



MOODY MARINE LTD

Public Comment Draft Report for
TOSAKATSUO SKIPJACK POLE & LINE FISHERY

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82093/v3

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1. SUMMARY

This report provides information on the assessment for the Tosakatsuo Skipjack Pole and Line Fishery, carried out by Moody Marine, against the Marine Stewardship Council, Principals and Criteria for sustainable fishing. The assessment team used the default assessment tree contained within the MSC Fishery Assessment Methodology version 1 (FAM v1).

1.1 The Assessment team

Andrew Hough	Principal, Moody Marine
Jo Akroyd	Lead Assessor with P3 responsibility
Joseph Powers	Assessor with P1 responsibility
Satoshi Ishikawa	Assessor with P2 responsibility

1.2 Assessment timeline

Announcement of Main Assessment:	October 2008
Site Visit and Stakeholder Consultation:	February 2009
Expected Date of Completion:	July 2009

1.3 Scores for each Principle

Principle 1	86 PASS
Principle 2	90 PASS
Principle 3	84 PASS

1.4 Recommendation

We believe that the management of the Japanese skipjack pole and line fishery has achieved biological sustainability, protected the productivity of the stocks, and that the fishery has caused minimal impacts on other important elements of the fish and wildlife biota of the region.

1.5 Conditions and timescales

The fishery attained a score of below 80 against two Performance Indicators. The assessment team has therefore set a condition for continuing certification that the client for certification is required to address.

The condition is associated with two key areas of performance of the fishery. However, the two areas relate to the same generic issue. Therefore, a single Condition is required.

Condition 1.

Indicators 1.1.2 and 1.1.1 require that “There are well defined and effective harvest control rules in place. Generally understood harvest control rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached. Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached” and that “Limit and target reference points are appropriate for the stock”. Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category; Reference points are

appropriate for the stock and can be estimated.” Currently, no harvest strategies, objectives and reference points have been formally adopted. While B_{MSY} (biomass at maximum sustainable yield) and F_{MSY} (fishing mortality at maximum sustainable yield) limit reference points are used by the Science Committee (SC) of the Western and Central Pacific Fisheries Commission (WCPFC) and reported to the Commission, these are recognized as being default measures. Therefore, in order to resolve deficiencies in these indicators, the WCPFC needs to move toward formally establishing harvest strategies and reference points.

Action required:

1. Tosakatsuo Skipjack Pole and Line Fishery is to promote and support management actions put forward to develop formal harvest strategies and reference points within the WCPFC and in Japanese domestic management. Communications supporting such measures should be made to the Fisheries Agency of Japan (FAJ). Records should be provided by Tosakatsuo Suisan of communications and responses.
2. Tosakatsuo Skipjack Pole and Line Fishery to provide a summary of Japan’s responses to WCPFC management resolutions and recommendations relating to this condition.
3. If additional resolutions are proposed by WCPFC/FAJ to address this Condition, then these should be supported as in 1 above.
4. If additional resolutions addressing this issue are adopted by the WCPFC, then this condition would be considered closed.

Timescale:

- | | |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Point 1 | Should be completed within 12 months of certification. |
| Point 2 | Tosakatsuo Skipjack Pole and Line Fishery should provide this information within 12 months of certification. |
| Points 3 and 4 | Tosakatsuo Skipjack Pole and Line Fishery should provide an annual summary of WCPFC actions in this regard on the actions of WCPFC, and supportive actions should be initiated at the earliest possible opportunity thereafter. Should the stock status fall below default limit reference points, the relevant scoring indicators would need to be revised by the assessment team. |

2. INTRODUCTION

This report sets out the results of the assessment of the Tosakatsuo Skipjack Pole & Line Fishery against the Marine Stewardship Council (MSC) Principles and Criteria for Sustainable Fishing.

2.1 The fishery proposed for certification

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

Species: Skipjack tuna (*Katsuwonus pelamis*)

Geographical Area: Western and Central Pacific Ocean

Method of Capture: Pole and Line (Distant water Fleet)

Management System: Skipjack occur within the jurisdiction of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC). When operating in the Japanese EEZ, the Japanese fishery is under domestic management of the Ministry of Agriculture, Forestry and Fisheries (MAFF).

Client Group: Tosakatsuo Suisan Co., Ltd.

In the course of the certification it is possible that further companies/vessels may join the client group. This would be in accordance with the MSC's stated desire to allow fair and equitable access to the certification.

2.2 Report Structure and Assessment Process

The aims of the assessment are to determine the degree of compliance of the fishery with the MSC Principles and Criteria for Sustainable Fishing, as set out in Section 9.

This report sets out:

- the background to the fishery under assessment and the context within which it operates in relation to the other areas where skipjack are fished within the western Pacific Ocean
- the qualifications and experience of the team undertaking the assessment
- the standard used (MSC Principles and Criteria)
- stakeholder consultation carried out. Stakeholders include all those parties with an interest in the management of the fishery and include fishers, management bodies, scientists and environmental Non-Governmental Organisations (ENGO's)
- the methodology used to assess ('score') the fishery against the MSC Standard.
- a scoring table with the Scoring Indicators adopted by the assessment team and Scoring Guidelines which aid the assessment team in allocating scores to the fishery. The commentary in this table then sets out the position of the fishery in relation to these Scoring Indicators.

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

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

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

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

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

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

2.3 Stakeholder meetings attended

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

- I1 Japan Tuna Fisheries Co-operative Association: S.Fukuda (Depty Director, International), K.Chiyo (Manager, International), S. Hirahara (Manager, Guidance).
- I2 Fisheries Agency: T.Miwa (Assistant Director), S.Tashiro (Assistant Director).
- I3 Yaizu Fisheries Co-operative Association: M. Yamamoto (Depty Director, Marketing), S.Ooishi (Manager, Marketing), S. Suzuki (Manager, Accounting).
- I4 National Research Institute of Far Seas Fisheries: K. Uosaki (Section Chief, Skipjack & Albacore section).
- I5 Tosakatsuo Suisan Co., Ltd: Y. Myojin (President)
- I6 Toyokunimaru Fisheries Co-operative Association: T. Hashigaya (Director)
- I7 Skipjack Tuna Fishery. Shoyo-Maru: Y. Hamaguchi (Vessel Owner)
- I8 Public Meeting: S.Sawada (Professor,Tokyo Univ. of Marine Science and Technology), Y. Kitagata (President, Aitech), A. Kino (Vice Chairman, Consumer association), T. Suzuki (MSC Japan), R. Seki (JIC-QA), A. Yamauchi (WWF Japan), M. Onda (editor, ISO magazine).

2.4 Other information sources

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

Principle 1

- R1. Langley, A, J. Hampton and M. Ogura. 2005. Stock assessment of skipjack tuna in the western, central Pacific Ocean (SA WP-4). . (<http://wcpfc.org>)
- R2. Langley, A. and J. Hampton. 2008. Stock assessment of skipjack tuna in the western and central Pacific Ocean. SPC, Noumea, New Caledonia. (SA WP-4 Rev. 1). (<http://wcpfc.org>)
- R3. WCPF. 2008a. Report of the stock assessment specialist working group. 11–22 August 2008. Port Moresby, Papua New Guinea. The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean Scientific Committee Fourth

Regular Session. . (<http://wcpfc.org>)

- R4. WCPFC. 2005a. Resolution on the Reduction of Overcapacity . WCPFC Resolution-2005-02. (<http://wcpfc.org>)
- R5. WCPFC. 2005b. Conservation and Management Measure for North Pacific Albacore. WCPFC CMM-2005-03 . (<http://wcpfc.org>)
- R6. WCPFC. 2008b. Approaches for identification of appropriate reference points and implementation of MSE within the WCPO: an overview and response to issues from SC 4. WCPFC5-2008/12. Fifth Regular Session of the WCPFC. 8-12 December 2008. Busan, Republic of Korea. (<http://wcpfc.org>).

Principle 2

- R7. Anon (ISP) 2005a. Report of the Plenary Session of the Fifth Meeting of the Interim Scientific Committee for Tuna and Tuna-like Species in the North Pacific. (<http://isc.ac.affrc.go.jp/meeting.html>)
- R8. Anon 2005b. Annex ix-Report of the stock assessment specialist working groups."I know that the human being and the fish can co-exist" in Anon (WCPFC) ed. Final SCI Report. Presented to the 1st regular session of the Scientific Committee of the Commission for the Conservation and Management of Highly Migratory Fish Stock in the Western and Central Pacific Ocean. (http://www.wcpfc.org/sc1/pdf/sc1_final_report.pdf)
- R9. Bailey, K., P.G. Williams, and D.Itano. 1996. By-catch and Discards in Western Pacific Tuna Fisheries: A Review of SPC Data Holdings and Literature. SPC Oceanic Fisheries Programme, Technical Report No. 34. Available at: <http://www.spc.int/oceanfish/Docs/Technical/TECH34.pdf>
- R10..Chuenpagdee, R., L. E. Morgan, S. M. Maxwell, E. A. Norse, and D. Pauly. 2003. Shifting gears: assessing collateral impacts of fishing methods in US waters. *Frontiers in Ecology*1:517-524.
- R11. Hampton, J., P. Kleiber, A. Langley, Y. Takeuchi and M. Ichinokawa, 2005a. Stock assessment of yellowfin tuna in the western and central Pacific Ocean. (http://www.Wcpfc.org/sc1/pdf/SC1_SA_WP_1.pdf)
- R12..Hampton, J., A. Langley, S. Harley, P. Kleiber, Y. Takeuchi and M. Ichinokawa, 2005b. Estimates of sustainable catch and effort level for target species and the impacts on stocks of potential management measures. Working paper SA WP-10, presented to the 1st Meeting of the Scientific Committee of the WCPFC. Noumea, New Caledonia.
- R13. John R. Sibert,*, Michael K. Musyl and Richard W. Brill, Horizontal movements of bigeye tuna (*Thunnus obesus*) near Hawaii determined by Kalman filter analysis of archival tagging data. *Fisheries Oceanography*. Volume 12 Issue 3, Pages 141 – 151, Published Online: 21 May 2003, 2009
- R14. John Sibert, John Hampton, Pierre Kleiber, Mark Maunder. Biomass, Size, and Trophic Status of Top Predators in the Pacific Ocean. *Science* 15 December 2006, Vol. 314. no. 5806, pp. 1773 – 1776
- R15. Sibert, J., Hampton, J., Kleiber, P. and M. Maunder, 2006. Biomass, size, and trophic status of top predators in the Pacific Ocean. *Science* Vol: 314 1773:1776.

R16. Western Pacific Fishery Management Council (WPFMC). 2002. Amendment 8 to the Fishery Management Plan for the Pelagic Fisheries of the Western Pacific Region. Available at: <http://www.wpcouncil.org/pelagic.htm>.

R17. WCPFC. Western and Central Pacific Tuna Bulletin. 2008. (<http://wcpfc.org>)

Principle 3

R17. Anon, 1988. Law Relating to the Prevention of Marine Pollution and Maritime Disaster. Available at: <http://nippon.zaidan.info/seikabutsu/2001/00500/contents/00015.htm>

R18. FAO. Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas. Available at: <http://www.fao.org/Legal/Treaties/012t-e.htm>

R19. Japanese Cabinet Secretariat, 2001.. Fisheries Basic Act. Available at: http://www.cas.go.jp/jp/seisaku/hourei/data/fba_2.pdf

R20. Japanese Cabinet Secretariat. The Fishery Resources Conservation Law. Available at: <http://faolex.fao.org/docs/pdf/jap1715.pdf>

R21. Western and Central Pacific Fisheries Commission (WCPFC). 2007. Technical and Compliance committee Third Regular Session - Summary Report. Available at: <http://www.wcpfc.int/tcc3/pdf/TCC3%20Summary%20Report%20and%20Attachments.pdf>

R22. Western and Central Pacific Fisheries Commission (WCPFC). 2006. Commission Vessel Monitoring System. Available at: <http://www.wcpfc.int/pdf/Conservation%20and%20Management%20Measure-2006-06%20%5BCommission%20VMS%5D.pdf>

R23. Western and Central Pacific Fisheries Commission (WCPFC). 2006. Strategic Research Plan 2007-2011. Available at: http://www.wcpfc.int/pdf/Research_Plan_2007_2011.pdf

R24. Western and Central Pacific Fisheries Commission (WCPFC). 2005. Scientific Data to be Provided to the Commission. Available at: <http://www.wcpfc.int/pdf/Scientific%20Data%20to%20be%20Provided%20to%20the%20Commisison.pdf>

R25. Western and Central Pacific Fisheries Commission (WCPFC). 2006. Annual Report - Part II, management and compliance. Available at: [http://www.wcpfc.int/pdf/Annual%20Report%20-%20Part%20%20\[Management%20and%20Compliance\].pdf](http://www.wcpfc.int/pdf/Annual%20Report%20-%20Part%20%20[Management%20and%20Compliance].pdf)

3. GLOSSARY OF ACRONYMS USED IN THE REPORT

ABC	Allowable Biological Catch
B _{MSY}	Biomass at Maximum Sustainable Yield
CMM	Conservation Management Measures
CPUE	Catch Per Unit Effort
EEZ	Exclusive Economic Zone
ETP	Endangered, Threatened, Protected
FAD	Fish Aggregation Device
FAJ	Fisheries Agency of Japan
F _{MSY}	Fishing Mortality Rate at Maximum Sustainable Yield
IATTC	Inter – American Tropical Tuna Commission
ISC	Interim Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean
MAFF	Ministry of Agriculture, Forestry and Fisheries, Japan
MSC	Marine Stewardship Council
MSY	Maximum Sustainable Yield
NRIFSF	National Research Institute of Far Seas Fisheries
OFP	Oceanic Fisheries Programme (Secretariat of the Pacific Community)
PI	Performance Indicators
RFMO	Regional Fisheries Management Organization of FAO
ROP	Regional Observer Programme
SC	Science Committee of WCPFC
SG	Scoring Guidelines
SPC	Secretariat of the Pacific Community
TAC	Total Allowable Catch
TCC	Technical Compliance Committee (WCPFC)
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and central Pacific Ocean
WPFMC	Western Pacific Fishery Management Council

4. BACKGROUND TO THE FISHERY

4.1 Introduction

The Japanese distant water pole and line fishery started during the 1950's when the technology to process frozen fish was first developed and made widely available to the industry. This, coupled with the development of more fuel efficient diesel engines, led to the production of larger vessels in excess of 100 tonnes capable of spending up to 30 days at sea. Catches of skipjack tuna by the Japanese fleet peaked in the late 1970's while both catch and effort decreased throughout the 1980's. Both catch and effort have remained nearly stable since 1991, with an average skipjack catch of 100,000mt.

To date, about 50 distant water vessels are licensed to operate in the Japanese pole and line fishery, although only 27 currently fish. The remaining 23 vessel licences are not actively used due to relatively poor economic returns from the fishery. Indeed, the economic status of the fishery is considered the main reason for the observed increase in purse seine vessels that are capable of catching larger quantities of tuna, albeit lower quality than pole and line caught tuna.

4.2 Biology of the Target Species

Skipjack tuna are commonly found in tropical and subtropical waters of the Pacific Ocean. Warm currents flowing toward the northern and southern poles in the western Pacific extend the skipjack distribution to approximately 40°N and 40°S (approximately corresponding to the 20°C surface isotherm). While skipjack occur throughout this area in the western Pacific, their distribution (and availability to fisheries) centers in the equatorial areas. There has been a substantial amount of tagging of skipjack which has indicated that movement is highly variable and is thought to be influenced by large-scale oceanographic variability. This, too, leads to large variation in availability to fisheries.

