adoption of a TRP egy evaluation. The SG100	
b	Harvest	strategy evaluation			
	Guidep ost	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	Ν	
	Justific ation	Fishing mortality rate remain the stock is well above SSB explicit LRP). Evidence of t fully tested but evidence exi are met.	hs well below F _{MSY} (WCPFC a _{MSY} (the MSC default TRP) an his is seen PI 1.1.1. The hal ists that it is achieving its obj	and IATTC implicit LRP) and d 20%SSB _{current,F=0} (WCPFC rvest strategy has not been ectives. SG80 requirements	
	Harvest	strategy monitoring			
С	Guidep ost	Monitoring is in place that is expected to determine whether the harvest strategy is working.			
	Met?	Υ			
	Justific ation	Internationally systems are in place for recording catch and effort for all entities fishing on north Pacific albacore. ISC Members are required to an report the following data for fishery monitoring: Category I: total annual catch weight by species) total annual effort (active vessels by fishery); Category II: effort (summary of logbook data); Category III: biological data, (size compo- length or weight frequencies, sex information). Fishing entities fishing in the are required to report all data on standard WCPEC forms			
		The ISC exchanges data w annual basis. Monitoring is i strategy is working. SG60 re	vith the IATTC and the WPF n place that is expected to de equirements are met.	C (through the SPC) on an termine whether the harvest	
d	Harvest	strategy review			
-	Guidep ost			The harvest strategy is periodically reviewed and improved as necessary.	
	Met?			Υ	
Justific ation The harvest strategy is periodically reviewed and improved as nec IATTC and the WCPFC receive advice and review management re- their respective annual meetings. Evidence of this is in the form WCPFC CMMs and IATTC Resolutions. The requirement for the in formal harvest strategies and HCRs for WCPFC has been agreed in The interim harvest strategy adopted by IATTC indicates a commit review of the harvest strategy. This work is due to end in 2020 Committee meeting (NC13) reviewed the current harvest strategy quo projections, and concluded that in the short-term no change wa This scoring is a change from the 2016 certification score and			ved as necessary. Both the agement resolutions during in the form of adoption of nt for the implementation of en agreed in CMM 2014-06. s a commitment to ongoing end in 2020. The Northern st strategy based on status change was required. Note: score and the Hong Kong		



PI 1.2	PI 1.2.1 There is a robust and precautionary harvest strategy in place		blace		
		harmonisation scores. Howe in alignment with other rece here.	ever, the changes recognises ent scoring of the stock. A s	progress since 201 core of SG100 is a	6 and is awarded
е	Shark fin	ning			
•	Guidep ost	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 d certainty that shar is not taking place	egree of k finning
	Met?	Not relevant	Not relevant	Not relevant	
	Justific ation	Sharks are not a target spec	cies in the client fishery and s	so this SI is not scor	red.
f	Review of	of alternative measures			
	Guidep ost	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a biennia of the potent effectiveness practicality of alte measures to min UoA-related mor unwanted catch target stock, and implemented appropriate	I review tial and ernative himise tality of of the they are , as
	Met?	Not relevant	Not relevant	Not relevant	
	Justific ation	Pole-and-line fishing is high (and skipjack) specifically, maximum landing sizes or unwanted. Discarding rates Hence there is no 'unwanted	hly targeted. This fishery tar and there are no requirem quotas which could lead are minimal, according to th d catch' of skipjack in this fish	gets north Pacific a lents such as mini to any of this cato le stock assessmen nery.	albacore mum or th being at report.
Refere	ences	WCPFC 2018, ISC 2017, C	MM 2014-06, WCPFC-NC 20)17	
OVER	ALL PER	FORMANCE INDICATOR SO	CORE:		85
COND	ITION NU	MBER (if relevant):			N/A



UoA 2 (north Pacific albacore tuna): PI 1.2.2 – Harvest control rules and tools

PI 1.2.2 There are well defined and effective harvest control rules (HCRs) in place		s (HCRs) in place			
Scorin	g Issue	SG 60	SG 80	SG 100	
0	HCRs de	ICRs design and application			
	Guidep ost	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.	Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	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.	
	Met?	Y	Ν	Ν	
	Justific ation	SG80 is not met because there are not yet well-defined harvest control rules in place through WCPFC and/or IATTC. MSC certification requirements lay out two conditions for acceptance of HCR being available sufficient to justify scoring at the SG60 level. First, MSC FS v2.01 SA2.5.2a provides for HCR being recognised as available "			
		stock biomass has not previously been reduced below B _{MSY} or has been maintained at that level for a recent period of time"			
		The albacore stock assessment provides probabilistic estimates of parameters of interest, and uncertainty has been extensively explored through sensitivity tests (ISC 2017). The stock has not been reduced below SSB_{MSY} over the time series and has been above the more precautionary SSB_{MSY} proxy of 2xLRP except for a sensitivity run which the ALBWG did not consider plausible.			
		The SA2.5.2a requirement being recognised as availab requires the management be declines below B _{MSY} ".	is therefore met. Second, Sole if "…there is an agreemen ody (WCPFC and IATTC) to a	SA2.5.3b provides for HCR at or framework in place that adopt HCRs before the stock	
		WCPFC CMM 2014-06 sets implemented. The definition rules or ("harvest control r tested using simulation a strategies. The Commission meeting, with revision in s yellowfin, Pacific bluefin, a Northern Committee of the work plan for north Pacific a	out definitions of harvest stra ns include target and limit refuules"), with a clear intention pproaches, will be part of n agreed to adopt a work pla subsequent years, with appl and south and north Pacific ISC responsible for develop albacore.	ategies to be developed and ference points and decision that harvest control rules, the implemented harvest an at the 2015 Commission ication to skipjack, bigeye, c albacore tunas, with the ing and recommending the	
		According to ISC (2017), 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 SSB _{MSY} .			
h	HCRs ro	bustness to uncertainty			
b	Guidep ost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a wide range of uncertainties including the ecological role of the stock, and there is evidence that the HCRs	



PI 1.2.2 There are well defined and effective harvest control rules (HCRs) in place		s (HCRs) in place			
				are robust to th uncertainties.	e main
	Met?		Ν	Ν	
	Justific ation	Given that there is no HCR	in place it follows that SG80	and SG100 are not	met.
с	HCRs ev	valuation			
	Guidep ost	There is some evidence that tools used or available to implement HCRs 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 HCRs.	Evidence clearly that the tools in u effective in achiev exploitation le required under the	shows use are ving the vels HCRs.
	Met?	Y	Ν	Ν	
	Justific ation	Two MSC requirements need to be addressed for SG60 to be met. First, MSC FS v2.01 SA2.5.6 requires that as part of the evidence that tools working, "teams should include current levels of exploitation in the UoA, measured by fishing mortality rate where available". The best available information on the exploitation rate is in ISC (2017); the SS3 base case assessment estimate F/F _{MSY} as 0.61 and F is estimated never to have reached F _{MSY} . FS v2.01 GSA2.5 2.5. (relating 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 FS v2.01 SA2.5.5 requires that in order to conclude that 'availad HCRs are 'effective', MSC requires evidence of i) the use of effective HCRs in other stocks or fisheries under the same management body; or ii) a formal agreement framework with trigger levels which will require the development of a well-definit HCR. A formal framework is in place for the development of a harvest strategy the stock (CMM 2014-06 and workplans; ISC MSE process; see above). The requirements for 'available' tools at SG60 are therefore met. SG80 is not in because there is not a well-defined HCR.			
Refere	ences	ISC 2017, WCPFC 2017, W	/CPFC 2018, MSC FS v2.01.		
OVER	ALL PER	FORMANCE INDICATOR SO	CORE:		60
COND		IMBER (if relevant):			
SI a) By the fourth surveillance audit, demonstrate that well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY.					
SI b) E robus	By the fou t to the m	urth surveillance audit, prov ain uncertainties.	vide evidence that the HCR	s are likely to be	3
SI c) I that th requir	By the for ne tools in ed under	urth surveillance audit, der n use are appropriate and e the HCRs.	nonstrate that available ev effective in achieving the ex	idence indicates xploitation levels	