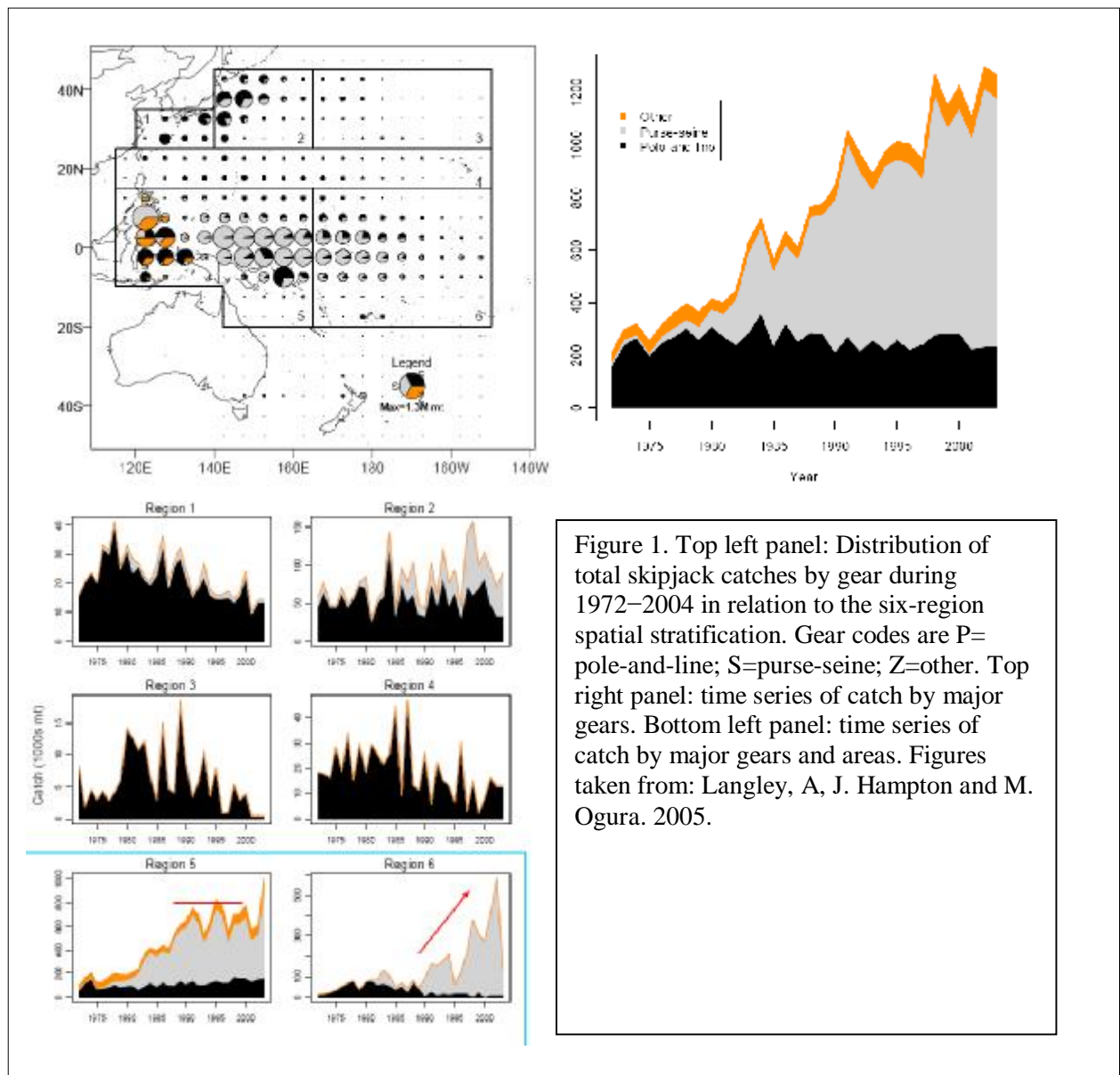
Skipjack growth is very rapid compared to other tropical tunas. Age estimates from both tagging and otolith readings indicate that western Pacific skipjack grow from 48 cm fork length at age 1 to 80 cm FL by age 4. However, there is a great deal of individual variability in growth. Additionally, skipjack reach reproductive maturity by approximately 1 ½ years of age. Tagging data have indicated that natural mortality rates (M's) are quite high compared to other tunas. The longest period at liberty for a tagged skipjack was 4.5 years and tagging estimates of M were in the order of 0.8 per month for skipjack less than 1 year old and 0.12 per month for ages 2 and older. Note that estimates of growth and natural mortality were estimated within the assessment model to account for some of the individual variability. However, results were consistent with studies in which these life history parameters were estimated external to the assessment model.

The effect of these oceanographic factors coupled with the life history parameters is that skipjack are a very productive species which exhibits considerable variability in year-class strength and production.

4.3 History of the Fishery

Skipjack tuna catches in the western and central Pacific Ocean (WCPO) have increased steadily since 1970, more than doubling during the 1980s. The catch has been relatively stable during the early 1990s, approaching 1,000,000 mt per annum. Catches increased again in the late 1990s and averaged about 1,200,000 mt during 1998–2003 (Figure 1). Pole-and-line fleets, primarily Japanese, initially dominated the fishery, with the catch peaking at 380,000 mt in 1984, but the relative importance of this fishery has declined steadily for economic reasons. Annual skipjack tuna catches increased during the 1980s due to growth in the international purse-seine fleet, combined with increased catches by

domestic fleets from the Philippines and Indonesia (which have made up to 20–25% of the total skipjack tuna catch in WCPO in recent years). Catches in the northern regions (1–4) are highly seasonal as are the three domestic pole-and-line fisheries operating in the regions 5 and 6 (Figure 1). Historically, most of the catch has been taken from the western equatorial region (region 5) (Figure 1). Since the late 1980s, annual catches from this region have fluctuated around approximately 650,000 mt. The increase in catch during the late 1990s has been largely attributable to the expansion of the purse-seine fishery in the eastern equatorial region of the WCPO (region 6), and the development of the Japanese off-shore purse-seine fishery in region 2 since the mid-1990s, the development of the equatorial purse-seine log and school fisheries from the mid-1970s and the FAD fisheries in the mid-1990s and the steady increase in catch for the domestic fisheries of Indonesia and the Philippines (from: Langley, A, J. Hampton and M. Ogura. 2005).



4.4 Fleet and Gear Description

Skipjack tuna fisheries are classified into a number of fleets for statistical and assessment purposes. The classifications are: the Japan distant-water and offshore pole-and-line fleets, domestic pole-and-line fleets based in island countries, artisanal fleets based in the Philippines, eastern Indonesia and the Pacific Islands, and distant-water and Pacific-Island-based purse seine fleets. The Japanese distant-water and offshore pole-and-line fleets operate over a large region in the WCPO. A domestic pole-and-line fishery occurred in Papua New Guinea from 1970 to 1985 and an active fishery has occurred in Fiji and the Solomon Islands since 1974 and 1971, respectively. A variety of gear types (e.g. gillnet, hook and line, longline, purse seine, ring net, pole-and-line and unclassified) capture skipjack in the Philippines and Indonesia (Figure 1). Small but locally important artisanal fisheries for skipjack and other tuna (using mainly trolling and traditional methods) also occur in many of the Pacific Islands. Purse seine fleets usually operate in equatorial waters from 10°N to 10°S; although a Japan offshore purse seine fleet operates in the sub-tropical North Pacific. The distant-water purse-seine fleets from Japan, Korea, Taiwan and the USA capture most of the skipjack in the WCPO. Since 1975, purse seiners flagged in various countries (e.g. Australia, Federated States of Micronesia, Kiribati, Mexico, Papua New Guinea, Russia, Solomon Islands, and Vanuatu) have operated in the WCPO. The purse seine fishery is usually classified by set type categories – log, fish aggregation device (FAD) and school sets – because the different set types have somewhat different spatial distributions, catch per unit effort (CPUE) and catch different sizes of skipjack and other tuna. The combined distribution of skipjack catch by these fleets shows tropical (mainly purse seine) and subtropical (Japan-based pole-and-line and purse seine) components (from: Langley, A, J. Hampton and M. Ogura. 2005).

5 STOCK ASSESSMENT

Stock assessments have been conducted on WCPO skipjack by the scientific staff of Secretariat of the Pacific Community in 2002, 2003, 2005 and 2008. Additionally the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean Fisheries (referred to as the WCPFC) was recently formed; this is the Regional Fisheries Management Organization (RFMO) governing tuna and tuna-like species within this region. An important component of the new organization is the Scientific Committee (SC) of the WCPFC which is comprised of scientists from the member nations and cooperating parties. The SC reviewed and contributed to the recent assessment analyses of skipjack. Therefore, the resulting assessments in 2005 and 2008 and the management advice that ensued from those assessments were the result of a joint peer review process emanating from the SC. Additionally, the WCPFC serves as the repository for the catch, effort, size frequency, tagging and biological data from the international fleets. This allows the SC to utilize these data in the stock assessments of the highly migratory species such as skipjack.

5.1 Management Unit

While tagging data indicated some large-scale movements of skipjack, there is no strong evidence of mixing between eastern and western Pacific skipjack. Additionally the availability of skipjack to the fisheries does not appear to be continuous across the Pacific. Therefore, skipjack in the western and central Pacific Ocean (WCPO) are considered a single stock for assessment purposes. Additionally, this coincides with the area of jurisdiction of the WCPFC.

5.2 Assessments and stock status

Stock assessments were conducted most recently using the MULTIFAN-CL model. As with most assessments, MULTIFAN-CL models the population dynamics of the fish and the characteristics of the fisheries based upon a set of unknown parameters that are estimated from observed data. The model makes “predictions” of the data and these are statistically compared to the observations by searching for the set of parameters where the likelihood of the observations and predictions is maximized. The estimated parameters are used to determine stock productivity and status.

The basic approach of MULTIFAN is to model multiple “fishing fleets” which exhibit relatively homogeneous behaviour in regards to their selectivity by size, areas fished and the efficiency of their gear. In the WCPO skipjack application the fisheries were categorized into 24 fleets encompassing the six areas (Figure 1), gears (pole-and-line, purse-seine and others) and the nations to which the fleets belong. The Japanese pole-and-line fishery in selected areas was utilized in this categorization. The observed data included catch and effort data, length frequency data and tagging data. The catch and effort data were categorized by fisheries, by area and by quarter of the year. Catch per effort was standardized using General Linear Models for the fisheries for which there were longer time series of data (including the Japanese pole-and-line fisheries) in which factors such as year, quarter, region, bait effects, effects of radar/sonar and satellite data and the targeting of other species. Length-frequencies were available by 2 cm size class by quarter, year and fishery. However, sampling in each of these strata was not consistent over time. The most consistently sampled fisheries were the Japanese pole-and-line fisheries, the equatorial purse-seine fisheries and the longline fisheries. Tagging data consisted of 226,329 releases from several tagging programs primarily in the 1980s and 1990s in areas 5 and 6 (Figure 1) resulting in a total of 18,042 returns which were used in the assessment model.

MULTIFAN versions which emphasized the equatorial region characterized the preponderance of the fishery and, thus, were deemed to provide the most robust assessment of skipjack status. Growth rate estimates derived from the MULTIFAN application were generally consistent with external length at age observations and provided good agreement with the size frequency data. Estimates of natural mortality were strongly age-specific with higher rates estimated for young skipjack. Age 1 recruitment increased in the 1980s and was estimated to have remained relatively high since then in the western subarea. Recruitment in the eastern equatorial region has been variable with recent age classes (age 1 in 2004 and 2005) being high. Biomass trends follow the recruitment trends since skipjack grow quickly.

The principal conclusions are that skipjack is currently (2007) exploited at a moderate level relative to its biological potential. Furthermore, the estimates of $F_{current}/F_{MSY}$ and $B_{current}/B_{MSY}$ reveals that overfishing of skipjack is not occurring in the WCPO, nor is the stock in an overfished state. These conclusions appear relatively robust. Recruitment variability, influenced by environmental conditions, will continue to be the primary influence on stock size and fishery performance. These conclusions do not substantially differ from those of the assessments of 2002, 2003 and 2005. The 2008 assessment estimates that biomass is approximately three times the biomass at MSY and that the fishing mortality rate is about 26% of that at MSY. The assessment provided likelihood profiles of key status criteria and determined that the probability that current biomass is less than B_{MSY} is virtually zero.

5.3 Management advice

The management advice provided by the Scientific Committee of the WCPFC at their 2008 meeting relative to WCPO skipjack was:

“Catches in 2007 increased to a historical high of ~1.7 million mt. These high catches are sustainable unless recruitment falls persistently below the long-term average. However, any increases in purse-seine catches of skipjack may result in a corresponding increase in fishing mortality for bigeye and yellowfin tunas.”

The implication of this advice and the status determination given above is that the stock is not overfished or undergoing overfishing and that it is at a high level due to recent periods of high recruitment. However, any additional increases in fishing mortality on skipjack would likely result in larger catches of yellowfin and bigeye because of the mixed targeting nature of the purse seine and longline fisheries (and not the pole and line).

6. FISHERY MANAGEMENT FRAMEWORK

6.1 Fishing rights, licensing etc

Twenty seven distant water vessels are licensed to operate in the Japanese pole and line fishery. Until recently there were 50 licences of which only 27 currently fish. The remaining 23 vessel licenses are not were not used. The Government has made a decision to remove these unused licences.

6.2 Fishing locations

The Japanese distant water pole and line fishery (vessels greater than 300 GRT) that target skipjack tuna (*Katsuwonus pelamis*) operate over a large region of the western and central Pacific Ocean (WCPO) both within the Japanese EEZ and High Seas areas. The Japanese fleet operates between two seasonal fishing grounds. Between November and May the fleet mainly fishes in the sub-tropical waters of the Central Pacific Ocean but moves further north around 35°N and east of Japan (150°E) between September and October.

6.3 Administrative Arrangements and Boundaries

Overall responsibility for the management of Japanese pole and line fisheries is dependent on the location of the fishing fleet. The inshore and domestic pole and line fisheries are regulated by the prefectural governments where the fisheries are located. The offshore and distant water fleets are managed by the National Research Institute of Far Seas Fisheries (NRIFSF) of the Japanese Fishery Research Agency.

Due to the highly migratory nature of skipjack tuna and other valuable pelagic fish stocks within the WCPO, the WCPFC was established in 2004 to undertake stock assessments and management of these resources. Scientific data and advice for stock assessments are provided by each member to the WCPFC through the WCPFC-SC (Scientific Committee). As an active member of WCPFC, the Japanese NRIFSF undertakes an annual stock assessment in the form of a 'stock assessment card' for skipjack tuna and submits a report to WCPFC each year. The most recent stock assessment for skipjack tuna was carried out by the Science Committee (SC) of the WCPFC in 2008. The assessment uses an integrated model MULTIFAN-CL that can utilise a wide range of fishery dependent and independent data, including catch and effort, tagging and biological characteristics.

6.4 Legislation and Regulation

Japanese Fisheries Law permits license control measures for all national fisheries, currently administered by MAFF. As part of the license requirements, participants within the pole and line fishery must submit log book information on daily catch statistics

6.5 Harvest controls

To date, the latest assessment of skipjack tuna within the WCPO indicates that the stock biomass far exceeds the levels expected to provide the maximum sustainable yield (BMSY) and is therefore not over-exploited, and does not experience overfishing. As such, no management controls such as catch limits (TACs) or limited entry have been established. These measures will only be triggered

when the results of a stock assessment indicates that the stock biomass has become fully exploited, equivalent to the maximum sustainable yield. Furthermore, due to the low incidence of bycatch species (e.g. sharks, turtles and birds) reported within the pole and line fishery, no mitigation measures are currently employed.

6.6 Monitoring, Control and Surveillance

The WCPFC has several monitoring, enforcement and compliance measures in place and Japan as a member has agreed to adhere to these. Monitoring of catch and bycatch species, in addition to compliance with fisheries regulations, is conducted by WCPFC through a fishery observer program and patrol vessels used to inspect vessels. All participating vessels are also required to be monitored through a vessel monitoring system (VMS).

All fish caught by Japanese pole and line vessels are reported in log books. There are port inspections of vessels that land at a Japanese port and all tuna landings have to be distributed through the wholesale market in Japan. The amount of landings is recorded and reported to the government by the manager of the market (the Wholesale Market Law). In this way, catch data can be verified by the market statistics.

The Japanese government implements a scoring mechanism for each licensee. If poor or bad data are submitted to MAFF, they can get penalized according to the degree of seriousness. After 4 points have been deducted during the lifetime of the license, it can be revoked for a period up to 5 years.

Japan has strict procedures for breaking regulations including imprisonment hard labour and fines.

6.7 Consultation and Dispute Resolution

WCPFC has input from members to make decisions, has members on advisory bodies, allows participation by non-members, and allows observers to participate in this meeting.

The Commission considers input and opinions from all cooperating members before implementing new guidelines and regulations, and the roles and responsibilities of each member party are clearly described.

A three-tier dispute resolution framework for the Commission is laid out in the *“Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels.”*

In Japan a consultation process exists for stakeholders. For the Fisheries Cooperative Associations, the decision making procedure is stipulated in the Fisheries Cooperative Association Law.

Disputes are dealt with by the various Government and Fisheries agencies in formal meetings. Fishers or fishing agencies may bring any matter to the attention of MAFF at any time. After discussion the Government has the final say.

7. ECOSYSTEM CHARACTERISTICS

7.1 Ecosystem characteristics

The distribution of skipjack tuna covers a large area of the Pacific Ocean. It ranges from 40 N to 40 S in latitude and from 100 E to 80 W in longitude. The spawning area of Skipjack is assumed to be from 30 N to 25 S in latitude and from 120 E to 130 W in longitude. Most Japanese fisheries activities operate in the mid western and eastern parts of their distribution range. Previously the mid western and eastern populations were considered to be separate however recent research including molecular

analysis does not support the existence of separate populations.

Many kinds of small zooplankton, including crustacea, salpa, jelly fish and some nectons (including lantern fish), make up the major part of the biomass of the distribution range of Skipjack. The trophic chain of the ecosystem is based on photosynthetic productivity by phytoplankton, the same as in other regions. Although several commercially important species are utilising this area, the biomass of planktonic organisms exceeds the total biomass of utilising species including skipjack.

7.2 By-catch and discarding

The pole and line fishery is composed of following three steps in operation; first step is searching fish batch, second is strewing bait to the fish batch and third is hooking and catching. In general, fish batch comprise of single species. And fish sizes of one batch are usually similar. Therefore, the risk of by-catch from pole and line fishery can be said to be quite low. Although, albacore, yellowfin and bigeye are caught by pole and line fishery incidentally, these are never discarded and treated as catch fish because their high economical values in the market than that of skipjack.

The risk to discard small skipjack is indicated. However, due to the low economic value of the small size skipjack, skipper tends to choose the batch comprised of large size fish. Besides, in order to husband baits on board, skipper quit fishing operation if the batch comprised of small size skipjack. A report said the average fork length of skipjack caught by Japanese purse seine and pole and line fishery, varied from 43.2 ± 2.3 cm to 66.2 ± 7.0 cm (Ashida et al. 2008). Although more information and observation are required in order to grasp accurate figures of by-catch, there is no indication that pole and line fishery derives serious impact on by-catch fish resources through discarding.

Regarding ETP species, the by-catch risk by pole and line fishery could be said to be quite low due to the selectivity of its feature as mentioned before. However, from 2008, Japan government impose to the all pole and line vessels operating in the western and central Pacific Ocean to submit by-catch reports. In this mechanism, sea turtles, sharks and sea birds are nominated as a by-catch species. So far, no reports suggesting pole and line fishery caught any ETP species. There are no systems and mechanisms to assure the compliance of the by-catch report from pole and line vessels, it will be strengthened by the observer program that is going to start in near future under WCPFC.

7.3 Ecosystem impacts

Currently the number of pole and line vessels operating in the far seas is only 27. Two of which are included in the unit of certification. Approximate 20% of the total catch of skipjack tuna in Japan is caught by the pole and line fishery. The other 80% is caught mainly by the purse seine fishery. The length of the line used in pole and line fishing is approximately 5m. Consequently, this fishery only catches the fish in the shallow layers and/or surface of the ocean. Considering the large area of the oceanic ecosystem and taking into account no ETP species being caught along with the low bycatch (which has a high probability of survival), the total impact from the pole and line fishing would be insignificant. A review paper has suggested that although the trophic level if the catch has decreased slightly from 1950 to 2004, no decrease in the trophic level of the population has been detected. This suggests that the fishery has minimum impacts on the trophic structure in the Pacific Ocean.

8. OTHER FISHERIES AFFECTING TARGET STOCK

The Japanese pole and line fleet is part of a much larger fishery that target skipjack tuna in the WCPO, including domestic pole-and-line fleets based in island countries (e.g. PNG, Fiji and Solomon Islands), artisanal fleets based in the Philippines, eastern Indonesia and the Pacific Islands, and distant-water and Pacific-Island-based purse seine fleets. Purse seine fleets usually operate in equatorial waters from 10°N to 10°S and are classified by set type categories (log, fish aggregation

device (FAD) and school sets) because they each have different spatial distributions, catch-per-unit effort and catch different sizes of skipjack and other tuna. WCPFC monitor each fleet targeting skipjack tuna and provide stock assessments and management advice for the entire stock.

Currently, pole and line catches of western Pacific skipjack are less than 20% of the total catch of about 1.2 million mt (Figure 1; see section 4.3. History of the Fishery). The predominate catches are taken by purse seine fleets which increased considerably during the last three decades due to expansion of the purse-seine fishery in the eastern equatorial region of the WCPO (Figure 1), and the development of the Japanese off-shore purse-seine fishery in the north-central region since the mid-1990s, the development of the equatorial purse-seine log and school fisheries from the mid-1970s and the FAD fisheries in the mid-1990s and the steady increase in catch for the domestic fisheries of Indonesia and the Philippines. The pole and line fishery remains the predominate fishery in the northwestern region (region 1 in Figure 1).

9. STANDARD USED

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

9.1 Principle 1

A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.¹:

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

Criteria:

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

9.2 Principle 2

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

¹ The sequence in which the Principles and Criteria appear does not represent a ranking of their significance, but is rather intended to provide a logical guide to certifiers when assessing a fishery. The criteria by which the MSC Principles will be implemented will be reviewed and revised as appropriate in light of relevant new information, technologies and additional consultations

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

Criteria:

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

9.3 Principle 3

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

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

A. Management System Criteria:

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

The management system shall:

2. Demonstrate clear long-term objectives consistent with MSC Principles and Criteria and contain a consultative process that is transparent and involves all interested and affected parties so as to consider all relevant information, including local knowledge. The impact of fishery management decisions on all those who depend on the fishery for their livelihoods, including, but not confined to subsistence, artisanal, and fishing-dependent communities shall be addressed as part of this process.
3. Be appropriate to the cultural context, scale and intensity of the fishery – reflecting specific objectives, incorporating operational criteria, containing procedures for implementation and a process for monitoring and evaluating performance and acting on findings.
4. Observe the legal and customary rights and long term interests of people dependent on fishing for food and livelihood, in a manner consistent with ecological sustainability.
5. Incorporates an appropriate mechanism for the resolution of disputes arising within the system².

² Outstanding disputes of substantial magnitude involving a significant number of interests will normally disqualify a fishery from certification.

6. Provide economic and social incentives that contribute to sustainable fishing and shall not operate with subsidies that contribute to unsustainable fishing.
7. Act in a timely and adaptive fashion on the basis of the best available information using a precautionary approach particularly when dealing with scientific uncertainty.
8. Incorporate a research plan – appropriate to the scale and intensity of the fishery – that addresses the information needs of management and provides for the dissemination of research results to all interested parties in a timely fashion.
9. Require that assessments of the biological status of the resource and impacts of the fishery have been and are periodically conducted.
10. Specify measures and strategies that demonstrably control the degree of exploitation of the resource, including, but not limited to:
 - a) setting catch levels that will maintain the target population and ecological community's high productivity relative to its potential productivity, and account for the non-target species (or size, age, sex) captured and landed in association with, or as a consequence of, fishing for target species;
 - b) identifying appropriate fishing methods that minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;
 - c) providing for the recovery and rebuilding of depleted fish populations to specified levels within specified time frames;
 - d) mechanisms in place to limit or close fisheries when designated catch limits are reached;
 - e) establishing no-take zones where appropriate.
11. Contains appropriate procedures for effective compliance, monitoring, control, surveillance and enforcement which ensure that established limits to exploitation are not exceeded and specifies corrective actions to be taken in the event that they are.

B. Operational Criteria

Fishing operation shall:

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

10. BACKGROUND TO THE EVALUATION

10.1 Evaluation Team

Moody Marine Principal: Dr Andrew Hough

Dr Hough has a PhD in marine ecology from the University of Wales, Bangor and fourteen years post-doctoral experience in commercial marine and coastal environmental management projects. He is manager of Moody Marine operations within Moody International Certification with particular responsibility for the implementation of MSC Certification procedures and development of MSC methodologies. Dr.Hough has acted as lead assessor on the majority of Moody Marine MSC pre assessments and main assessments.

Lead Assessor: Jo Akroyd

Jo Akroyd is Director and Principal Consultant of Jo Akroyd Ltd, an International consultancy company specializing in marine fisheries policy and marine ecosystem and community based management. She has also provided services in quality system implementation and training in project management and negotiation skills. Prior to a career in consultancy, she was manager of International Projects at the Auckland University of Technology and Director of Quality and Strategic Management and Assistant Director of Marine Research at the Ministry of Agriculture & Fisheries, Wellington, NZ. Her specific experience includes acting as a team member on the assessment of the NZ hoki fishery for compliance with Marine Stewardship Council Principles and Criteria (2005- 2010), and on the Ross Sea Tooth fishery (2008) providing specialist inputs on Principle 3 (Fisheries management).

Project Coordinator: Peter Kimura

Moody International Certification Ltd. Mr Kimura is a marketing manager for Moody International Certification Ltd., in Japan with particular responsibility for the development of new business unit in Japan.

Expert advisor: Joseph E Powers

Dr. Joseph E. Powers currently serves as a professor of Stock Assessment in the School of the Coast and Environment, Louisiana State University. Previously Dr Powers served as Senior Stock Assessment Scientist of the Southeast Fisheries Science Centre conducting research on the implementation of science-based management policies for the nation's and world's fisheries. He has had extensive experience in conducting population dynamics studies, scientific stock assessments, in communicating results to constituents and managers, analyzing policy implications for regional, national and international fisheries and serving as a fisheries manager. Specifically, he has served as the Southeast Regional Administrator for the National Marine Fisheries Service, i.e. the senior fisheries manager in the southeast United States interacting with nine coastal states and the US Caribbean in developing and implementing the region's Fishery Management Plans. He has, also, been the lead US scientist conducting stock assessments for Atlantic tuna and billfish species including bluefin tuna, swordfish, albacore and marlins for the International Commission for the Conservation of Atlantic Tunas (ICCAT) and provided policy advice to the US delegation for some 20 years. Dr. Powers' research interests continue to be the modelling of robust sustainable management procedures, integrating ecosystem factors into stock assessments, risk analysis in decision-making and the role of scientific investigations in fisheries management policy.

Expert advisor: Satoshi Ishikawa

Dr Satoshi Ishikawa is an associate professor of Department of Fishery, School of Marine Science and Technology, Tokai University. His expertises are fisheries biology and conservation of natural living

resources. He has some scientific research experiences of conservation genetic on fish distributing tropical and temperate area and of fishing impacts on fish resources of Japan. He previously worked for Southeast Asia Fisheries Development Centre as an expert of fish biology and project coordinator for several years.

10.2 Previous certification evaluations

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

10.3 Inspections of the Fishery

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

Meetings were held as follows. Some of the key issues discussed have been identified for each meeting. Please note that the meeting held on 12 Feb 09 was the public meeting.

Name	Affiliation	Date	Key Issues
S Fukuda K Chiyo S Hirahara	Japan Tuna Fisheries Co-operative Association	9 Feb 09	JTFCA organisation Fishing history/practices
T Miwa S Tashiro	Fisheries Agency	9 Feb 09	Fishery policy/management
M Yamamoto S Oonishi S Suzuki	Yaizu Fisheries Co-operative Association	10 Feb 09	Fisheries management/policy Fishing practice/history
K Uosaki	National Research Institute of Far Seas Fisheries	10 Feb 09	Fisheries management Stock assessment Research
Y Myojin T Hashigaya Y Hamaguchi	Tosakatsuo Suisan Group	11 Feb 09	Fishing practice & history MSC administrative requirements Fisheries management
S Sawada	Professor at Tokyo University of Marine Science and Technology	12 Feb 09	Fishing practice & history MSC requirements in general
Y Kitagata	President of Aitech	12 Feb 09	Fishing practice & history MSC requirements in general
A Kano	Vice chairperson, consumer Association	12 Feb 09	Fishing practice & history MSC requirements in general
T Suzuki	MSC Japan	12 Feb 09	Fishing practice & history MSC requirements in general
A Yamauchi	WWF Japan	12 Feb 09	Fishing practice & history MSC requirements in general
M Onda	Editor, ISO magazine	12 Feb 09	Fishing practice & history MSC requirements in general

11. STAKEHOLDER CONSULTATION

11.1 Stakeholder Consultation

Stakeholders were identified and consulted specifically by Moody Marine. Information was also made publicly available at the following stages of the assessment:

Date	Purpose	Media
14 October 2008	Announcement of assessment	Direct E-mail/letter Notification on MSC website Advertisement in press
4 November 2008	Notification of Assessment Team nominees	Direct E-mail Notification on MSC website
24 November 2008	Notification of intent to use MSC FAM Standard Assessment Tree	Direct E-mail Notification on MSC website
19 December 2008	Notification of assessment visit and call for meeting requests	Direct E-mail Notification on MSC website
9-13 February 2009	Assessment visit	Meetings
13 March 2009	Notification of Proposed Peer Reviewers	Direct E-mail Notification on MSC website
	Notification of Public Draft Report	Direct E-mail Notification on MSC website
	Notification of Final Report	Direct E-mail Notification on MSC website

11.2 Stakeholder Issues

Feedback from stakeholders has assisted in the selection of the assessment team and refinement of the Performance Indicators and Scoring Guideposts. No significant issues have been identified by stakeholders in relation to the fishery under assessment.

12. OBSERVATIONS AND SCORING

12.1 Introduction to scoring methodology

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

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

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

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

13. LIMIT OF IDENTIFICATION OF LANDINGS FROM THE FISHERY

13.1 Traceability

Traceability requirements within the fishery are defined in Appendix E. Companies and vessels within the Unit of Certification eligible to sell as MSC certified are identified.

13.2 At-Sea processing

Product is generally landed as whole and frozen.

13.3 Points of Landing

Prescribed landing points for the fishery are defined in Appendix E. The limit of identification of landings is the landing of skipjack by Tosakatsuo Suisan group member vessels at recognized ports where appropriate recording and monitoring of landings may take place.

13.4 Eligibility to enter Chain of Custody

To be eligible to carry the MSC logo, product from the certified fishery must enter into separate Chain of Custody certifications.

It is recommended that in doing Chain of Custody certifications, that membership of, or authorisation by, Tosakatsuo Suisan is determined for vessels landing skipjack.

13.5 Target Eligibility Date

The target eligibility date is 31st August 2009. This is because the fishing year commences on 1st September 2009.

14. ASSESSMENT RESULTS

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

MSC Principle	Fishery Performance
Principle 1: Sustainability of Exploited Stock	Overall : 86
Principle 2: Maintenance of Ecosystem	Overall : 90
Principle 3: Effective Management System	Overall : 84

The fishery attained a score of 80 or more against each of the MSC Principles and did not score less than 60 against any Indicators. It is therefore determined that the Tosakatsuo Skipjack Pole and Line Fishery be certified according to the Marine Stewardship Council Principles and Criteria for Sustainable Fisheries.