UoA 2 (north Pacific albacore tuna): PI 1.2.3 – Information and monitoring

PI 1.2.3		Relevant information is collected to support the harvest strategy			
Scoring Issue		SG 60	SG 80	SG 100	
2	Range of	f information			
	Guidep ost	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant info1mation 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, UoA 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	
	Justific ation	YYYThe ISC ALBWG coordinates biological research and disseminates research results and statistics to cooperating scientists and the management bodies in support of the harvest strategy. Available information includes:Stock structure: Data suggest distinct north and south Pacific Ocean albacore tuna stocks. The equator is considered the north-south boundary between the stocks. The distinction is supported by a range of fishery, tagging, genetic, and ecological data. Life-history parameters for north Pacific albacore are based on analyses of biological samples, collected routinely on an annual basis. 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.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).Stock abundance is determined via stock assessment (see PI 1.2.4). Removal by all fisheries are reported to IATTC and WCPFC. ISC Members are required to annually report total annual catch, total annual effort and catch-effort data (summary of logbook data).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.			
b	Monitorir	ng			
	Guidep ost	Stock abundance and UoA removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and UoA 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	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	



PI 1.2	I 1.2.3 Relevant information is collected to support the harvest strategy				
			frequency to support the harvest control rule.	robustness of asso and management uncertainty.	essment to this
	Met?	Y	Y	Ν	
	Justific ation	The assessment estimates composition data. Standard ALBWG. The ALBWG aggre the surface fishery, and 5 generalized linear models. entire north Pacific albacord and catches (fishery remove coverage consistent with aster making. ISC Members are required to Category I: total annual cate vessels by fishery); Categor biological data, (size compo- frequency and certainty of assessment, and assessme robust estimation and advice The data are sufficient to sources of uncertainty suc- treatment of the spatial strue fishery does not meet the S	stock abundance using cate lized abundance indices are egated catch and effort data 5°x5° strata for the longline Data for stock assessment a e stock. Discarding is conside rals) are regularly monitored sessment requirements to en to annually report the following tach (round weight by species y II: catch-effort (summary of sition, length or weight freque f monitoring is sufficient gi nt time step (quarterly) and ap e. meet SG60 and SG80 require h as lack of sex–specific si cture of north Pacific albacor G100 requirements.	ch and effort data a regularly monitored into monthly 1°x1° s of standardization are from all fisheries ared overall to be n at a level of accur able management of g data for fishery mo s) total annual effor logbook data); Cate noties, sex informati iven the frequency oproaches taken to en- tirements. There and ze data and the s e population dynam	and size d by the strata for on using s for the egligible acy and lecision- nitoring: t (active egory III: on). The c of the ensuring re some implified ics. The
с	Compret	nensiveness of information			
	Guidep ost		There is good information on all other fishery removals from the stock.		
	Met?		Y		
	Justific	There is adequate information on all other fishery removals from the stock.			
	ation	Other fishery removals suc catch tables in the annual IS	h as recreational fishery by SC Plenary report.	the US are reporte	d in the
Refere	ences	ISC 2017, ISC 2019			
OVER	ALL PER	FORMANCE INDICATOR SO	CORE:		90
COND	ITION NU	MBER (if relevant):			N/A



UoA 2 (north Pacific albacore tuna): PI 1.2.4 – Assessment of stock status

PI 1.2	2.4	There is an adequate asse	essment of the stock status	;
Scorin	g Issue	SG 60	SG 80	SG 100
	Appropri	ateness of assessment to sto	ock under consideration	
	Guidep ost		The assessment is appropriate for the stock and for the harvest control rule.	The assessment takes into account the major features relevant to the biology of the species and the nature of the UoA.
	Met?		Υ	Y
а	Justific ation	The stock has been assess assessments use the Stock exploring and implementing statistical catch-at-age more rigorous. The 2017 stock as structured, forward-simulat model representing the collect The assessment models the operating on it. It uses maxing is then used to evaluate stock The spatial and temporal est analyses of the biology and nine fisheries were defined season, and unit of catch (allocated to these fisheries. per-unit-effort) were provid ALBWG fitted the base case index from the fleet operating Species biology is incorporation sex-specific growth, estimate the assessment takes into a species meeting SG100 recomposition.	sed regularly by the ISC A s Synthesis v3 (SS#) framew g integrated length- and ag odels. The method has ge assessment model is a sex- ing, fully integrated, statisti- ective work of the ALBWG. The population dynamics of the mum likelihood estimates to fick status probabilistically with actent of fisheries in the assess historical fishing operations of for the assessment on the numbers or weight), and all Thirteen relative abundance in the model to one abundance in the stock assessment account the stock assessment account the major features re- nuirements.	LBWG since 2005. Recent ork. SS3 is a framework for e-based forward-simulating nerally been accepted as -specific, length-base, age- cal model. The base-case the stock and the fisheries it a range of parameters and respect to reference points. ssment is defined based on f albacore fisheries. Twenty- basis of gear, fishing area, catch and effort data were indices (standardized catch- inese Taipei, however, the ndex, the Japanese longline 160°E (1996-2015). Int model (e.g. catch-at-size, ates of steepness). Overall, elevant to the biology of the
	Assessm	nent approach		
h	Guidep ost	Theassessmentestimatesstockstatusrelativetogenericreferencepointsappropriateto the speciescategory.	The assessment estimates stock status relative to reference points that are appropriate to the stock and can be estimated.	
5	Met?	Y	Y	
	Justific ation	The stock assessment esti appropriate to the stock and art statistical catch-at-age estimates north Pacific alb potential reference points. S	mates stock status relative t d can be estimated. The asse modelling approach. The 2 acore stock status relative SG100 requirements are met.	to reference points that are essment uses a state-of-the- 2017 assessment provides to a range of adopted and
	Uncertai	nty in the assessment	•	
С	Guidep ost	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	Υ	Y



The model is developed using state-of-the art approaches to investigate model convergence, model structure, parameter mis-specification and data conflicts. Diagnostic tools include model convergence tests, profiles of estimated recruitment at unfished equilibrium, residual analysis, and retrospective analysis.