14.1 Conditions

As a standard requirement of the MSC certification methodology, the fishery shall be subject to (as a minimum) annual surveillance audits. These audits shall be publicised and reports made publicly available.

The fishery attained a score of below 80 against two Performance Indicators. The assessment team has therefore set a condition for continuing certification that the client for certification is required to address. The condition is applied to improve performance to at least the 80 level within a period set by the certification body but no longer than the term of the certification.

As a standard condition of certification, the client shall develop an 'Action Plan' for Meeting the Conditions for Continued Certification', to be approved by Moody Marine.

The condition is associated with two key areas of performance of the fishery. However, the two areas relate to the same generic issue. Therefore, a single Condition is required. The Condition, associated timescales and relevant Scoring Indicator are set out below.

Condition 1.

Indicator 1.1.2 requires that management reference points be defined in terms of the target biomass or target fishing mortality rate that is to be achieved, the limit of fishing mortality rate that should not be exceeded and the limit at which biomass should remain above.

Indicator 1.2.2 requires that harvest control rules be defined. Harvest control rules are the “game-plan” which outlines the fishing rates and strategies which will achieve the management targets and objectives, which will allow the fishery to avoid being near management limits, and which sets out the actions needed (reductions in fishing mortality rate) if limits are exceeded.

Currently, no harvest strategies, objectives or reference points have been formally adopted. While BMSY and FMSY limit reference points are used by the Scientific Committee of the WCPFC and reported to the Commission, these are recognized as being default measures. Therefore, in order to resolve deficiencies in these indicators, the WCPFC needs to move toward formally establishing harvest strategies and reference points.

Action required:

1. Tosakatsuo Skipjack Pole and Line Fishery to promote and support management actions put forward to develop formal harvest strategies and reference points within the WCPFC and in Japanese domestic management. Communications supporting such measures should be made to the FAJ. Records should be provided of communications and responses.
2. Tosakatsuo Skipjack Pole and Line Fishery to provide a summary to Moody Marine on Japan's responses to WCPFC management resolutions and recommendations relating to this condition.
3. If additional resolutions are proposed by WCPFC/FAJ to address this Condition, then these should be supported as in 1, above.
4. If additional resolutions addressing this issue are adopted by the WCPFC, then this condition would be considered closed.

Timescale:

Point 1. Should be pursued immediately upon certification.

Point 2. Tosakatsuo Skipjack Pole and Line Fishery should provide this information within 6 months of certification.

Points 3,4. Tosakatsuo Skipjack Pole and Line Fishery should provide an annual summary of WCPFC actions in this regard (after annual WCPFC meetings which are usually in December) on the actions of WCPFC, and supportive actions should be initiated at the earliest possible opportunity thereafter.

Relevant Scoring Indicators: 1.1.2, 1.2.2

APPENDICES

Appendix A: Scoring Table

Appendix B: Peer Review Reports

1. Peer Reviewer Biographies
2. Peer Review Report A
3. Peer Review Report B

Appendix C: Client Action Plan

Appendix D: Stakeholder Comments

Appendix E: Registered companies / vessels within Unit of Certification: eligible to sell MSC certified are listed in Table 1.

APPENDIX A

Scoring Table

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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Principle 1	A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.		
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1.1	Management Outcomes:		
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1.1.1	Stock Status: The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing	It is <u>likely</u> that the stock is above the point where recruitment would be impaired.	It is <u>highly likely</u> that the stock is above the point where recruitment would be impaired. The stock is at or fluctuating around its target reference point.	There is a <u>high degree of certainty</u> that the stock is above the point where recruitment would be impaired. There is a <u>high degree of certainty</u> that the stock has been fluctuating around its target reference point, or has been above its target reference point, <u>over recent years</u> .
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Scoring Comments

95. $B_{current} > 3 \times B_{MSY}$, $F_{current} < 0.4 F_{MSY}$ and it has been this way for entire time series; catch has never exceeded MSY
Therefore, stock status is good and there is no overfishing occurring. There is a high degree of certainty that the stock is above the point where recruitment would be impaired.

Assessment based on an application of MULTIFAN-CL where 24 fisheries are modelled (including Japanese Pole & Line), catch and CPUE and size frequency and tagging data used. No indications of changes in recruitment; size frequency of catches only have limited catches less than 45 cm (size of maturity).

Limit reference points have not been established by the Commission (WCPFC); however, the WCPFC scientific committee are using B_{MSY} and F_{MSY} as limit reference points for their assessments until such time as formal reference points are adopted by the commission. (Langley et al 2005, Langley and Hampton 2008, WCP FC 2008a). There is a high degree of certainty that the stock has been fluctuating around its limit reference point, or has been above its limit reference point, over recent years.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>1.1.2</p>	<p>Reference Points: Limit and target reference points are appropriate for the stock.</p>	<p><u>Generic</u> limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.</p>	<p>Reference points are appropriate for the stock and can be estimated.</p> <p>The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.</p> <p>The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome.</p> <p>For low trophic level species, the target reference point takes into account the ecological role of the stock.</p>

Scoring Comments

75. Generic reference points have been used by the WCPFC Scientific Committee and the stock is well within these limits (see 1.1.1). However, formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points and these are expected to be established over the next 2-3 years (N. Miyabe-Chair of Stock Assessment Specialist Working Group of WCPFC’s scientific committee, - pers. comm.). The Commission itself will have to adopt these recommendations. Target and limit reference points can be estimated from the current assessment. There is no technical reason that it cannot be done. The time needed is to establish the appropriate degree of risk to be implemented. This will take Commission input, as well. This was noted by the WCPFC (*In progressing work on reference points the Commission should establish a parallel/joint process for establishing key management objectives for each target species including the possibility of holding an inter-sessional workshop on management objectives in 2009*, WCPFC 2008). Additionally, it is likely that whatever the targets and references are that are chosen for skipjack, the current status will be within these limits. (Langley et al 2005, Langley and Hampton 2008, WCPFC 2008a).

Skipjack tuna is not considered a low trophic level species.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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1.1.3	<p>Stock Rebuilding: Where the stock is depleted, there is evidence of stock rebuilding.</p>	<p>Where stocks are depleted rebuilding strategies which have a <u>reasonable expectation</u> of success are in place.</p> <p>Monitoring is in place to determine whether they are effective in rebuilding the stock within a <u>specified</u> timeframe.</p>	<p>Where stocks are depleted rebuilding strategies are in place.</p> <p>There is <u>evidence</u> that they are rebuilding stocks, or it is highly likely based on simulation modelling or previous performance that they will be able to rebuild the stock within a <u>specified</u> timeframe.</p>	<p>Where stocks are depleted, strategies are <u>demonstrated</u> to be rebuilding stocks continuously and there is strong evidence that rebuilding will be complete within the <u>shortest practicable</u> timeframe.</p>
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Scoring Comments
Not applicable

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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1.2	Harvest Strategy (management)		
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1.2.1	<p>Harvest Strategy: There is a robust and precautionary harvest strategy in place</p>	<p>The harvest strategy is <u>expected</u> to achieve stock management objectives reflected in the target and limit reference points.</p> <p>The harvest strategy is <u>likely</u> to work based on prior experience or plausible argument.</p> <p><u>Monitoring</u> is in place that is expected to determine whether the harvest strategy is working.</p>	<p>The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy <u>work together</u> towards achieving management objectives reflected in the target and limit reference points.</p> <p>The harvest strategy may not have been fully tested but monitoring is in place and <u>evidence</u> exists that it is achieving its objectives.</p>	<p>The harvest strategy is responsive to the state of the stock and is <u>designed</u> to achieve stock management objectives reflected in the target and limit reference points.</p> <p>The performance of the harvest strategy has been <u>fully evaluated</u> and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.</p> <p>The harvest strategy is <u>periodically reviewed and improved</u> as necessary.</p>
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Scoring Comments

80. The harvest strategy that has been adopted is currently based upon input controls, i.e. the limitation of effort. The WCPFC has recently adopted a resolution to cap fishing effort (R4: WCPFC 2005). Also, various other management measures directed at yellowfin and bigeye catches have been adopted by the WCPFC which have ramifications on skipjack catches. However, these measures relate to purse seine and longline fleets.

Additionally, the Japanese fisheries' agency has placed license limits on skipjack pole and line vessels for some years, maintaining the participation and catch at fairly constant levels. The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work towards achieving management objectives.

Collectively, these input decisions have resulted in the overall pole and line harvest of skipjack being about 200,000 tonnes for the last several decades. These catches and catch rates are continuously monitored and assessed periodically. While the above actions are not formal harvest strategies, they appear to be achieving stock status objectives. Nevertheless, discussions have been initiated within WCPFC to establish further harvest rules for all species (not just skipjack). But these have yet to be implemented.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
1.2.2	Harvest control rules and tools: There are well defined and effective harvest control rules in place	<p><u>Generally understood</u> harvest control rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.</p> <p>There is <u>some evidence</u> that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.</p>	<p><u>Well defined</u> harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.</p> <p>The <u>selection</u> of the harvest control rules takes into account the <u>main</u> uncertainties.</p> <p><u>Available evidence indicates</u> that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules</p>

Scoring Comments

75. The WCPFC has recently adopted a resolution to cap fishing effort (R4: WCPFC 2005). Also, various other management measures directed at yellowfin and bigeye catches have been adopted by the WCPFC which have ramifications on skipjack catches. However, these measures relate to purse seine and longline fleets.

Additionally, the Japanese fisheries' agency has placed license limits on skipjack pole and line vessels for some years, maintaining the participation and catch at fairly constant levels. The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work towards achieving management objectives.

Collectively, these input decisions have resulted in the overall pole and line harvest of skipjack being about 200,000 tonnes for the last several decades. These catches and catch rates are continuously monitored and assessed periodically. While the above actions are not formal harvest strategies, they appear to be achieving stock status objectives. Nevertheless, discussions have been initiated within WCPFC to establish further harvest rules for all species (not just skipjack). But these have yet to be implemented.

Generic reference points have been used by the WCPFC Scientific Committee and the stock is well within these limits (see 1.1.1). However, formal targets and limits have yet to be adopted by the WCPFC. The Scientific Committee has initiated the process to establish these reference points and these are expected to be established over the next 2-3 years (N. Miyabe-Chair of Stock Assessment Specialist Working Group of WCPFC's scientific committee, - pers. comm.). The Commission itself will have to adopt these recommendations. Target and limit reference points can be estimated from the current assessment. There is no technical reason that it cannot be done. The time needed is to establish the appropriate degree of risk to be implemented. This will take Commission input, as well. This has been noted by the WCPFC *"In progressing work on reference points the Commission should establish a parallel/joint process for establishing key management objectives for each target species including the possibility of holding*

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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an inter-sessional workshop on management objectives in 2009” (R6: WCPFC 2008b) Additionally, it is likely that whatever the targets and references are that are chosen for skipjack, the current status will be within these limits. (Langley et al 2005, Langley and Hampton 2008,WCPFC 2008a)..

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>1.2.3</p>	<p>Information / monitoring: Relevant information is collected to support the harvest strategy</p>	<p><u>Some</u> relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</p> <p>Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.</p>	<p><u>Sufficient</u> relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.</p> <p>Stock abundance and fishery removals are <u>regularly monitored at a level of accuracy and coverage consistent with the harvest control rule</u>, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.</p> <p>There is good information on all other fishery removals from the stock.</p> <p>A <u>comprehensive range</u> of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available.</p> <p><u>All information</u> required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent <u>uncertainties</u> in the information [data] and the robustness of assessment and management to this uncertainty.</p>

Scoring Comments

95. A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available. All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>1.2.4</p>	<p>Assessment of stock status: There is an adequate assessment of the stock status</p>	<p>The assessment estimates stock status relative to reference points.</p> <p>The major sources of uncertainty are identified.</p>	<p>The assessment is appropriate for the stock and for the harvest control rule, and is evaluating stock status relative to reference points.</p> <p>The assessment takes uncertainty into account.</p> <p>The stock assessment is subject to peer review.</p> <p>The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.</p> <p>The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.</p> <p>The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.</p> <p>The assessment has been <u>internally and externally</u> peer reviewed.</p>

Scoring Comments

95. The principal conclusions are that skipjack is currently (2007) exploited at a moderate level relative to its biological potential. Furthermore, the estimates of $F_{current}/F_{MSY}$ and $B_{current}/B_{MSY}$ reveal that overfishing of skipjack is not occurring in the WCPO, nor is the stock in an overfished state. These conclusions appear relatively robust. The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery. The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored. Recruitment variability, influenced by environmental conditions, will continue to be the primary influence on stock size and fishery performance. These conclusions do not substantially differ from those of the assessments of 2002, 2003 and 2005. The 2008 assessment estimates that biomass is approximately three times the biomass at MSY and that the fishing mortality rate is about 26% of that at MSY. The assessment provided likelihood profiles of key status criteria and determined that the probability that current biomass is less than B_{MSY} is virtually zero (Langley et al 2005, Langley and Hampton 2008, WCPFC 2008a). The stock assessment is subject to peer review.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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Principle 2	Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends		
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2.1	Retained non-target species		
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2.1.1	<p><i>Status:</i> The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species.</p>	<p>Main retained species are <u>likely</u> to be within biologically based limits or if outside the limits there are <u>measures</u> in place that are <u>expected</u> to ensure that the fishery does not hinder recovery and rebuilding of the depleted species.</p> <p>If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.</p>	<p>Main retained species are <u>highly likely</u> to be within biologically based limits, or if outside the limits there is a <u>partial strategy</u> of <u>demonstrably effective</u> management measures in place such that the fishery does not hinder recovery and rebuilding.</p>	<p>There is a <u>high degree of certainty</u> that retained species are within biologically based limits.</p> <p>Target reference points are defined and retained species are at or fluctuating around their target reference points.</p>
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Scoring Comments

90. The retained species are clearly identified, and includes albacore, bigeye, yellowfin and pacific bluefin tuna, for the pole and line fishery in Japan. As the commercial value of these two retained species in the market are higher than that of skipjack, the catches of these species are regularly reported to Fisheries Agency of the Government of Japan by each of the pole and line vessels. Fish catch data are also submitted to WCPFC through Fisheries Agency. However, the amount of catch of these retained species by pole and line fishery do not make up the major part of the total catch of pole and line. In average for 2003-2006, the portion of albacore, yellowfin and bigeye were 17.8%, 1.9% and 1.8%, respectively (calculated based on Japanese Fisheries statistics). Kikawa and Warashina (1972) reported the catch composition of Japanese Skipjack pole and line operating in the western Pacific Ocean as follow, skipjack 95%, yellowfin 4.6% and bigeye 0.4%. And, the catch compositions of Tosakatsuo group in 2008 estimated logbooks were skipjack 89.5%, yellowfin 0.2%, albacore 10.1% and bigeye 0.1%. There is a high degree of certainty that retained species are within biologically based limits. The stock status of albacore and yellowfin in North and South Pacific Ocean are monitored and assessed by WCPFC, ISC and SPC. These organisations have reported no over catch and concerns for the condition of these stocks so far. Ref. 2-5 Although the pole and line fishery use anchovy as the bait for skipjack, they do not catch the bait fish themselves; they purchase it from different fishing bodies operating around Japan. Therefore, anchovy is not treated as retained species in this case. Anchovy is listed as the target species of TAC in Japan, the stock of anchovy is highly monitored and managed by the TAC mechanisms in Japan.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>2.1.2</p>	<p>Management strategy: There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species.</p>	<p>There are <u>measures</u> in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a <u>partial strategy</u> in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.</p> <p>There is some <u>objective basis for confidence</u> that the partial strategy will work, based on some information directly about the fishery and/or species involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being <u>implemented successfully</u>.</p> <p>There is a <u>strategy</u> in place for managing retained species.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and <u>testing</u> supports <u>high confidence</u> that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being <u>implemented successfully</u>, and intended changes are occurring.</p> <p>There is some evidence that the strategy is <u>achieving its overall objective</u>.</p>

Scoring Comments

90 As mentioned in 2.1.1 above, the retained species of the pole and line fishery in Japan are albacore and yellowfin. The stock monitoring and management is done under WCPFC, ISC and SPC. There are definite strategies in place for albacore and yellowfin stock managements. The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work. Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan comply with the rules are adopted by the WCPFC mechanisms and there is evidence that the strategy is being implemented.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100	
<p>2.1.3</p>	<p>Information / monitoring: Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species.</p>	<p><u>Qualitative information</u> is available on the amount of main retained species taken by the fishery.</p> <p>Information is <u>adequate</u> to <u>qualitatively</u> assess outcome status with respect to biologically based limits.</p> <p>Information is adequate to support <u>measures</u> to manage <u>main</u> retained species.</p>	<p><u>Qualitative information</u> and some quantitative information are available on the amount of main retained species taken by the fishery.</p> <p>Information is <u>sufficient</u> to estimate outcome status with respect to biologically based limits.</p> <p>Information is adequate to support a <u>partial strategy</u> to manage <u>main</u> retained species.</p> <p>Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).</p>	<p>Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.</p> <p>Information is <u>sufficient</u> to <u>quantitatively</u> estimate outcome status with a <u>high degree of certainty</u>.</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage retained species, and evaluate with a <u>high degree of certainty</u> whether the strategy is achieving its objective.</p> <p>Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.</p>

Scoring Comments

85 As the retained species hold high commercial value, they are landed and sold through the wholesaling-retailing system in Japan and there is no discard regarding the retained species. In the wholesaling-retailing system in Japan, the fishermen can not sell their catch themselves. All landed catch are treated by the local fish market which are operated by a local fishermen cooperation association. Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species. All of the landed fish is recorded by the local fishermen's association. Each pole and line vessel must submit their logbook including the positions of their operations and catch to the Ministry of Agriculture, Forestry and Fishery of Government of Japan. Information is sufficient to quantitatively estimate outcome status with a high degree of certainty.

However, there is no observer coverage to verify the information but there is no incentive to misreport. All members of the Japan Skipjack and tuna fishermen's association declared that they will accept the observers on their vessels after WCPFC have established a system.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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2.2	By Catch (also known as 'discards')		
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2.2.1	<p><i>Status</i> The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups.</p>	<p>Main bycatch species are <u>likely</u> to be within biologically based limits, or if outside such limits there are mitigation <u>measures</u> in place that are <u>expected</u> to ensure that the fishery does not hinder recovery and rebuilding.</p> <p>If the status is poorly known there are measures or practices in place that are expected result in the fishery not causing the bycatch species to be biologically based limits or hindering recovery.</p>	<p>Main bycatch species are <u>highly likely</u> to be within biologically based limits or if outside such limits there is a <u>partial strategy</u> of <u>demonstrably effective</u> mitigation measures in place such that the fishery does not hinder recovery and rebuilding.</p>	<p>There is a <u>high degree of certainty</u> that bycatch species are within biologically based limits.</p>
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Scoring Comments

95. As the pole and line fishery is very selective in catching, the bycatch by this fishery is assumed to be extremely low. Pole and line fishery start fishing operation after finding the target skipjack school. The skipjack school usually comprise of the similar size of skipjack individuals, the standard deviation of folk length varied from 3.9 to 10.4 cm. Besides, the mean of folk length of the skipjack schools varied from 43.0 to 58.7 cm Ref.7-8 (Ashida et al. 2007, 2008). The skipper of the pole and line vessels belonging to Tosakatsuo group intend to choose the skipjack school comprising large seize individuals, because the fishery want to produce high quality and high value products so called B1 level product. Therefore, the risk of discarding small size fish is hardly occurred in the fishery.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>2.2.2</p>	<p>Management strategy: There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations.</p>	<p>There are <u>measures</u> in place, if necessary, which are expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, for managing bycatch that is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery.</p> <p>There is <u>some objective basis for confidence</u> that the partial strategy will work, based on some information directly about the fishery and/or the species involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being implemented successfully.</p> <p>There is a <u>strategy</u> in place for managing and minimising bycatch.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports <u>high confidence</u> that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its objective.</p>

Scoring Comments

90 Despite no specific strategy is generally in place for managing bycatch and discards species within the pole and line fishery, the vessels belonging to Tosakatsuo groups use barb less hooks in order to make easy to remove bycatch species. This treatment can shorten the duration of time of bycatch species on boat and can improve the chance of survival of the bycatch species after release. And each pole and line vessel should submit bycatch report to Fisheries Agency after every cruise. This mechanism started in August in 2008. So far no information suggesting bycatch of pole and line fishery. Although there is no mechanism to ensure the reliability of bycatch report submitted from each vessel, observer program which will be started in 2010 under WCPFC can evaluate it in the future. Actually, in 2008, one case of WCPFC observer program has done for the pole and line fishery in far sea. Ref.3.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>2.2.3</p>	<p><i>Information / monitoring</i> Information on the nature and amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch.</p>	<p><u>Qualitative information</u> is available on the amount of main bycatch species affected by the fishery.</p> <p>Information is <u>adequate</u> to <u>broadly understand</u> outcome status with respect to biologically based limits.</p> <p>Information is adequate to support <u>measures</u> to manage bycatch.</p>	<p><u>Qualitative information and some quantitative information</u> are available on the amount of main bycatch species affected by the fishery.</p> <p>Information is sufficient to estimate outcome status with respect to biologically based limits.</p> <p>Information is adequate to support a <u>partial strategy</u> to manage main bycatch species.</p> <p>Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).</p> <p><u>Accurate and verifiable information</u> is available on the amount of all bycatch and the consequences for the status of affected populations.</p> <p>Information is <u>sufficient</u> to quantitatively estimate outcome status with respect to biologically based limits with a <u>high degree of certainty</u>.</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage bycatch, and evaluate with a high degree of certainty whether a strategy is achieving its objective.</p> <p>Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.</p>

Scoring Comments

80. As the risk of bycatch from pole and line fishery is hardly supposed, there is no specific mechanism of information collection and monitoring system regarding bycatch for pole and line fishery, except the bycatch report (see 2.2.2). Using barb less hook is only partial strategy in place for reducing the bycatch risks, and this treatment can be checked by fishermen association at landing. Tosakatsuo Group declared fully following the bycatch report submission and using barb less hook. Because Tosakatsuo group comprise of only two pole and line vessels, the reliability of their compliances are easily ensured.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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2.3	Endangered, Threatened and Protected (ETP) species		
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2.3.1	<p>Status: The fishery meets national and international requirements for protection of ETP species.</p> <p>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species.</p>	<p>Known effects of the fishery are <u>likely</u> to be within limits of national and international requirements for protection of ETP species.</p> <p>Known direct effects are <u>unlikely</u> to create <u>unacceptable impacts</u> to ETP species.</p>	<p>The effects of the fishery are known and are <u>highly likely</u> to be within limits of national and international requirements for protection of ETP species.</p> <p>Direct effects are <u>highly unlikely</u> to create <u>unacceptable impacts</u> to ETP species.</p> <p>Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.</p>	<p>There is a <u>high degree of certainty</u> that the effects of the fishery are within limits of national and international requirements for protection of ETP species.</p> <p>There is a <u>high degree of confidence</u> that there are <u>no significant detrimental effects (direct and indirect)</u> of the fishery on ETP species.</p>
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Scoring Comments			
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95. Some parts of the fishing ground of the pole and line fishery coincides with the distribution and/or migration areas of sea turtle and whale shark. However the method of pole and line fishery has minimal interaction with these species and is not caught by normal fishing activities. There is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species. The limitation of weight of the pole makes it impossible to catch whale shark. Besides, sea turtle and whale shark have no commercial values in Japan. There were no records of catches of seabirds, marine reptiles or marine mammals by pole-and-line in tropical waters at the time of the review conducted by Bailey et al. (1996), nor in observer data currently held by the Oceanic Fisheries Programme (OFP) under Secretariat of the Pacific Community (SPC). There is a reasonable to high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>2.3.2</p> <p>Management strategy The fishery has in place precautionary management strategies designed to:</p> <ul style="list-style-type: none"> - meet national and international requirements; - ensure the fishery does not pose a risk of serious or irreversible harm to ETP species; - ensure the fishery does not hinder recovery of ETP species; and - minimise mortality of ETP species. 	<p>There are <u>measures</u> in place that minimise mortality, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species.</p> <p>The measures are <u>considered likely</u> to work, based on <u>plausible argument</u> (eg general experience, theory or comparison with similar fisheries/species).</p>	<p>There is a <u>strategy</u> in place for managing the fishery's impact on ETP species, including measures to minimise mortality, that is designed to be highly likely to achieve national and international requirements for the protection of ETP species.</p> <p>There is an <u>objective basis for confidence</u> that the strategy will work, based on <u>some information</u> directly about the fishery and/or the species involved.</p> <p>There is <u>evidence</u> that the strategy is being implemented successfully.</p>	<p>There is a <u>comprehensive strategy</u> in place for managing the fishery's impact on ETP species, including measures to minimise mortality, that is designed to achieve <u>above</u> national and international requirements for the protection of ETP species.</p> <p>The strategy is mainly based on information directly about the fishery and/or species involved, and a <u>quantitative analysis</u> supports <u>high confidence</u> that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring. There is evidence that the strategy is achieving its objective.</p>

Scoring Comments

95. Due to no reports suggesting ETP species catch, the impact on ETP stocks by the pole and line fishery is negligible (see. 2.3.1). There is no need for a comprehensive management strategy, as such, regarding ETP species conservation for the skipjack pole and line fishery because of the minimal or nil interactions..However, the WCPFC has policies in place to protect ETP which includes a comprehensive strategy for managing the impact on ETP species based on information about the species involved. There is clear evidence that this strategy is being implemented.. Minimal interaction with ETP species given the gear used and location of this fishery in the water column. Therefore, it is assumed that the fishery does not pose any risk to ETP species.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>2.3.3</p> <p><i>Information / monitoring</i> Relevant information is collected to support the management of fishery impacts on ETP species, including:</p> <ul style="list-style-type: none"> - information for the development of the management strategy; - information to assess the effectiveness of the management strategy; and - information to determine the outcome status of ETP species. 	<p>Information is <u>adequate</u> to <u>broadly understand</u> the impact of the fishery on ETP species.</p> <p>Information is adequate to support <u>measures</u> to manage the impacts on ETP species</p> <p><u>Information</u> is sufficient to <u>qualitatively</u> estimate the fishery related mortality of ETP species.</p>	<p>Information is <u>sufficient</u> to determine whether the fishery may be a threat to protection and recovery of the ETP species, and if so, to measure trends and support a <u>full strategy</u> to manage impacts.</p> <p><u>Sufficient data</u> are available to allow fishery related mortality and the impact of fishing to be <u>quantitatively</u> estimated for ETP species.</p>	<p>Information is <u>sufficient</u> to <u>quantitatively</u> estimate outcome status with a high degree of certainty.</p> <p>Information is adequate to support a <u>comprehensive strategy</u> to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives.</p> <p><u>Accurate and verifiable information</u> is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species</p>

Scoring Comments

90. Despite the fact that the impact on ETP species from pole and line fishery is negligible, each skipper of the vessels has to submit the report for ETP species catch. Information is sufficient to quantitatively estimate outcome status with a high degree of certainty. Pole and line crews cooperate with scientific researches in whale shark biology through the information sharing regarding sightings of them during trips. Regarding the ETP species, the Japanese government takes a precautionary approach for their conservation. A new CMM within the WCPFC for the Regional Observer Program (ROP) entered into force on 15 February 2008. Member countries are required to develop and start the regional and national observation program (WCPFC, 2006). Ref.34 In this connection, Japan has established the fostering scheme of the scientific observer.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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2.4	Habitat		
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2.4.1	<i>Status</i> The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function.	The fishery is <u>unlikely</u> to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is <u>highly unlikely</u> to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is <u>evidence</u> that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.
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Scoring Comments

95 Skipjack distribute widely in Pacific Ocean, from 40N to 40S in latitude and from 110E to 80W in longitude (Matsumoto et al, 1984). Despite Fujino (1996) suggested a possibility of population separation between the western and central Pacific Ocean, South Pacific Commission (SPC 1981) insisted single population of skipjack in Pacific Ocean. Langley et al. (2005) showed the wide and long distance migration of skipjack in western and central Pacific Ocean based on the tagging data. Asida et al (2008) reported there are no geographical differences in batch fecundity of skipjack collected in western and central Pacific Ocean. Therefore, single population of skipjack in the western and central Pacific Ocean could be proper opinion. Pole and line fishery operate in both western and central Pacific Ocean. The stock status was evaluated by Scientific Committee (SC) of WCPFC in 2005. SC reported recent stock status of skipjack in the western and central Pacific Ocean is maintaining high level. Besides, skipjack is year round spawner and the stock of this species would be robust.

Pole and line fishery caught approximate 18% of total catch of skipjack in the western and central Pacific Ocean (SPC 2005). And the Tosakatsuo group catch skipjack by only two pole and line vessels. In addition, pole and line fishery operate only surface and do not contact with the seafloor (Chuenpagdee et al. 2003), it cannot harm skipjack stock and its habitat structure.

The vessels belonging to Tosakatsuo group use anchovy as bite. All anchovy used by Tosakatsuo groups are caught in Japan EEZ and annual amount of the bite is less than 9 tons. Anchovy is also one of the TAC target species in Japan, its stocks is managed by Japanese Government. Therefore, impact on the habitat from bite using by the fishery would be quite small. And the impact on the anchovy stock from the fishery is also small.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>2.4.2</p>	<p>Management strategy There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types.</p>	<p>There are <u>measures</u> in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.</p> <p>The measures are considered <u>likely</u> to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.</p> <p>There is some <u>objective basis for confidence</u> that the partial strategy will work, based on some information directly about the fishery and/or habitats involved.</p> <p>There is <u>some evidence</u> that the partial strategy is being implemented successfully.</p> <p>There is a <u>strategy</u> in place for managing the impact of the fishery on habitat types.</p> <p>The strategy is mainly based on information directly about the fishery and/or habitats involved, and testing supports high confidence that the strategy will work.</p> <p>There is <u>clear evidence</u> that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its objective.</p>

Scoring Comments

95. Far offshore skipjack pole and line fishery in Japan is a license based fishery. Currently a total 45 licenses exist. However, actually 27 vessels are operating. 18 licenses are not in active recently due to economic reason and low profitability. Tosakatsuo Group that is client in this certification holds only two of 27 vessels. In addition, Japan Government declared no increasing of licenses. This treatment is one strategy for input control of fisheries operating in the western and central Pacific Ocean.

As the impact on habitat of skipjack from pole and line fishery is assumed to be small (see, 2.4.1), particular management strategy is not listed. However, Tosakatuo group decided to avoid unnecessary dumping at sea. And the group decided use anchovy caught in Japan coastal area as bite. The garbage landing and bite purchase are monitored by fishermen association at landing site in Japan

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>2.4.3</p>	<p>Information / monitoring Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.</p>	<p>There is a basic understanding of the types and distribution of main habitats in the area of the fishery.</p> <p>Information is adequate to broadly understand the main impacts of gear use on the main habitats, including spatial extent of interaction.</p>	<p>The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery.</p> <p>Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent, timing and location of use of the fishing gear.</p> <p>Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).</p> <p>The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types.</p> <p>Changes in habitat distributions over time are measured.</p> <p>The physical impacts of the gear on the habitat types have been quantified fully.</p>

Scoring Comments

80. Skipjack distributing in central and western Pacific Ocean is assumed to comprise single population. Its habitat type is oceanic. As pole and line fishery never meet the bottom of oceanic area and use only surface layer of the habitats, the fishing impacts by pole and line fishery is supposed to be quite limited. Besides, as the fishery includes only two pole and line vessels, it is hardly assume the serious impact on the whole habitats of skipjack in the central and western Pacific Ocean.