Justific The stock assessment takes into account uncertainty within the base case model (from data and parameter estimates) and provides 5% and 95% confidence intervals. The assessment also takes into account structural uncertainty, via a range of one-off sensitivity runs. The assessment also provides some projections (from the base case model) with estimates of the probability of SB falling below the LRP at any point up to 2025. SG100 requirements are met.

Evaluation of assessment

d	Guidep ost		The assessm tested and s robust. hypotheses assessment have been explored.	ent has been hown to be Alternative and approaches rigorously
	Met?		Υ	

Justific ation Alternative hypotheses and assessment approaches have been rigorously explored. To explore uncertainty, the ALBWG conducts sensitivity analysis to evaluate changes in data series, growth curve parameters, natural mortality, stock recruitment steepness, selectivity parameters and weighting of size composition data. The assessment provides results in a probabilistic way. SG100 requirements are met.

Peer review of assessment

е

Guidep ost		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
Met?		Υ	Y
	The stock assessment repo WCPFC and IATTC internal	ort is reviewed by ISC in their processes.	r plenary and through other

Justific ation The ISC had three independent reviewers from the Center of Independent Experts (University of Miami) conduct reviews of the assessment in 2011 and recommendations were incorporated into subsequent assessments (Chen, 2011a, b; Cordue, 2011).

 References
 Chen, 2011a, b; Cordue, 2011; ISC 2017

 OVERALL PERFORMANCE INDICATOR SCORE:
 100

 CONDITION NUMBER (if relevant):
 N/A

Updated Principle 1 scoring for north Pacific albacore under MSC v2.0 upgrade

1.1.1	1.1.1 1.2.1 1.2.2 1.2.3 1.2.4				
80	85	60	90	100	82.5

Note: PI 1.1.2 no longer applicable under v2.0 upgrade.



8 References

A full reference list is available in the PCR.

Acoura Marine, 2016. MSC Sustainable Fisheries Certification. Japanese Pole and Line Skipjack and Albacore Fishery, Public Certification Report.

Banks, R., Clark, L., Huntington, T., Lewis, T. & A. Hough (2011). MSC assessment report for PNA Western and Central Pacific Skipjack Tuna (Katsuwonus pelamis) unassociated and log set purse seine fishery. Moody Marine Ltd., 768 pp.

Chen, D.G. 2011a. CIE Review Report for Albacore Tuna Assessment. ISC/12/Plenary/Info/14 Review.

Chen, Y. 2011b. CIE Independent Peer Review Report on Stock Assessment of albacore tuna, Thunnus alalunga, in the North Pacific Ocean. ISC/12/ Plenary/Info/15.

Cordue, P.L. 2011. Review of the 2011 North Pacific Ocean albacore tuna stock assessment. ISC/12/ Plenary/Info/16.

Cordue, P. L. 2013. Review of species and size composition estimation for the western and central Pacific purse seine fishery. WCPFC SC9-2013-ST-IP-02.

Ianelli, J., Maunder, M., and Punt, A. E. 2012. Independent review of the 2011 WCPO bigeye tuna assessment. WCPFC SC8-SA-WP-01.

IATTC (2014) Fifth Meeting of the IATTC Scientific Advisory Committee. (https://www.iattc.org/Meetings/Meetings2014/SAC-05/Docs/_English/SAC-05-RPT_5th%20Meeting%20of%20the%20Scientific%20Advisory%20Committee.pdf).

ISC. 2017. Report of the Seventeenth Meeting of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean. Plenary Session, 12-17 July, 2017, Vancouver, BC, Canada.

ISC. 2019. Report of the Nineteenth Meeting of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean. Plenary Session, 11-15 July, 2019, Taipei City, Taiwan.

McKechnie S., Hampton J., Pilling GM. and Davies N. 2016. Stock assessment of skipjack tuna in the western and central Pacific Ocean. Report to the 12th Regular Session of the WCPFC Scientific Committee, Bali, Indonesia, 3-11 August 2016. WCPFC-SC12-2016/SA-WP-04.

MSC. 2014. MSC fisheries certification requirements and guidance, v.2.0, 1st October 2014. Marine Stewardship Council, London, 528 pp.

MSC. 2018a. MSC fisheries certification process, v.2.1, 31st August 2018. Marine Stewardship Council, London, 189 pp.

MSC. 2018d. MSC fisheries standard, v.2.01, 31st August 2018. Marine Stewardship Council, London, 289 pp.

Vincent MT., Pilling GM. and Hampton J., Pilling G.M. and Davies N. 2016. Stock assessment of skipjack tuna in the western and central Pacific Ocean. Report to the 15th Regular Session of the WCPFC Scientific Committee, Pohnpei, Federated States of Micronesia, 12-20 August 2019. WCPFC-SC15-2019/SA-WP-05.

WCPFC. 2009. Final Report on Independent Review of the Commission's Transitional Science Structure and Functions. WCPFC-SC5-2009/GN-WP-7.

WCPFC. 2014. Summary Report. Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Tenth Regular Session, Cairns, Australia, 2-6 December 2013.

WCPFC. 2015. Summary Report. Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Eleventh Regular Session, Apia, Samoa, 1-5 December 2014.

WCPFC. 2016. Summary Report. Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Twelfth Regular Session, Bali, Indonesia, 3-8 December 2015.



WCPFC. 2017. Summary Report. Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Thirteenth Regular Session. Denarau Island, Fiji, 5-9 December 2016. 361 p.

WCPFC. 2018. Summary Report. Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Fourteenth Regular Session. Manila, Philippines, 3-7 December 2017. https://www.wcpfc.int/meetings/wcpfc14.

WCPFC. 2019. Summary Report. Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Fifteenth Regular Session. Honolulu, Hawaii, USA, 10- 14 December 2018. Draft summary report as at 31 January 2019.

WCPFC-NC. 2017.WCPFC Northern Committee Thirteenth Regular Session. Summary Report 28 August – 1 September, 2017, Busan, Republic of Korea. 56 p. https://www.wcpfc.int/node/29863.

WCPFC-NC. 2018. WCPFC Northern Committee Fourteenth Regular Session. Summary Report 4-7 September, 2018, Fukuoka, Japan. 51 p. https://www.wcpfc.int/node/31946.

WCPFC-SC. 2016. Summary Report. The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Scientific Committee Twelfth Regular Session of the Scientific Committee, Bali, Indonesia, 3-11 August.

WCPFC-SC. 2017. Summary Report. The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Scientific Committee Thirteenth Regular Session of the Scientific Committee, Rarotonga, Cook Islands, 9-17 August 2017.

WCPFC-SC. 2018. Summary Report. The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Scientific Committee Fourteenth Regular Session of the Scientific Committee, Rarotonga, Busan, South Korea, 8-16 August 2018.

WCPFC-SC. 2019. Estimates of annual catches in the WCPFC statistical area. Scientific Committee 15th Regular Session. Pohnpei, Federated States of Micronesia, 12 – 20 August 2019. WCPFC-SC15-2019/ST IP-1.



Appendices 9

9.1 Assessment information

9.1.1 **Previous assessments**

The previous scores under V1.3 are shown below.

Principle 1 scoring of skipjack

	Performance indicator						
Score	1.1.1	1.1.2*	1.2.1	1.2.2	1.2.3	1.2.4	Overall P1 score
2016 v1.3	100	90	70	60	90	95	86.9

* Note: PI 1.1.2 has changed between versions.

Principle 1 scoring of north Pacific albacore

	Performance indicator						
Score	1.1.1	1.1.2*	1.2.1	1.2.2	1.2.3	1.2.4	Overall P1 score
2016 v1.3	100	70	80	60	90	100	83.8

*Note: PI 1.1.2 has changed between certification requirement versions and condition applied at certification is no longer applicable.

The 2016 certification of the fishery was based on an earlier stock assessment and found that SG100 requirements were met for PI 1.1.1. SG80 is the harmonised outcome for PI 1.1.1 under the current assessment.

Under V1.3 the previous condition existed:

3	North Pacific albacore 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 B_{MSY} or some measure or surrogate with similar intent or outcome.	1.1.2	Removed. Performance indicator is no longer applicable under the FS v2.01	70	N/A
---	---	-------	---	----	-----

Small-scale fisheries 9.1.2

To help identify small-scale fisheries in the MSC program, the CAB should complete the table below for each Unit of Assessment (UoA). For situations where it is difficult to determine exact percentages, the CAB may use approximations e.g. to the nearest 10%.

Table 9: Small scale fisheries

Unit of Assessment (UoA)	Percentage of vessels with length <15m	Percentage of fishing activity completed within 12 nautical miles of shore
MSC ECP 2.1 Template CRV/21 R190605	Page 61 of 85	WWW Ir o





9.2 Evaluation processes and techniques

9.2.1 Site visits

The site visit took place on 31 July and 1 August in Japan. Two meetings were held during the site visit to discuss changes in the fishery occurring since the last surveillance audit (2018), that are relevant to the MSC certification. This included changes to:

- fishery operations
- the management system and regulations
- key scientific, management or industry personnel
- the scientific information base including stock status of the target species
- practices that could affect traceability of MSC product, and
- re-scoring of Principle 1 in accordance with the CAB's joint variation request for tuna fisheries and MSC's response to this variation request.

Meeting 1

31 July 2019 10:00 – 11:30 am Fisheries Agency of Japan, Ministry of Agriculture, Forestry and Fisheries, Kasumigaseki, Tokyo

Attendees:

Mitsuhito Kasahara, International Affairs Division, Fisheries Agency of Japan (FAJ) Takatsugu Kudoh, International Affairs Division, Fisheries Agency of Japan Kenji Matsunaga, President, Meiho Gyogyo Co. Ltd (MG) Kensuke Goto, Fishing Department, Meiho Gyogyo Co. Ltd Johanna Pierre, Audit Team Leader, Lloyd's Register (LR) Yoko Tamura, Translator, Lloyd's Register Makiko Horiguchi, Marketing Manager, Lloyd's Register Seiji Takenobu, Food Team Manager, Lloyd's Register

Meeting 2 1 August 2019 9:30 – 11:30 am Meiho Gyogyo Ltd, Shinhamacho, Shiogama

Attendees:

Kenji Matsunaga, President, Meiho Gyogyo Co. Ltd (MG) Kensuke Goto, Fishing Department, Meiho Gyogyo Co. Ltd Johanna Pierre, Audit Team Leader, Lloyd's Register (LR) Yoko Tamura, Translator, Lloyd's Register Makiko Horiguchi, Marketing Manager, Lloyd's Register Seiji Takenobu, Food Team Manager, Lloyd's Register

9.2.2 Stakeholder participation

There were no stakeholders who sought to participate during the surveillance audit.

9.2.3 Evaluation techniques

The scoring was based on the harmonised scores agreed by all CABs and following the variation request accepted by the MSC.

The Variation Request and MSC's response are available at: https://fisheries.msc.org/en/fisheries/japanese-pole-and-line-skipjack-and-albacore-tuna-fishery/@@assessments.

9.2.4 Harmonised fishery assessments



Skipjack tuna – P1 scoring

Table 10. Overlapping fisheries (Skipjack)

Fishery name	Certification status and date		
Japanese pole and line albacore and skipjack fishery	1 Date re-certified: 17 October 2016; Expiry date: 16 October 2021		
Ishihara albacore and skipjack pole and line	 2 Date certified: 12 March 2019; 3 Expiry date: 11 March 2024 		
PNA skipjack and yellowfin, unassociated / non FAD set, tuna purse seine	4 Date re-certified: 23 March 2018; Expiry date: 21 March 2023		
Talley's New Zealand Skipjack Tuna Purse Seine	5 Date re-certified: 28 August 2017; Expiry date: 16 August 2022		
PT Citraraja Ampat, Sorong pole and line Skipjack and Yellowfin Tuna	 6 Date certified: 22 Nov 2018; 7 Expiry date: 21 Nov 2023 		
WPSTA purse seine free school yellowfin and skipjack	8 Date certified: 21 Jun 2018;9 Expiry date: 20 Jun 2023		
Solomon Islands skipjack and yellowfin tuna purse seine and pole & line	10 Date certified: 12 July 2016; Expiry date: 11 July 2021		
Tri Marine Western and Central Pacific skipjack and yellowfin tuna	11 Date certified: 2 June 2016; Expiry date: 2 June 2021		

Table 11. Scoring differences (Skipjack)

Performance Indicators (PIs)	1.1.1	1.2.1	1.2.2	1.2.3	1.2.4
Japanese P & L	100	70	60	90	95
Ishihara skipjack and albacore	100	70	60	90	95
PNA skipjack and yellowfin	100	70	60	90	95
Talley's New Zealand Skipjack	100	70	60	90	95



PT Citraraja Ampat, Sorong Skipjack and Yellowfin Tuna	100	70	60	90	95
WPSTA yellowfin and skipjack	100	70	60	90	95
Solomon Islands skipjack and yellowfin*	100	70	60	90	95
Tri Marine skipjack and yellowfin tuna*	100	70	60	90	95

* scored against FCR v1.3 (v1.3 PI 1.1.2 scores not listed)

North Pacific albacore tuna – P1 scoring

Table 12. Overlapping fisheries (North Pacific albacore)

Fishery name	Certification status and date
Japanese pole and line albacore and skipjack fishery	Date re-certified: 17 October 2016; Expiry date: 16 October 2021
CHMSF British Columbia albacore tuna North Pacific	Date re-certified: June 9 2015; Expiry date: June 8 2020
AAFA and WFOA North Pacific albacore tuna	Date re-certified: June 14 2018; Expiry date: June 13 2023
Ishihara Marine Products albacore and skipjack pole and line fishery	Date certified: 12 March 2019; Expiry date: 11 March 2024

Table 13. Scoring differences (North Pacific albacore)

Performance Indicators (PIs)	1.1.1	1.2.1	1.2.2	1.2.3	1.2.4
Japanese P & L	80	85	60	90	100
CHMSF	80	85	60	90	100
AAFA/WFOA	90	80	60	90	100
Ishihara	80	85	60	90	100

Table 14. Rationale for scoring differences (North Pacific albacore)

If applicable, explain and justify any difference in scoring and rationale for the relevant Performance Indicators (FCP v2.1 Annex PB1.3.6)



There is a difference between the AAFA/WFOA scoring for PI 1.1.1 (90) and other fisheries (80) as the other fisheries have scored lower for PI 1.1.1a on the basis of uncertainty in the estimated female SSB. There is also a minor difference between the AAFA/WFOA scoring for PI 1.2.1 (80) and other fisheries (85) due to the AAFA/WFOA finding that SG100 1.2.1d is not met whereas other fisheries consider that the harvest strategy is periodically reviewed.