The all far sea fisheries in Japan including trawler, purse seiner, long line and pole and line, are license based fishery. Then, all vessels operating in the habitats ought to submit log books after every cruise to Fisheries Agency of Japan. In the log book, there is the information of fishing location, fish catch in tons sorted by species, fishing operation time, ocean surface temperature. Other training vessels also submit cruise log books including some information of the habitats (temperatures, chlorophyll consistency etc.) to Fisheries Agency of Japan. Fisheries Agency compiles all information from log book and some satellite image data etc. and analyse the habitat situation and stock status of tuna and tuna like species in the western and central Pacific Ocean.

However, no monitoring systems and mechanisms to assure the compliances of the log book information from fishing vessels so far, excepting surface temperature which can be comparable between that in log book and that from satellite image. This will be solved by WCPFC observation mechanisms in near future.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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2.5	Ecosystem		
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2.5.1	<i>Status</i> The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function.	The fishery is <u>unlikely</u> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is <u>highly unlikely</u> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is <u>evidence</u> that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.
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Scoring Comments

90. As mentioned in 2.4.1, the impacts from the pole and line fishery on the ecosystem are quite limited. The pole and line fishery is catching the fish aggregated in the surface layer of the ocean and the target species tend to occur in the relatively shallow layer than the retained species including albacore, yellowfin and other tuna species (http://www.affrc.go.jp/ja/research/seika/data_suisan/h18/enyo/enyo001) this could suggest that the pole and line fishery does not have very much affect on the other species stocks. Peer reviewed articles on the ecosystem indicates that the trophic level of the catch has decreased slightly from 1950 to 2004. However, there are no indications of decrease of the trophic level of the population. The results suggest that the fisheries have minor impacts on the ecosystem in the Pacific Ocean (Sibert et. al., 2006, 2009)

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100	
<p>2.5.2</p>	<p>Management strategy There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function.</p>	<p>There are <u>measures</u> in place, if necessary, that take into account potential impacts of the fishery on key elements of the ecosystem.</p> <p>The measures are considered likely to work, based on <u>plausible argument</u> (eg, general experience, theory or comparison with similar fisheries/ ecosystems).</p>	<p>There is a <u>partial strategy</u> in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.</p> <p>The partial strategy is considered likely to work, based on <u>plausible argument</u> (eg, general experience, theory or comparison with similar fisheries/ ecosystems).</p> <p>There is <u>some evidence</u> that the measures comprising the partial strategy are being implemented successfully.</p>	<p>There is a <u>strategy</u> that consists of a <u>plan</u>, containing measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem.</p> <p>This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm.</p> <p>The measures are considered likely to work based on <u>prior experience</u>, plausible argument or <u>information</u> directly from the fishery/ecosystems involved.</p> <p>There is <u>evidence</u> that the measures are being implemented successfully.</p>

Scoring Comments

90. As mentioned in 2.5.1, the impacts from pole and line fishery on the ecosystem is quite limited. There is no specific information regarding the impact on the ecosystem from pole and line fishery in the far sea. A management strategy regarding the ecosystem health is not considered important at this time. Peer reviewed reports of the ecosystem indicate the fisheries has minor impacts on the trophic structure and function in the Pacific Ocean (Sibert et al, 2006)

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100	
<p>2.5.3</p>	<p><i>Information / monitoring</i> There is adequate knowledge of the impacts of the fishery on the ecosystem.</p>	<p>Information is adequate to <u>identify</u> the key elements of the ecosystem (e.g. trophic structure and function, community composition, productivity pattern and biodiversity). Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but <u>have not been investigated in detail</u>.</p>	<p>Information is adequate to <u>broadly understand the functions</u> of the key elements of the ecosystem. Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but <u>may not have been investigated in detail</u>. The main functions of the Components (i.e. target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are <u>known</u>. Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred. Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).</p>	<p>Information is adequate to <u>broadly understand the key elements</u> of the ecosystem. Main <u>interactions</u> between the fishery and these ecosystem elements can be inferred from existing information, and <u>have been investigated</u>. The impacts of the fishery on target, Bycatch, Retained and ETP species and Habitats are identified and the main functions of these Components in the ecosystem are <u>understood</u>. Sufficient information is available on the impacts of the fishery on the Components <u>and elements</u> to allow the main consequences for the ecosystem to be inferred. Information is sufficient to support the development of strategies to manage ecosystem impacts.</p>

Scoring Comments

85. As mentioned in 2.4.3, the vessel monitoring system (VMS) has been equipped to all pole and line vessels. These vessels monitor the sea water temperature and submit the data to the Fisheries Agency by radio transmission every day. Other information suggesting any ecosystem changes are also provided to the Fisheries Agency through logbooks submission and dialogues between the fishermen and governmental officers at annual meetings. Information is adequate to broadly understand the key elements of the ecosystem. Impacts of the fishery on these key ecosystem elements is considered to be negligible. Sufficient data is collected to detect any increase in risk level. The main functions of the Components in the ecosystem are known and information is available to determine that the consequences are minimal. Sometimes crews of the pole and line vessel cooperate with the tagging project for skipjack research. However, there is no research and/or review report the impact from pole and line fishery on the ecosystem generally.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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Principle 3	The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable		
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3.1	Governance and Policy		
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3.1.1	<p>Legal and/or customary framework</p> <p>The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"> - Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; - Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and - Incorporates an appropriate dispute resolution framework. 	<p>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</p> <p>The management system incorporates or is subject by law to a <u>mechanism</u> for the resolution of legal disputes arising within the system.</p> <p>Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.</p> <p>The management system has a mechanism to <u>generally respect</u> the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.</p>	<p>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</p> <p>The management system incorporates or is subject by law to a <u>transparent mechanism</u> for the resolution of legal disputes which is <u>considered to be effective</u> in dealing with most issues and that is appropriate to the context of the fishery.</p> <p>The management system or fishery is attempting to comply in a timely fashion with binding judicial decisions arising from any legal challenges.</p> <p>The management system has a mechanism to <u>observe</u> the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.</p>	<p>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</p> <p>The management system incorporates or is subject by law to a <u>transparent mechanism</u> for the resolution of legal disputes that is appropriate to the context of the fishery and has been <u>tested and proven to be effective</u>.</p> <p>The management system or fishery acts proactively to avoid legal disputes or rapidly implements binding judicial decisions arising from legal challenges.</p> <p>The management system has a mechanism to <u>formally commit</u> to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.</p>
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SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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Scoring Comments

90.

WCPFC Framework:

- The international management agencies responsible for skipjack in the Pacific Ocean include the Inter-American Tropical Tuna Commission (IATTC) and the Western and Central Pacific Fisheries Commission (WCPFC). Regulations are generally based on recommendations by the commission staff or scientific committees, and implemented by member and cooperating countries. The WCPFC came into force on June 2004, and regulates and manages all HMS in the western and central Pacific; the IATTC manages tuna in the eastern Pacific Ocean.
- The WCPFC has a governance and policy structure which includes several committees (including the Scientific and Technical & Compliance Committees) and groups that member states (including Japan) participate in.
- Japan is a fully cooperating member of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean.
- A three-tier dispute resolution framework for the Commission is laid out in the “*Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels*”
- Resolutions with measures to mitigate and prevent by-catch of non-target fish seabirds, turtles and sharks exist.
- The convention has specified 10 activities or items that indicates a vessel has carried out IUU fishing, and all patrol and enforcement vessels monitor these activities.

Japan Framework:

- Japanese fisheries are managed based on the Fisheries Basic Act (Act No.89 of June 29, 2001).
- The Act provides for delivering sustainable management. It allows for development of fisheries while ensuring sustainable utilisation.
- The Japanese Fisheries Management system legal framework incorporates policies and practices of government, agencies, industry and the community
- The Government takes necessary legislative, fiscal and financial measures to implement the policies on fisheries.
- The Government seeks opinions from the Fishery Policy Council, in establishing the basic plan. The Council is made up of academics and industry.
- Measures relevant to fishing villages referred in the basic plan must be developed in harmony with the national plan of comprehensive utilization, development and conservation of the national land. Articles one is rural development
- Regarding high sea fisheries, the number of licenses and the fishing capacity of tuna vessels are strictly regulated by the Government of Japan in order to prevent the expansion of fishing effort and/or fishing capacity. No Japanese tuna vessel is authorized to operate in the high seas unless the Government of Japan issues a license.
- It is unlikely there is any subsistence fishing as the resource is located far offshore. There are no customary fisheries
- The State and local governments endeavour to cooperate in taking measures for fisheries.
- Disputes are dealt with by the various Government and Fisheries agencies in formal meetings. Fishers or fishing agencies may bring any matter to the attention of MAFF at any time. After discussion the Government has the final say
- Japanese fisheries are managed based on the Fisheries Law and other fisheries-related laws and regulations. Governmental officials of MAFF conduct landing surveys

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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at fishing ports to monitor catch.

Taking the above evidence into account, all elements meet SG80 and in some areas Capability of delivering sustainable fisheries in accordance with Principles 1 and 2, respect for the laws, and observing legal rights created explicitly or by custom of people dependent on fishing for food or livelihood the SG 100 is met.

<p>3.1.2</p>	<p>Consultation, roles and responsibilities The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties.</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <u>generally understood</u>.</p> <p>The management system includes consultation processes that <u>obtain relevant information</u> from the main affected parties, including local knowledge, to inform the management system.</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <u>explicitly defined and well understood for key areas</u> of responsibility and interaction.</p> <p>The management system includes consultation processes that <u>regularly seek and accept</u> relevant information, including local knowledge. The management system demonstrates consideration of the information obtained.</p> <p>The consultation process <u>provides opportunity</u> for all interested and affected parties to be involved.</p>	<p>Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <u>explicitly defined and well understood for all areas</u> of responsibility and interaction.</p> <p>The management system includes consultation processes that <u>regularly seek and accept</u> relevant information, including local knowledge. The management system demonstrates consideration of the information and <u>explains how it is used or not used</u>.</p> <p>The consultation process <u>provides opportunity and encouragement</u> for all interested and affected parties to be involved, and <u>facilitates</u> their effective engagement.</p>
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Scoring Comments

85.

WCPFC Framework

- Organisations and individuals involved in the management process have been identified.
- Roles and responsibilities are defined and well understood for key areas of responsibility and interaction
- WCPFC has input from members to make decisions, has members on advisory bodies, allows participation by non-members, and allows observers
- The Commission considers input and opinions from all cooperating members before implementing new guidelines and regulations, and the roles and responsibilities of each member party are clearly described.

Japan Framework

- Organisations and individuals involved in the management process have been identified.
- Roles and responsibilities are defined and well understood for key areas of responsibility and interaction
- The Japanese government has to invite public opinion about their measures based on the Administrative Procedure Act.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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- A consultation process exists for stakeholders. For the Fisheries Cooperative Associations, the decision making procedure is stipulated in the Fisheries Cooperative Association Law
- An annual meeting is called by Government. Although minutes of meetings were not cited both government and industry stakeholders indicated that they participated in these annual meetings. A consultation process exists for stakeholders. For the Fisheries Cooperative Associations, the decision making procedure is stipulated in the Fisheries Cooperative Association Law
- There are also opportunities for ad hoc meetings to take place if necessary. Regional fisheries agencies hold monthly meetings. The Central association (Tokyo) holds monthly meeting that Government representatives are invited to and do attend.
- There is evidence that information from these meetings is considered eg licence numbers.

Taking the above evidence into account, all elements meet the SG 80 some achieves a higher performance but none meet SG100.

3.1.3	Long term objectives The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.	Long-term objectives to guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are <u>implicit</u> within management policy.	<u>Clear</u> long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are <u>explicit</u> within management policy.	<u>Clear</u> long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are <u>explicit</u> within <u>and required by</u> management policy.
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Scoring Comments

80.

WCPFC Framework

- Members of the Commission agree to apply the precautionary approach in accordance with this Convention and all relevant internationally agreed standards and recommended practices and procedures.
- Japan has signed the Convention on the Conservation and Management of Highly Migratory Fish Stock in the Western and Central Pacific Ocean. The objective of this Convention is to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and the Agreement.
- There are currently no TACs, trip limits or size limits for skipjack tuna in the WCPO, but as adequate research and monitoring plans are in place, it is assumed that they will be implemented at the first indication they are required.

Japan Framework

- In the Fisheries Basic Act there are clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, they are explicit within management policy

- The sound development of fisheries is promoted, while maintaining sustainable utilization of fishery resources, by fostering efficient and stable fishery management for the fishery production, processing of marine products and distribution that meet the demands of the citizens.
- There is a plan for fisheries which promotes the direction for policies on fisheries. And outlines the measures that the Government shall implement comprehensively and systematically for fisheries.

The evidence suggests that the SG80 is met but does not reach a higher performance.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100	
3.1.4	Incentives for sustainable fishing The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that negative incentives do not arise.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and <u>explicitly considers</u> incentives in a <u>regular review</u> of management policy or procedures to ensure that they do not contribute to unsustainable fishing practices.

Scoring Comments

85.

WCPFC framework

The Commission has passed a resolution that fishing effort should not increase. The sets a stage to minimize disincentives (perverse subsidies) to sustainable fishing.

Japan Framework

- Japan has limited the participation of vessels in the fishery, which demonstrates no disincentives to sustainable fisheries.
- Japan secures the import of marine products for which domestic production cannot meet the demands; and imposes import restrictions, tariff rate adjustments and other necessary measures when deemed necessary, in case certain imports give or are likely to give serious adverse effects on an appropriate conservation and management of living aquatic resources or on the production of marine products that compete against imports.
- Japan promotes international technical and financial cooperation for the promotion of fisheries in the developing regions to contribute to the long-term stability of the world's supply and demand of marine products.
- Japan in view of the importance of enabling motivated fishery operators to develop creative fishery management, take measures such as improvement of conditions that helps management rationalization, promotion of improvement of fishing boats and other facilities, promotion of joint operation of business and others necessary for the promotion of reinforcement of fishery management infrastructure to develop efficient and stable fishery management.
- Japan shall take necessary measures such as promotion of education on fisheries to obtain better understanding and interest of the citizens in fisheries.
- Japan takes measures such as the enhancement of business base, promotion of coordination with fisheries and rationalization of marine products marketing for the sound development of fishery processing industry and fishery marketing with consideration to the reduction of adverse effects to environment caused by the business operation and maintenance of effective utilization of resources

The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that negative incentives do not arise. And there is management policy to ensure that they do not contribute to unsustainable fishing so a score of 85 was awarded

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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3.2	Fishery- specific management system		
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3.2.1	Fishery-specific objectives The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.	Objectives, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are <u>implicit</u> within the fishery's management system.	<u>Short and long term objectives</u> , which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are <u>explicit</u> within the fishery's management system.	<u>Well defined and measurable short and long term objectives</u> , which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are <u>explicit</u> within the fishery's management system.
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Scoring Comments

80.
WCPFC Framework

- Japan has signed the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. The objective of this Convention is to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and the Agreement. The Convention agreement includes measures to protect stock status, trophic relationships and habitat. Resolutions to mitigate and prevent bycatch of non target fish, seabirds, turtles and sharks exists
- Japanese vessels must also follow a law relating to the prevention of marine pollution and maritime disaster, which addresses some of the outcomes of P2.
- Resolutions with measures to mitigate and prevent bycatch of non-target fish, seabirds, turtles and sharks exist.