9.3 **Peer Review reports**

The upgrade process was not eligible for peer review.

9.4 Stakeholder input

The surveillance audit was announced to stakeholders and interested parties as required through the MSC website. Stakeholders were contacted by Lloyd's Register via email to advise them of the audit and how to participate. Lloyd's Register did not receive any stakeholder submissions. No stakeholder input on the upgrade process was received.



9.5 Conditions

Condition 1

	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score	
Performance Indicator(s) & Score(s)	Skipjack 1.2.1 Scoring issue a	 a) 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. 	70	
Condition	 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. Revised Condition (revised at 3rd surveillance audit): By 2021, 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 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 achieving management objectives reflected in the target and limit reference points. This revised condition results from alignment of the 1.2.1 Harvest Control Rules condition, timelines and associated milestones in accordance to the CABs joint Variation Request and MSC's response to this Variation Request. It should be noted that the Variation Request allows non-suspension of fisheries that are behind target on P1 conditions raised against CR v.1.3. The agreed Variation Request condition deadline for skipjack is 2021. 			
Milestones	It is recognized that 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 Japan Tuna Fisheries Cooperative Association (JTFCA). 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). 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 3). 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 - Interim score 60.		
	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 - Interim score 60.		
	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 - Interim score 60.		
	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.		
	Milestone 4 (revised at 3 rd surveillance audit):		
	By the fourth annual surveillance (2020), the Client should show clear evidence of continued 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, IATTC 2014 and WCPFC 2018). 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 – interim score 60.		
	Milestone 5 (Added at 3 rd surveillance audit)		
	By 2021, the condition should be closed, and the PI rescored at 80.		
	This revised milestone is due to alignment of the 1.2.1 Harvest Strategy condition and associated milestones in accordance to the CABs joint Variation Request and MSC's response to this Variation Request.		
	We have established our action plan to get the following done to meet the SG80 requirements by the fourth annual surveillance:		
	Year 1		
Client action plan	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 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 JTFCA 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		



	<i>Text as in Public Certification Report:</i> 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.			
	Revision of Client Action Plan following the 1 st surveillance audit:			
	Noting the difficulty in developing milestones and a CAP when the small scale UoC can have no direct influence on international fisheries bodies, the audit team at the 1st audit accepted a revision to the CAP. The following text was adopted:			
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that the harvest strategy for skipjack tuna 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.			
	It is noted that the client can have no direct influence on the international bodies which will need to act to close the condition. The CAP in the PCR therefore requires the client to advocate to the FAJ and other relevant organisations for progress towards meeting the condition. Evaluation of progress must therefore consider how the client has advocated for progress rather than measuring actual progress of work against the final condition outcome.			
	During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ representatives were very positive about the certification and recognised the need for its support. Recollecting that the Ministry cannot provide a formal letter of support for reasons covered in the PCR, FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the condition is closed.			
	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI1.2.1.			
Progress on Condition [2017]	The audit team notes the difficulty in developing milestones and a CAP when the small scale UoC can have no direct influence on international fisheries bodies. Milestones and the CAP need to be realistic. The client proposed a simplification of the CAP for year 2 onwards to reflect i) its lack of ability directly to influence progress, ii) the need for it to try to promote progress by asking relevant Japanese agencies (FAJ) to promote progress on its behalf. A revised CAP was proposed and accepted by the audit team.			
	The revised CAP for Year 2 onwards is as follows:			
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that for skipjack tuna 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.			
	Meiho Gyogyo also noted that it would keep a record of all communications related to progress against the condition.			



	As indicated in the report of the 1 st surveillance audit (and above), a decision was made to revise the CAP to more appropriately reflect the role of the client in pursuing the closure of this condition (as above).		
Progress on Condition [2018]	The client indicated that they participated in the following industry meetings since the previous surveillance audit:		
	• Distant Water Tuna Fishery Meeting (2nd session) held on February 23, 2018 (attendees included FAJ and the client representative, Kazuki Yoshida, Yaizu Branch Head. At this meeting, Mr Yoshida advocated to the agency for progress towards achieving the fishery conditions.		
	Distant Water Pole and Line Tuna Fishery Vessel Owner Meeting (1st and 2nd sessions) on May 16 and August 30, 2018		
	During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the conditions are closed. Unfortunately, documentation on Meiho Gyogyo's interactions with the Ministry and FAJ was not available at the audit but they have indicated that that it would keep a record of all communications related to progress against the condition in future.		
	FAJ indicated that they participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules. They have discussions prior to these meetings with the Tuna association and individual companies, including Meiho Gyogyo.		
	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.2.1 for skipjack tuna.		
Progress on Condition [2019]	As indicated in the report of the 1 st surveillance audit (and above), a decision was made to revise the CAP to more appropriately reflect the role of the client in pursuing the closure of this condition.		
	At the surveillance audit, MG indicated that they have a positive working relationship with FAJ, and that FAJ are supportive of MG. Changes in FAJ staff have not affected MG. Typically, MG's contact with FAJ occurs via the Japan Tuna Fisheries Cooperative Association (JTFCA). JTFCA's role is to represent all of its members collectively. Therefore, JTFCA and MG have agreed that MG will conduct MSC-specific work outside of JTFCA. At JTFCA meetings, MG has proposed ideas to reduce fishing pressure and increase fishing efficiency. At this stage, MG concludes that working with fishermen in this way to build consensus about pragmatic approaches that benefit fishers is the best way to progress fishery sustainability. MG provided the audit team with documentation of meetings attended (agendas, attendance lists and meeting records).		
	FAJ visits JTFCA once each month to discuss how management arrangements are working and how the fishery is progressing. FAJ also participated in the Distant Water Pole and Line Tuna Fishery Vessel Owner Meetings in late 2018 and mid-2019 and the Emergency Skipjack Tuna Fishery Vessel Owner Meeting in mid-2019. Their purpose in attending those meetings is to promote the fisheries, provide advice and check on the status and situation of the cooperatives.		
	FAJ continued to participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules.		
	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.2.1 for skipjack tuna.		
Status of condition	On target.		