Japan Framework

- The client company has explicit short and long term objectives as indicated in their Company document and as evidenced in the Company's offices regarding their commitment to meeting MSC criteria. They want to provide the consumer with the best quality product that meets all the outcomes as expressed by MSC P 1 and P2.
- How the company intends to meet these objectives does not appear to be documented eg in a management plan which should clearly define measurable short and long term objectives, demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, explicit within the fishery's management system.

SG 80 is met because there are Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.. It does not achieve a higher performance.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100	
<p>3.2.2</p>	<p>Decision-making processes The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives.</p>	<p>There are <u>informal</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>serious issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take <u>some</u> account of the wider implications of decisions.</p>	<p>There are <u>established</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>serious and other important issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.</p> <p>Decision-making processes use the precautionary approach and are based on best available information.</p> <p><u>Explanations</u> are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.</p>	<p>There are <u>established</u> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.</p> <p>Decision-making processes respond to <u>all issues</u> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.</p> <p>Decision-making processes use the precautionary approach and are based on best available information.</p> <p><u>Formal reporting</u> to all interested stakeholders describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.</p>

Scoring Comments

85.

WCPFC Framework

- The Convention includes an article on decision making that requires decision making to be by consensus with few exceptions, which are well defined and explained. The Convention includes an article on decision making that requires decision-making in the Commission to be by consensus, with few exceptions, which are well defined and explained.

Japan Framework

- Japans decision making processes take place in various forums. There are annual meetings held by MAFF and also monthly meeting held by Prefecture Fishery Agencies. There are opportunities for public hearings for fishers and fishing associations to be involved in decisions eg the serious and important issue of the number of licences allowed. This process resulted in a precautionary 27 licences. It is not clear that the decision making processes respond to all issues.
- Within Japan, a consultation process exists for stakeholders. For the Fisheries Cooperative Associations, the decision making procedure is stipulated in the Fisheries Cooperative Association Law.
- The Japanese government has to invite public opinion about their measures based on the Administrative Procedure Act. Information on decision making is available. to

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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Public

- When deemed necessary for conservation and culture, the Japanese Government may ask fisheries cooperatives or others for cooperation in the work of conservation and culture of fishery resources.

All elements of SG 80 are met and some meet higher performance but in almost all elements SG 100 is not met.

<p>3.2.3</p>	<p>Compliance and enforcement Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.</p>	<p>Monitoring, control and surveillance <u>mechanisms</u> exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.</p> <p>Sanctions to deal with non-compliance exist and there is some evidence that they are applied.</p> <p>Fishers are <u>generally thought</u> to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.</p>	<p>A monitoring, control and surveillance <u>system</u> has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.</p> <p>Sanctions to deal with non-compliance exist, <u>are consistently applied</u> and thought to provide effective deterrence.</p> <p><u>Some evidence exists</u> to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.</p> <p>There is no evidence of systematic non-compliance.</p>	<p>A <u>comprehensive</u> monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.</p> <p>Sanctions to deal with non-compliance exist, are consistently applied and <u>demonstrably</u> provide effective deterrence.</p> <p>There is a <u>high degree of confidence</u> that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.</p> <p>There is no evidence of systematic non-compliance.</p>
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Scoring Comments

90.

WCPFC Framework

- The following monitoring, enforcement and compliance measures -VMS, transhipments, transhipment activities, at-sea inspections, port inspections, observer monitoring, monitoring of trade and domestic distribution of HMFS, seagoing patrols, aerial surveillance and inspections of domestic only vessels -are listed as activities for the Commission. However no levels of compliance or frequency of patrols are listed
- There is a regional observer programme, but coverage from Japan is <5% The client company and skippers have no objections for having observers on their vessels and support any observer scheme.
- Japan has been dispatching patrol vessels to the Convention area to monitor and inspect Japanese tuna vessels. In addition Japanese tuna vessels that operate in the high seas and land their catch in Japanese ports must report their landings to FAJ in advance. FJA randomly inspects landings of those Japanese vessels.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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- Members of the WCPFC shall not grant a vessel authorization to fish if it is on the Convention’s IUU vessel list.

Japan Framework

- All vessels over 24m, carry VMS and this is monitored by Japan and FFA.
- All fish caught are reported in log books. Although there does not appear to be a formal system to verify that these log books equate to what is actually caught, the regional fisheries agencies who auction the fish would be aware of any major discrepancies. Also there is no incentive to misreport retained species and by catch is minimal (refer P2).
- There has been one case of a vessel not completing the log book and this vessel immediately left the fishery. Non compliance would result in a vessel not getting a permit to fish.
- There are port inspections for all Japanese pole and line vessels which land at a Japanese port. In addition, Japanese tuna fishing vessels that operate in the high seas and land their catch at Japanese ports must report their landing plans to the FAJ in advance. FAJ randomly inspects landings of those Japanese tuna vessels .
- All Japanese vessels are prohibited from landing catches in other countries or transshipping tuna without special permission by the government. The vast majority of tuna caught by the Japanese pole and line vessels is therefore landed in Japan.
- And all tuna landings have to be distributed through the wholesale market in Japan. The amount of landings is recorded and reported to the government by the manager of the market (the Wholesale Market Law). In this way, catch data can be verified by the market statistics.
- To date, processors do not monitor the catch. However, fishermen are required to submit the logbook to the authority and get a port inspection in Japan. More recently
- Japan has strict procedures for breaking regulations including imprisonment hard labour and fines
- The export and charter of Japanese tuna vessels are strictly regulated by the Fisheries Agency of Japan (FAJ) in order not to become a source of IUU fishing vessels.
- There is a Regional Observer Program, but coverage from Japan is <5%.

Most elements of SG 100 are met with the exception that would be achieved if there was an observer scheme operating

3.2.4	<p>Research plan The fishery has a research plan that addresses the information needs of management.</p>	<p><u>Research</u> is undertaken, as required, to achieve the objectives consistent with MSC’s Principles 1 and 2.</p> <p>Research results are <u>available</u> to interested parties.</p>	<p>A <u>research plan</u> provides the management system with a strategic approach to research and <u>reliable and timely information</u> sufficient to achieve the objectives consistent with MSC’s Principles 1 and 2.</p> <p>Research results are <u>disseminated</u> to all interested parties in a <u>timely</u> fashion.</p>	<p>A <u>comprehensive research plan</u> provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and <u>reliable and timely information</u> sufficient to achieve the objectives consistent with MSC’s Principles 1 and 2.</p> <p>Research <u>plan</u> and results are <u>disseminated</u> to all interested parties in a <u>timely</u> fashion and are <u>widely and publicly available</u>.</p>
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SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
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Scoring Comments

80.

WCPFC Framework

- The commission has a strategic Research Plan 2007-2011 which includes overall research and data collection priorities.
- This plan is periodically reviewed to ensure it remains responsive to the Commission’s needs.
- The Commission obtains data from members and oversees research through various committees. They have a Strategic Research Plan, observer data collection priorities, and several resolutions which encourage research and experimentation.
- Members are required to report estimates of annual catches, number of active vessels, operational level catch and effort data (including activity, date, noon position and weight of fish caught per day), catch and effort data aggregated by time period and geographic area (if the coverage rate of the operational level catch and effort data that are provided to the Commission is less than 100%), and size composition data.
- The Strategic Research Plan (2007-2011) is intended to serve an initial period of five years from 2007. As there will be an ongoing need for an adaptive research plan to support the Scientific Committee’s objective of providing the best available scientific advice, the Plan will be periodically reviewed

Japan Framework

- There is clear evidence of research taking place to achieve the objectives of P1 and P2. Research is also carried out in response to fishery concerns eg tagging surveys. However there is no evidence of a research plan specific to the skipjack fishery that provides the management system with a strategic approach and assigns priorities’ and appropriate resources
- Broad research objectives are defined by Research Councils, Government and industry. Fisheries
- Research Agency priorities for research for skipjack have been identified, including tagging, market research, DNA analysis, cohort analysis, Oceanographic data collection for model analyses, Improvement of Multifan – CL analyses, VPA analysis
- The Fisheries Basic Act specifies that Japan shall take measures such as research, study and others relevant to living aquatic resources and others necessary to contribute to an appropriate conservation and management of living aquatic resource and that Japan shall take necessary measures for effective promotion of research and development and dissemination of technologies relevant to fisheries such as setting of specific goals for research and development of such technologies, enhancement of coordination with national laboratories, laboratories of incorporated administrative agencies, local governments and local incorporated administrative agencies, universities and private bodies, and promotion of dissemination activities of technologies relevant to fisheries in accordance with regional characteristics

The elements of SG 80 are met but it does not achieve higher performance.

SCORING CRITERIA	SCORING GUIDEPOST 60	SCORING GUIDEPOST 80	SCORING GUIDEPOST 100
<p>3.2.5 Monitoring and management performance evaluation There is a system for monitoring and evaluating the performance of the fishery-specific management system against its objectives. There is effective and timely review of the fishery-specific management system.</p>	<p>The fishery has in place mechanisms to evaluate <u>some</u> parts of the management system and is subject to <u>occasional internal</u> review.</p>	<p>The fishery has in place mechanisms to evaluate <u>key</u> parts of the management system and is subject to <u>regular internal</u> and <u>occasional external</u> review.</p>	<p>The fishery has in place mechanisms to evaluate <u>all</u> parts of the management system and is subject to <u>regular internal</u> and <u>external</u> review.</p>

Scoring Comments

80.

WCPFC Framework

- Progress with implementation of conservation management measures (CMMs) is monitored through the reporting provisions within the CMMs themselves or the Annual Reports by CCMs to the Commission.
- The Technical and Compliance Committee (TCC) provide the Commission with information, technical advice and recommendations relating to the implementation of, and compliance with, CMMs (Convention Article 14).
- Each member shall transmit to the Commission an annual statement of compliance measures, including imposition of sanctions for any violations, it has taken.
- The Technical and Compliance Committee of the Convention has regular sessions which include a review of members' implementation of and compliance with conservation and management measures.
- The Commission may make appropriate arrangements for periodic peer review of scientific information and advice provided to the Commission by the scientific experts.
- The Scientific Committee reviews the stock assessments, status of target, non-target and associated or dependent stocks and provides information, advice and comments as necessary,
- The Commission may provide for periodic peer review of scientific information and advice.

Japan Framework

- Japan produces an annual stock assessment card for skipjack tuna based on up-to-date catch statistics.
- Scientific research that is carried is subject to internal and external review. However there is no overall management plan for the fishery that incorporates all aspects of the management system which would provide the basis for a mechanism on which to evaluate key parts of the management system . The plan would provide for information on which internal and external reviews could be based.

SG 80 is met because The fishery has in place mechanisms to evaluate key parts of the management system and is subject to regular internal and occasional external review.

APPENDIX B

Peer Review Reports

Reviewer A: Tosakatsuo Pole and Line Fishery

General comments:

The assessment could use more information of other fishing gears targeting the same stock. This will help to place some context around the assessment of PI2 1 and 2, related to retained species and by-catch. **Moody Marine comment:** Much of this was addressed in Section 4.3 History of the fishery, and in Figure 1. In order to make this clear, a paragraph has been added to Section 8 which expands upon this issue.

Generally I agree with the assessment although the review of P2 was more descriptive than analytical and, in some areas, it was difficult to draw the scoring conclusions from the text.

I've included editorial comments with substantive comments in the order of the text by section number.

2.2 Report Structure and Assessment Process, first bullet: “northern shrimp” reference is in error. **Moody Marine comment:** This has been corrected in the report

2.4 Other information sources: R9 : edit Pacific (Spelling) **Moody Marine comment:** This has been corrected

3.0 Glossary: RFMO should probably be Regional Fisheries Management Organization of FAO not WCPFC. **Moody Marine comment:** This has been corrected

6.2: Fishing locations: Presumably this fleet fishes not only in the Japanese EEZ and on high seas, as reported, but in other EEZ's under bilateral agreements. **Moody Marine comment:** The description of the fishing locations has been modified in the report

There are two sections 6.6 in the text. **Moody Marine comment:** This has been corrected

The first 6.6: Monitoring, Control and Surveillance: This gives the impression that the WCPFC MCS measures apply to Pole and Line vessels. It might be helpful to cite the specific measures being referenced since I believe most WCPFC CCM's do not reference the pole and line fishery, aside from reporting requirements. **Moody Marine comment:** This is correct

First 6.6 para 2, line 1, end: missing “of” between inspections and vessels; no cap on “and” in the line 2. **Moody Marine comment:** This has been corrected

Second 6.6 Consultation and Dispute Resolution: Either there should be a period after “observers” or there should be a statement about what observers are entitled to do, like attend meetings, make representation or table documents. There should also be a period in the last para, after “Law”, and after “say” **Moody Marine comment:** The report has been revised to reflect this.

7.2: By-catch and discarding, first para, line 1: It is probably more accurate to say the fishery is selective in the fish it “retains” rather than “catches”, even though the small fish are released alive from barb-less hooks.

Moody Marine comment: This has been revised in the report.

7.2 para 2: I doubt if turtles “could be caught in the pole and line fishing” (which should be “fishery” if you are going to use it. Since there is no data to suggest a bycatch or an incidental kill of turtles, why raise it? The yellowfin caught and retained may be more of any issue requiring further comment considering the state of the yellowfin resource. Even yellowfin by-catch needs to be placed in context of the low impact of the P/L gear compared to other methods. **Moody Marine comment:** “Fishing” has been changed to “fishery” and the report has been revised to incorporate the comments on yellowfin.

Other Fisheries Affecting the Target Stock: It might be useful to place the P/L catch of skipjack in context of the catch of other fishing gear targeting skipjack. Data is available from WCPFC SC reports. This will highlight the relatively small catch of the fleet. Of particular interest is the catch by species of pole and line gear relative to of fishing gears targeting skipjack. **Moody Marine comment:** Noted

14.1 Condition 1:

Note the Indicators referenced should be 1.1.1 and 1.2.2 not “1.1.2 and 1.1.1” **Moody Marine comment:** The references should be 1.1.2 and 1.2.2. Changes have been made in the report.

The quote from the Indicators needs some clarification since the text is highly repetitive and not easily understood. **Moody Marine comment:** The reference to the quotes has been changed to make it clearer.

Also, edit “Currently no harvest strategies, objectives **or** (not and) reference points have been” **Moody Marine**

comment: This has been corrected.

While I agree with the lower scoring levels related to the lack of reference level and harvest strategy, it is difficult to imagine the condition being applied will result in the reference level and harvest strategy being established in the short term. One company operating 2 vessels in a fleet of 27 has limited ability to influence national and WCPFC policy to bring these measures into place. Apparently realizing this limitation, the reviewers have opted for a condition whereby the company makes its best efforts to promote these measures within the national and international consultations. Does the company's stated support for such measures provide sufficient reduction to risk such that we can be assured the fishery is pursued at a sustainable level? I'm not certain, but can offer no alternative condition in this case. [Moody Marine comment: This was the intention.](#)

Appendix 1 Scoring Table

1.1.2 Reference points, line 5: WCPFC not WCPOFC, and "holding an" inter-sessional ... [Moody Marine comment: This has been corrected in the report](#)

1.2.1 Harvest Strategy: This statement gives the impression that the WCPFC CMM's 2005 and 2005-01 (not "2005a" as referenced) include an effort limit on pole and line skipjack, particularly when followed by a statement starting with "Additionally, the Japanese fisheries agency ..." Perhaps within the context of P1, these statements are referring to the overall skipjack stock harvesting strategy rather than specific to the pole and line fishery. However, the WCPFC adopted cap on fishing effort for longline and purse seine CMM2005-01 and on albacore CMM2005-02 but these have nothing to do with pole and line. Even their replacement, CMM2008-01, makes little mention of pole and line.