The harvest strategies and control rules for skipjack are still scheduled for completion within the condition timeline/certificate cycle and this aspect of the condition remains on target (though strongly dependent on progress at WCPFC16 in December 2019). Further to that, the CAB Variation Request results in fishery moving from MSC v1.3 to 2.0 and performance indicator 1.2.1 is re-scored at this audit. This PI has been re-scored as per the CAB Variation Request (see *Section 3.4*) and the timeline is revised to align with that Variation Request which imposes a deadline for skipjack to meet the P1 conditions by 2021

Condition 2

	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score	
Performance Indicator(s) & Score(s)		 There are not yet any well-defined harvest control rules in place and SG80 is not met. 		
		b) HCR are still under development and neither SG80 nor SG100 is met.		
	Skipjack 1.2.2 Scoring issue a, b and c	ci) 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"	60	
		cii) 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".		
	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.			
	Revised Condition (revised at 3 rd surveillance audit):			
Condition	By 2021, 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.			
	This revised condition results from alignment of the 1.2.2 Harvest Control Rules condition, timelines and associated milestones in accordance to the CABs joint Variation Request and MSC's response to this Variation Request.			


	It should be noted that the Variation Request allows non-suspension of fisheries that are behind target on P1 conditions raised against CR v.1.3. The agreed Variation Request condition deadline for skipjack is 2021.
	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.
	Milestones for Condition 2 parallel those for Condition 1, with the development of harvest control rules being a subset of harvest strategy development.
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. 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).
	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 - Interim score 60.
	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 - Interim score 60.
	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 - Interim score 60.
	Milestone 4 : 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.
	Milestone 4 (revised at 3 rd surveillance audit):
	By the fourth annual surveillance, the Client should show clear evidence of continued 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, IATTC 2014 and WCPFC 2018). 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 – interim score 60.
	Milestone 5 (Added at 3 rd surveillance audit)



	Dy 2024 the condition should be closed, and the DI researed at 00	
	By 2021, the condition should be closed, and the PI rescored at 80.	
	This revised milestone is due to alignment of the 1.2.2 Harvest Control Rules condition and associated milestones in accordance to the CABs joint Variation Request and MSC's response to this Variation Request.	
	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:	
	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	
	Action plans established by the FAJ and relevant organizations such as the JTFCA 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.	
Client action plan	Year 2 and onwards	
	Text as in Public Certification Report:	
	We will assess each year progress of the WCPFC and PNA towards meeting the condition and will continue to seek dialogue with FAJ and JTFCA 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.	
	Revision of Client Action Plan following the 1 st surveillance audit:	
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that for skipjack tuna a) well defined harvest control rules for skipjack tuna 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 for skipjack shall take into account the main uncertainties; and 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.	
Progress on Condition [2017]	It is noted that the client can have no direct influence on the international bodies which will need to act to close the condition. The CAP in the PCR therefore requires the client to advocate to the FAJ and other relevant organisations for progress towards meeting the condition. Evaluation of progress must therefore consider how the client has advocated for progress rather than measuring actual progress of work against the final condition outcome.	
	During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ representatives were very positive about the certification and recognised the need for its support. Recollecting that the Ministry cannot provide a formal letter of support for reasons covered in the PCR, FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the condition is closed.	



	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.2.2.
	The audit team notes the difficulty in developing milestones and a CAP when the small scale UoC can have no direct influence on international fisheries bodies. Milestones and the CAP need to be realistic. The client proposed a simplification of the CAP for year 2 onwards to reflect i) its lack of ability directly to influence progress, ii) the need for it to try to promote progress by asking relevant Japanese agencies (FAJ) to promote progress on its behalf. A revised CAP was proposed and accepted by the audit team.
	The revised CAP for Year 2 onwards is as follows:
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that for skipjack tuna a) well defined harvest control rules for skipjack tuna 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 for skipjack shall take into account the main uncertainties; and 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.
	The client indicated that they participated in the following industry meetings since the previous surveillance audit:
Progress on Condition [2018]	 Distant Water Tuna Fishery Meeting (2nd session) held on February 23, 2018 (attendees included FAJ and the client representative, Kazuki Yoshida, Yaizu Branch Head. At this meeting, Mr Yoshida advocated to the agency for progress towards achieving the fishery conditions. Distant Water Pole and Line Tuna Fishery Vessel Owner Meeting (1st and 2nd sessions) on May 16 and August 30, 2018 During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the conditions are closed. Unfortunately, documentation on Meiho Gyogyo's interactions with the Ministry and FAJ was not available at the audit but they have indicated that that it would keep a record of all communications related to progress against the condition in future. FAJ indicated that they participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules. They have discussions prior to these meetings with the Tuna association and individual companies, including Meiho Gyogyo. It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.2.2 for skipjack tuna.
Progress on Condition [2019]	As indicated above, a decision was made to revise the CAP to more appropriately reflect the role of the client in pursuing the closure of this condition. MG indicate that they have a positive working relationship with FAJ, and that FAJ are supportive of MG. Changes in FAJ staff have not affected MG. Typically, MG's contact with FAJ occurs via the Japan Tuna Fisheries Cooperative Association (JTFCA). JTFCA's role is to represent all of its members collectively. Therefore, JTFCA and MG have agreed that MG will conduct MSC-specific work outside of JTFCA. At JTFCA meetings, MG has proposed ideas to reduce fishing pressure and increase fishing efficiency. At this stage, MG concludes that working with fishermen in this way to build



	consensus about pragmatic approaches that benefit fishers is the best way to progress fishery sustainability. MG provided the audit team with documentation of meetings attended (agendas, attendance lists and meeting records).
	FAJ visits JTFCA once each month to discuss how management arrangements are working and how the fishery is progressing. FAJ also participated in the Distant Water Pole and Line Tuna Fishery Vessel Owner Meetings in late 2018 and mid-2019 and the Emergency Skipjack Tuna Fishery Vessel Owner Meeting in mid-2019. Their purpose in attending those meetings is to promote the fisheries, provide advice and check on the status and situation of the cooperatives.
	FAJ continued to participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules.
	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.2.2 for skipjack tuna.
	On target.
Status of condition	The harvest strategies and control rules for skipjack are still scheduled for completion within the condition timeline/certificate cycle and this aspect of the condition remains on target (though strongly dependent on progress at WCPFC16 in December 2019). Further to that, the CAB Variation Request results in fishery moving from MSC v1.3 to 2.0 and performance indicator 1.2.2 is re-scored at this audit. This PI has been re-scored as per the CAB Variation Request (see Section 3.4) and the timeline is revised to align with that Variation Request which imposes a deadline for skipjack to meet the P1 conditions by 2021.