I would prefer to see more information on the limits set by the Japanese fisheries agency. How long have they been in place? What is the basis for the limit? Have they changed? This would provide more justification for assessing whether the limits are appropriate. [Moody Marine comment: 1.1.2 and 1.2.2 have been revised to address the comments](#)

1.2.2 Harvest Controls: The WCPFC CMM's referenced are harvest controls designed to reduce mortality of juvenile yellowfin and bigeye. They are not strategies to address any concern for the state of the skipjack stock. It is not merely a function of "labeling" as suggested in line 4. [Moody Marine comment: 1.1.2 and 1.2.2 have been revised to address the comments.](#)

Line 10: "WCPOFC" should be WCPFC [Moody Marine comments: This has been corrected in the report](#)

2.1.1 Retained non-target species, status: This pole and line fishery is "less than 18% albacore"?! (line 4) This seems high and may be an error. [Moody Marine comments: This has been rechecked both in the Fishery statistics data of Japan far sea fishery where the percentage of albacore catch by pole and line fishery in Japan is given and in the log books of two vessels belonging to the Tosakatsuo group using the species composition of their catch in the last year.](#)

2.1.3 Information/monitoring: place a "." after species in line 3. [Moody Marine comments: This has been corrected in the report.](#)

2.2.1 By Catch status: The reference (WPFMC, 2002) has limited application to the management area of US Pacific Islands. Is it relevant here? I couldn't easily find this document on the website referenced. [Moody Marine comment: The report has been revised and two references of catch composition of pole and line in Japan have been added.](#)

2.2.2 Management strategy: The wording needs to be strengthened to match the scoring. There must be clear evidence the strategy is being implemented successfully. [Moody Marine comment: The report has been revised to incorporate this.](#)

2.2.3 Information/monitoring: Again, if the reviewer believes the information system is a comprehensive strategy, then these words should be here to attain the scoring. The text is very descriptive, but not analytical. Telling us about what Japan is required to do under the WCPFC observer program may be useful someday but since it has not yet been implemented as a comprehensive strategy with a high degree of success, it doesn't mean very much right now. [Moody Marine comment: The comments have been taken into account, and this has been rescored from 90 to 80. The reason for the reduction of score is that currently there are no systems and mechanisms to ensure the compliance of the log book information.](#)

2.3.2 ETP species management: edit Line 2 ".." Line 3 edit: "Ther" and line 4 edit "However with the this" [Moody Marine comment: This has been corrected](#)

2.4.1 Habitat status: The wording here suggests there are, indeed, "minimal effects" to the habitat from pole and line fishing, a conclusion that appears to be out of line with the scoring wording associated with the score. Also suggesting the habitat is "likely to be robust enough" doesn't provide the necessary sense of certainty required for the score. Edit two spaces in line 2. [Moody Marine comment: This has been rewritten with some references](#)

2.4.2 Habitat management strategy: The scoring comment is a reinforcement of 2.4.1, which misses the specific concern of 2.4.2. The management strategy in this case is to maintain the current number of licenses (as long as this is true) and authorize no changes to the present fishing gear such that habitat is affected by the changes. [Moody Marine](#)

comment: This has been rewritten.

2.4.3 Habitat information/monitoring: This PI is designed to assess whether there is sufficient information to assess the risk. Do we know enough about the fishery, its habitat and the effectiveness of the management strategy? Is there something we might be missing? Is there sufficient data collected? Have the impacts of the gear been fully quantified? Is the habitat fully known? The scoring comments should reflect this assessment. *Moody Marine comment:* This has been rewritten and rescored from 95 to 80. The reason of score reduction is that habitat of skipjack is quite large and it is quite difficult to complete understanding of whole habitat situation even some information regarding the habitats are available. However, the risk of habitat harming from this fishery could be said to be minimum, because pole and line fishery itself use only shallow layers and never touch the bottom of the oceanic area.

3.1.1 Legal and/or customary framework: Although Japan is a fully cooperating member of the WCPFC the text doesn't indicate if Japan has signed the pertinent international agreements, such as
FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas

Agreement for the Implementation of the Law of the Sea Convention relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

Ø Code of Conduct for Responsible Fishing

The inclusion would give the readers a view of Japan's participation in international fisheries agreements. *Moody Marine comment:* This has been rewritten to include such things as:

Resolutions with measures to mitigate and prevent by-catch of non-target fish seabirds, turtles and sharks exist.

The convention has specified 10 activities or items that indicate a vessel has carried out IUU fishing, and all patrol and enforcement vessels monitor these activities.

Japanese fisheries are managed based on the Fisheries Law and other fisheries-related laws and regulations. Governmental officials of MAFF conduct landing surveys at fishing port to monitor catch.

3.1.2 Consultation, roles, responsibilities: It might be useful to expand on the role of observers to the WCPFC and national meetings within Japan, including the process of entry to meetings and any restrictions of participation. This would give the reader some measure of transparency. *Moody Marine comments;* The report has been revised to attend to this.

3.2.1 Fishery specific objectives: WCPFC bullet two is a repeat of part of bullet one. *Moody Marine comments:* This has been corrected

3.2.3 Compliance and enforcement: The low observer coverage is troubling. Even though we know from our knowledge of this fishing gear that the impacts are low, there is a lack of quantitative evidence from observer reports at this coverage level. From the observer program point of view, however, there are higher priorities elsewhere. *Moody Marine comment:* The comment is noted

Reviewer B: Tosakatsuo Pole and Line Fishery

The assessment report completely and successfully addresses MSC criteria for evaluating and demonstrating the long-term sustainability of the TOSAKATSUO SKIPJACK POLE & LINE FISHERY (TSP&LF). Information and analyses contained in the report fully justify and support the recommendation ...” that the management of the Japanese pole and line fishery has achieved biological sustainability, protected the productivity of the stocks, and that the fishery has caused minimal impacts of other important elements of the fish and wildlife biota of the region”.

The team assembled to conduct the assessment is made up of notably well-qualified marine fisheries scientists. The special skills and talents of the individual members of the team complement each other in addressing the MSC principles and criteria followed throughout the assessment process.

There appear to have been ample opportunities for stakeholders to provide inputs, with stakeholder meetings including broad representation from the Japan skipjack and related industry, government and academic scientists, and NGO communities. No significant issues were identified by the stakeholders in relation to the Japanese pole-and-line fishery.

The Condition set by the assessment team for continuing certification that the certification client is required to address is warranted. The establishment of a single condition to address the two key areas of the fishery is appropriate, since both of the areas relate to the same generic issue: concerns that harvest strategies, objectives, and reference points require formal adoption by the fisheries management bodies. In the meantime, satisfactory default measures are being used by the Science Committee of the Western and Central Pacific Fisheries Commission (WCPFC) to evaluate stock status of highly migratory stocks in the WCPFC management area of responsibility. Nevertheless, it is fitting and appropriate that the client be required 1) to promote and support management actions to develop and formally adopt harvest strategies and reference points within the WCPFC and in Japanese domestic management, and 2) to provide summary reports to MSC of actions taken to do so. The 12-month timescales associated with the actions required are suitable.

The Background to the Fishery section is generally a bit sparse, but sufficient. Figure 1 is very effective in providing temporal and spatial summary information on catches of skipjack by the many gear types that harvest skipjack in the western and central Pacific. **Moody Marine comment:** This is noted and some additional information provided.

The Stock Assessment section of the report is especially well done. It provides the reader a ready understanding of the skipjack stock assessment process including: 1) who is responsible for conducting the assessments, 2) the data used in the assessments, as well as the repository for the data, 3) the specific stock assessments used in the MSC certification assessment process, 4) the management unit, 5) the stock assessment models used, 6) the results of recent stock assessments, and 7) management advice. The stock assessments for the skipjack resource in the western and central Pacific are likely among the most robust of stock assessments done on any highly migratory species (HMS) in the global oceans. They are accomplished by an excellent cadre of fisheries scientists who are recognized internationally as leaders in HMS stock assessment. The MULTIFAN-CL models that have been developed and used in central and western Pacific skipjack resource stock assessments are among the few that use tagging data and other biological characteristics, in addition to usual catch and effort data and length frequency data. The principal conclusions from recent stock assessments include: 1) that skipjack is being exploited at a moderate level relative to its biological potential, 2) that overfishing of skipjack is not occurring in the western and central Pacific region, and 3) that the stock is not in an overfished state. While there are concerns that increases in fishing mortality on skipjack would result in larger catches of yellowfin and bigeye tunas because of the mixed targeting nature of the purse seine and longline fisheries, the concerns do not apply to the skipjack pole-and-line fishery, which is notably selective in harvesting only the target species.

The Fishery Management Framework for the central and western Pacific skipjack resource has been established and it may be employed, if and when needed. However, to date the assessments of skipjack have indicated that the stock biomass far exceeds the levels expected to provide the MSY and the stock is not over-exploited nor does it experience overfishing. Consequently, no management controls, e.g., limited entry or TACS have been established, but the number of skipjack pole-and-line vessels licensed by the Japanese government is presently limited to 27. Management control measures may be readily triggered if results from stock assessments indicate that the stock biomass has become fully exploited, equivalent to the MSY.

The report adequately addresses the Ecosystem Characteristics of the pole-and-line fishery. The fishery is notably benign regarding ecosystem impacts in that 1) it operates in the upper few meters of the ocean surface and has no contact with the bottom, 2) interactions with ETP are almost non-existent, 3) bycatch is nil, except for minor amounts albacore and yellowfin tuna, which are retained and sold, 4) fishermen tend to target larger skipjack and avoid small skipjack because of low commercial value, 5) there appear to be minimum impacts on the trophic structure of the central and western Pacific Ocean, and 6) anchovy bait, the harvest of which is carefully monitored and managed by a TAC, is purchased from dealers around Japan.

Scoring Criteria and Comments

Principle 1: The scoring for some of the Principle 1 categories, e.g., 1.1.2, 1.2.1, and 1.2.2 appeared to be somewhat lower than necessary by about 5 points or so. Thus, resulting total score is likely particularly conservative. All of the scoring comments were very well stated and included germane and appropriate supporting information. **Moody Marine comment:** This is noted but it was not considered necessary to change the score allocated.

Principle 2: The scoring for Principle 2 categories appears to be accurate. Scoring comments for some of the categories are sufficient and support the respective assigned score, e.g., 2.1.1, 2.1.2, 2.1.3, 2.2.3, 2.3.1. However, the scoring comments for a number of the categories would benefit from some strengthening, expansion, and clarification;

this is especially the case for all categories in 2.4 and 2.5, e.g., 2.4.2 notes that there are 27 skipjack vessels in operation and that the ‘unit of certification’ is 2 vessels (the reviewer does not understand what this means). **Moody Marine comment:** A total of 27 pole and line vessels are operating in Japan. However, Tosakatsuo Group, which is client for this certification, holds only two of the 27 pole and line vessels. The Japanese Government does not intend to increase the total number of pole and line vessels. Therefore, there is no risk of input increase regarding pole and line fishery of Japan.

Comments 2.4.2 has been revised to reflect reviewer’s concern and additional text in 2.4 and 2.5 areas.

There are inconsistencies regarding scientific observers in some categories, e.g., 2.1.3 states that there is no observer coverage, while 2.2.1 and 2.2.2 state compliance has been verified by WCPFC observers in 2008. Category 2.2.3 and 2.3.3 also make reference to the WCPFC observer program. **Moody Marine comment:** Test observer programs have been carried out by WCPFC, but a regular observation program is not yet in place. The comments on 2.2.1, 2.2.2, 2.2.3, 2.3.3 were revised. WCPFC Scientific Committee report was cited.

Principle 3: The scoring for Principle 3 categories appears appropriate and the scoring comments are generally complete and well stated. Category 3.2.2, WCPFC Framework, may need a correction since it looks like there are duplicative statements. In category 3.2.3 an extra bullet appears to have been inserted in the middle of the statement marked by bullet #8. **Moody Marine comment:** This has been corrected in the report

Typos noted while reviewing the report include:

- page 6, section Report Structure and Assessment Process, bullet 1 – “skipjack” should replace “northern shrimp”.
- page 15, section Fishing rights, licensing etc., in second sentence omit “were not”.

The report would also benefit from running a Spellchecking routine. **Moody Marine comment:** These have been corrected in the report

APPENDIX C

Client Action Plan

Tosakatsuo Suisan Co., Ltd. Client Action Plan

Condition 1.

Indicator 1.1.2 requires that management reference points be defined in terms of the target biomass or target fishing mortality rate that is to be achieved, the limit of fishing mortality rate that should not be exceeded and the limit at which biomass should remain above.

Indicator 1.2.2 requires that harvest control rules be defined. Harvest control rules are the “game-plan” which outlines the fishing rates and strategies which will achieve the management targets and objectives, which will allow the fishery to avoid being near management limits, and which sets out the actions needed (reductions in fishing mortality rate) if limits are exceeded.

Currently, no harvest strategies, objectives or reference points have been formally adopted. While BMSY and FMSY limit reference points are used by the Scientific Committee of the WCPFC and reported to the Commission, these are recognized as being default measures. Therefore, in order to resolve deficiencies in these indicators, the WCPFC needs to move toward formally establishing harvest strategies and reference points.

Action required:

1. Tosakatsuo Skipjack Pole and Line Fishery to promote and support management actions put forward to develop formal harvest strategies and reference points within the WCPFC and in Japanese domestic management. Communications supporting such measures should be made to the FAJ. Records should be provided by MAFF of communications and responses.
2. Tosakatsuo Skipjack Pole and Line Fishery to provide a summary to Moody Marine on Japan’s responses to WCPFC management resolutions and recommendations relating to this condition.
3. If additional resolutions are proposed by WCPFC/FAJ to address this Condition, then these should be supported as in 1, above.
4. If additional resolutions addressing this issue are adopted by the WCPFC, then this condition would be considered closed.

Timescale:

Point 1. Should be pursued immediately upon certification.

Point 2. Tosakatsuo Skipjack Pole and Line Fishery should provide this information within 6 months of certification.

Points 3,4. Tosakatsuo Skipjack Pole and Line Fishery should provide an annual summary of WCPFC actions in this regard (after annual WCPFC meetings which are usually in December) on the actions of WCPFC, and supportive actions should be initiated at the earliest possible opportunity thereafter.

Relevant Scoring Indicators: 1.1.2, 1.2.2

Action Required

1. Tosakatsuo Skipjack Pole and Line Fishery to promote and support management actions put forward to develop formal harvest strategies and reference points within the WCPFC and in Japanese domestic management. Communications supporting such measures should be made to the FAJ. Records should be provided by MAFF of communications and responses.
2. Tosakatsuo Skipjack Pole and Line Fishery to provide a summary to Moody Marine on Japan's responses to WCPFC management resolutions and recommendations relating to this condition.
3. If additional resolutions are proposed by WCPFC/FAJ to address this Condition, then these should be supported as in 1, above.
4. If additional resolutions addressing this issue are adopted by the WCPFC, then this condition would be considered closed.

Client Action Plan

1. The stock biomass is under-exploited and the stock is still being fished down to optimal levels. Japanese management authorities have restricted access to the pole and line fishery with a limited number of licenses. The catch levels in the fishery are monitored from vessel logbook data submitted to the management authorities. Normally vessel logbooks are provided directly by ship owners to the authorities but henceforth we will obtain the logbooks, and will adopt it as our management criteria as part of the fishing strategy.
2. We will obtain from the management authorities what Japanese Government answers to WCPFC and submit it to MML
3. We will contact our ship owners and the management authorities for learning about trend, and obtain the report the ship owners made.
4. We contact our ship owners and the management authorities for learning about trend, and obtain the report the ship owners made.

APPENDIX D
STAKEHOLDER COMMENTS

No written stakeholder comments were received.

APPENDIX E

Registered companies / vessels within Unit of Certification: eligible to sell MSC certified product Unit of Certification

Client Group: Tosakatsuo Suisan Co., Ltd

- Tosakatsuo Suisan Group (processor)
- Toyokunimaru Fisheries Cooperative Association (Vessel name: No.8 Toyokunimaru)
- Masaki Hamaguchi (Skipjack tuna fishery), (Vessel name: No.2 Shoyo-Maru)