Condition 3

	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
Performance Indicator(s) & Score(s)	Albacore 1.1.2 Scoring issue b and c	Scoring Issue (b): The WCPFC LRP of 20%SBF=0 is arguably set 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 FSSB-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	70



		harmonise assessments with CHMSF (2015), it is considered the SG80 requirements are not met.	
		(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.)	
		Scoring Issue (c):	
		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, inter alia, 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.	
Condition	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 B _{MSY} or some measure or surrogate with similar intent or outcome.		
	Milestones: It is recognise SG80 are met at each scor and the JTFCA.	ed the Client has limited ability directly to ing issue. The Client will need to work throu	ensure the ugh the FAJ
	Milestone 1:		
Milestones	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 - Interim score 60. 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).		evidence of n to enable ore tuna (as IM 2014-06 dit has been Ild likely not 0. Note that ne WCPFC- he Northern
	Milestone 2:		
	By the second annual su continued advocacy within IATTC processes (as alre WCPFC CMM 2014-06 Committee, The mileston	rveillance, the Client should show clear Japan for participation in and support of V eady agreed under harvest strategy deve and IATTC, 2014), and advice from the e associated with this surveillance audi	evidence of VCPFC and elopment in le Northern t 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 - Interim score 60.
	Milestone 3:
	By third annual surveillance, the Client should show clear evidence of continued 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 - Interim score 60.
	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.
	We've established our action plan to get the following done to meet the SG80 requirements within 4 years.
	Vear 1
	By way of the JTFCA, 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.
	Year 2 and onwards
Client action plan	Text as in Public Certification Report:
Client action plan	We will assess each year progress of the WCPFC and PNA towards meeting the condition and will continue to seek dialogue with FAJ and JTFCA 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.
	Revision of Client Action Plan following the 1 st surveillance audit:
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that for north Pacific albacore b) the limit reference point for albacore is set above the level at which there is an appropriate risk of impairing reproductive capacity; and c) the target reference point for albacore is such that the stock is maintained at a level consistent with B _{MSY} or some measure or surrogate with similar intent or outcome.
Progress on Condition [2017]	It is noted that the client can have no direct influence on the international bodies which will need to act to close the condition. The CAP in the PCR therefore requires the client to advocate to the FAJ and other relevant organisations for progress towards meeting the condition. Evaluation of progress must therefore consider how the client has advocated for progress rather than measuring actual progress of work against the final condition outcome.



	During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ representatives were very positive about the certification and recognised the need for its support. Recollecting that the Ministry cannot provide a formal letter of support for reasons covered in the PCR, FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the condition is closed. It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.1.2.
	The audit team notes the difficulty in developing milestones and a CAP when the small scale UoC can have no direct influence on international fisheries bodies. Milestones and the CAP need to be realistic. The client proposed a simplification of the CAP for year 2 onwards to reflect i) its lack of ability directly to influence progress, ii) the need for it to try to promote progress by asking relevant Japanese agencies (FAJ) to promote progress on its behalf. A revised CAP was proposed and accepted by the audit team.
	The revised CAP for Year 2 onwards is as follows:
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that for north Pacific albacore a) the limit reference point for albacore is set above the level at which there is an appropriate risk of impairing reproductive capacity; and b) the target reference point for albacore is such that the stock is maintained at a level consistent with BMSY or some measure or surrogate with similar intent or outcome.
	The client indicated that they participated in the following industry meetings since the previous surveillance audit:
	• Distant Water Tuna Fishery Meeting (2nd session) held on February 23, 2018 (attendees included FAJ and the client representative, Kazuki Yoshida, Yaizu Branch Head. At this meeting, Mr Yoshida advocated to the agency for progress towards achieving the fishery conditions.
	 Distant Water Pole and Line Tuna Fishery Vessel Owner Meeting (1st and 2nd sessions) on May 16 and August 30, 2018
Progress on Condition [2018]	During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the conditions are closed. Unfortunately, documentation on Meiho Gyogyo's interactions with the Ministry and FAJ was not available at the audit but they have indicated that that it would keep a record of all communications related to progress against the condition in future.
	FAJ indicated that they participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules. They have discussions prior to these meetings with the Tuna association and individual companies, including Meiho Gyogyo.
	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.1.2 for north Pacific albacore tuna.
	The inability of MG to directly influence progress against this condition was recognised with a revised CAP for Year 2 onwards, as described above.
Progress on Condition [2019]	At the surveillance audit, MG indicated that they have a positive working relationship with FAJ, and that FAJ are supportive of MG. Changes in FAJ staff have not affected MG. Typically, MG's contact with FAJ occurs via the Japan



	all of its members collectively. Therefore, JTFCA and MG have agreed that MG will conduct MSC-specific work outside of JTFCA. At JTFCA meetings, MG has proposed ideas to reduce fishing pressure and increase fishing efficiency. At this stage, MG concludes that working with fishermen in this way to build consensus about pragmatic approaches that benefit fishers is the best way to progress fishery sustainability. MG provided the audit team with documentation of meetings attended (agendas, attendance lists and meeting records).
	FAJ visits JTFCA once each month to discuss how management arrangements are working and how the fishery is progressing. FAJ also participated in the Distant Water Pole and Line Tuna Fishery Vessel Owner Meetings in late 2018 and mid-2019 and the Emergency Skipjack Tuna Fishery Vessel Owner Meeting in mid-2019. Their purpose in attending those meetings is to promote the fisheries, provide advice and check on the status and situation of the cooperatives.
	FAJ continued to participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules.
	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.1.2 for north Pacific albacore tuna.
Status of condition	Condition 3 is no longer applicable as CAB Variation Request results in fishery moving from MSC v1.3 to 2.0 and performance indicator 1.1.2 no longer exists in MSC 2.0.

Condition 4

	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
Performance Indicator(s) & Score(s)		 a) There are not yet any well-defined harvest control rules in place and SG80 is not met. 	
	Albacore PI 1.2.2 Scoring issues a, b and c	b) HCR are still under development and neither SG80 nor SG100 is met.	
		ci) 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"	60
		cii) 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".	
	Condition at Certification:		
Condition	By the fourth annual surveille that the SG80 requirements rules shall be in place that a that the exploitation rate is re The selection of the harvest uncertainties: c) Evidence st	ance, the client must be in a position to der have been met: a) Well defined harvest co re consistent with the harvest strategy and aduced as limit reference points are approa control rules shall take into account the ma pall be available that indicates that tools in	monstrate Introl ensure ached; b) ain use are



	appropriate and effective in achieving the exploitation levels required under the harvest control rules.
	Revised Condition (revised at 3rd surveillance audit):
	By 2023, 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.
	This revised condition results from alignment of the 1.2.2 Harvest Control Rules condition, timelines and associated milestones in accordance to the CABs joint Variation Request and MSC's response to this Variation Request.
	It should be noted that the Variation Request allows non-suspension of fisheries that are behind target on P1 conditions raised against CR v.1.3. The agreed Variation Request condition deadline for north Pacific albacore is 2023.
	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.
Milestones	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 - Interim score 60. 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).
	Milestone 2 : By the second annual surveillance, the Client should show clear evidence of continued 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 Interim score 60.
	Milestone 3 : By third annual surveillance, the Client should show clear evidence of continued 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 – Interim score 60.
	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 B _{MSY} or some measure or surrogate with similar intent or outcome.
	Milestone 4 (revised at 3rd surveillance audit):



	By the 2020 surveillance audit, the Client should show clear evidence of continued 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, IATTC 2014 and WCPFC 2018). 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 – interim score 60.		
	Milestone 5 (Added at 3 rd surveillance audit)		
	By 2021 (fishery expected to be in reassessment), the client		
	Milestone 6 (Added at 3rd surveillance audit)		
	By 2022 (surveillance 1)		
	Milestone 7 (Added at 3rd surveillance audit)		
	By 2023 this condition should be closed and the PI rescored to 80.		
	The revised milestones is due to alignment of the 1.2.2 Harvest Control Rules condition and associated milestones in accordance to the CABs joint Variation Request and MSC's response to this Variation Request.		
	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:		
	Year 1		
Client action plan	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).		
	Action plans established by the FAJ and relevant organizations such as the JTFCA 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		
	Text as in Public Certification Report:		
	We will assess each year progress of the WCPFC and PNA towards meeting the condition and will continue to seek dialogue with FAJ and JTFCA 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.		
	Revision of Client Action Plan following the 1 st surveillance audit:		
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that for north Pacific albacore a) well defined harvest control rules for albacore 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 for albacore shall take into account the main uncertainties; and 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.		
	It is noted that the client can have no direct influence on the international bodies which will need to act to close the condition. The CAP in the PCR therefore requires the client to advocate to the FAJ and other relevant organisations for progress towards meeting the condition. Evaluation of progress must therefore consider how the client has advocated for progress rather than measuring actual progress of work against the final condition outcome.		
	During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ representatives were very positive about the certification and recognised the need for its support. Recollecting that the Ministry cannot provide a formal letter of support for reasons covered in the PCR, FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the condition is closed.		
	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.2.2.		
Progress on Condition [2017]	The audit team notes the difficulty in developing milestones and a CAP when the small scale UoC can have no direct influence on international fisheries bodies. Milestones and the CAP need to be realistic. The client proposed a simplification of the CAP for year 2 onwards to reflect i) its lack of ability directly to influence progress, ii) the need for it to try to promote progress by asking relevant Japanese agencies (FAJ) to promote progress on its behalf. A revised CAP was proposed and accepted by the audit team.		
	The revised CAP for Year 2 onwards is as follows:		
	Meiho Gyogyo cannot directly influence progress against this condition. However, Meiho Gyogyo will use all available mechanisms and relationships to influence the Fisheries Agency of Japan (FAJ) to promote progress. Meiho Gyogyo will ask FAJ to promote that for north Pacific albacore a) well defined harvest control rules for albacore 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 for albacore shall take into account the main uncertainties; and 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.		
	The client indicated that they participated in the following industry meetings since the previous surveillance audit:		
	• Distant Water Tuna Fishery Meeting (2nd session) held on February 23, 2018 (attendees included FAJ and the client representative, Kazuki Yoshida, Yaizu Branch Head. At this meeting, Mr Yoshida advocated to the agency for progress towards achieving the fishery conditions.		
	 Distant Water Pole and Line Tuna Fishery Vessel Owner Meeting (1st and 2nd sessions) on May 16 and August 30, 2018 		
Progress on Condition [2018]	During discussions, the FAJ confirmed that the client has participated in industry meetings to put forward views and that the client has additionally approached FAJ through phone calls. FAJ (as part of the Ministry) pointed out its strong, continuing support and desire to see progress in ensuring the conditions are closed. Unfortunately, documentation on Meiho Gyogyo's interactions with the Ministry and FAJ was not available at the audit but they have indicated that that it would keep a record of all communications related to progress against the condition in future.		
	FAJ indicated that they participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules. They have discussions prior to these meetings with the Tuna association and individual companies, including Meiho Gyogyo.		



	It is concluded that the client has acted in good faith to advocate for progress against the MSC requirements at PI 1.2.2 for north Pacific albacore tuna.
Progress on Condition [2019]	 The inability of MG to directly influence progress against this condition was recognised with a revised CAP for Year 2 onwards, as described above. MG indicate that they have a positive working relationship with FAJ, and that FAJ are supportive of MG. Changes in FAJ staff have not affected MG. Typically, MG's contact with FAJ occurs via the Japan Tuna Fisheries Cooperative Association (JTFCA). JTFCA's role is to represent all of its members collectively. Therefore, JTFCA and MG have agreed that MG will conduct MSC-specific work outside of JTFCA. At JTFCA meetings, MG has proposed ideas to reduce fishing pressure and increase fishing efficiency. At this stage, MG concludes that working with fishermen in this way to build consensus about pragmatic approaches that benefit fishers is the best way to progress fishery sustainability. MG provided the audit team with documentation of meetings attended (agendas, attendance lists and meeting records). FAJ visits JTFCA once each month to discuss how management arrangements are working and how the fishery is progressing. FAJ also participated in the Distant Water Pole and Line Tuna Fishery Vessel Owner Meetings in late 2018 and mid-2019 and the Emergency Skipjack Tuna Fishery Vessel Owner Meeting in mid-2019. Their purpose in attending those meetings is to promote the fisheries, provide advice and check on the status and situation of the cooperatives. FAJ continued to participate proactively at WCPFC meetings, including promoting development of the harvest strategy and harvest control rules. In March 2019, FAJ contributed to the 4th North Pacific Albacore management Strategy Evaluation (MSE) Workshop held in Yokohama, Japan. The workshop examined progress with the MSE which has a goal to examine the performance of alternative harvest strategies and associated reference points for north Pacific albacore. The outcomes of this workshop are further discussed at the re-scoring of P11.2.2 (Section 3.4). It is concluded that
	On target
Status of condition	Progress on the development of harvest control rules is behind schedule, however the client has made appropriate progress in line with the client action plan. This PI has been re-scored as per the CAB Variation Request (see <i>Section 3.4</i>) and the timeline is revised to align with that Variation Request which imposes a deadline for north Pacific albacore to meet the P1 conditions by 2023.

9.6 Client Action Plan

The Client Action Plan has not been amended to address conditions. However, conditions and milestones have been updated (see above) as a result of revised P1 scoring, in accordance with the CAB Variation Request.



9.7 Surveillance

To be drafted from Client and Peer Review Draft Report

The report shall include the program for surveillance, timing of surveillance audits and a supporting rationale.

Reference(s): FCP v2.1 Section 7.28

Table 15:Fishery surveillance program

Surveillance level	Year 1	Year 2	Year 3	Year 4
e.g. Level 5	e.g. On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit & re-certification site visit

Table 16: Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
e.g. 1	e.g. May 2018	e.g. July 2018	e.g. Scientific advice to be released in June 2018, proposal to postpone audit to include findings of scientific advice

Table 17: Surveillance level rationale

Year	Surveillance activity	Number of auditors	Rationale
e.g.3	e.g. On-site audit	e.g. 1 auditor on-site with remote support from 1 auditor	e.g. From client action plan it can be deduced that information needed to verify progress towards conditions 1.2.1, 2.2.3 and 3.2.3 can be provided remotely in year 3. Considering that milestones indicate that most conditions will be closed out in year 3, the CAB proposes to have an on-site audit with 1 auditor on-site with remote support – this is to ensure that all information is collected and because the information can be provided remotely.



9.8 Risk-Based Framework outputs

N/A