RECOMMENDED BEST PRACTICES FOR TUNA LONGLINE FISHERIES IN TRANSITION TO MSC CERTIFICATION

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November 2018

Topic Categories: MSC, Longline, FIPs

Abstract

This document summarizes recommended best practices for tuna longline fisheries that aim to participate in Fishery Improvement Programs (FIPs) with the objective of achieving MSC certification. The recommended practices are linked to MSC Fishery Certification Requirements.

November 2018

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1.INTRODUCTION

A Fishery Improvement Project (FIP) addresses challenges in a fishery whose timebound commitments can include an aim of certification against the Marine Stewardship Council's (MSC) fisheries standard at the end of the project.

Many tuna fisheries have started to enter FIPs in order to tackle some of the problems that would prevent them from currently achieving MSC certification. This includes longline fisheries that target tunas such as albacore, bigeye and yellowfin. The primary purpose of this document is to identify good practices for longline fisheries that are in FIPs, but the recommended practices can also be useful for certified longline fisheries that have to close MSC Conditions.

2.METHODOLOGY

The MSC Fisheries Standard consists of three Principles: Sustainable Fish Stocks (P1), Minimizing Environmental Impact (P2), and Effective Management (P3). For each one of these Principles, there is a set of Performance Indicators (PIs) that cover different aspects of the Principle. In turn, for each PI, there are one or more Scoring Issues (SIs).

 This document makes use of the MSC Fisheries Certification Requirements and Guidance (version 2.0) which provides requirements for fisheries to be scored at various levels. A score of 80 or higher is required for an individual PI to "pass" without requiring a Condition to address weaknesses. This document uses the SG80 (Scoring Guidance for a score of 80) for the various SIs in the default assessment tree.

Appendix 1 lists all of the PIs and their SIs and identifies actions that are expected to lead to scores of 80 or higher. The recommendations below are best practice as the authors understand them based on their knowledge of different fisheries, the MSC system, Regional Fishery Management Organizations (RFMOs), and what the authors believe is reasonably implementable. By no means is this list intended to be exhaustive or exclusive. These are simply recommended actions that the authors believe can lead to higher scores for longline fisheries. The best practices are then summarized in **Section 3**. Links to relevant ISSF tools and reports are provided.

NOTES ON UoA AND PRIMARY SPECIES

Currently, the MSC system allows Clients and Assessment teams to decide which fishing practices and which species are the candidates for MSC certification. These constitute the "Unit of Assessment" (UoA). This process lets Clients seek certification for some of the species that are targeted by assessing them under P1, while excluding others that are also targeted by assessing them under P2. In this document, it is assumed that tuna longline FIPs will want all of their target tuna species (albacore, bigeye, yellowfin, and even skipjack --which is sometimes caught in small amounts--) to be candidates for certification, i.e. be assessed under P1. Therefore, none of these target tuna species are treated as "Main Primary" species under P2.

3.SUMMARY OF RECOMMENDED PRACTICES

3.1. P1 (Sustainable Fish Stocks)

GENERAL

Stock status of the target tuna stocks ultimately depends on the impacts of fishing by all gears and fleets. It is unlikely that a single longline fishery in a FIP will have sufficient leverage to affect stock status unless it accounts for a significant proportion of the total catches. There are various activities that a FIP participants should conduct in coordination with all of the flag states, coastal states in whose EEZs they are licensed to operate, and in the relevant RFMO that contribute to fishing mortality of stocks in their UoA which, once adopted and implemented, will ensure healthy stock status.

Promote the adoption of measures by the RFMOs:

- The adoption of management measures that clearly identify the shares of the catch and/or effort that should go to all of the different major gear types (longline, purse seine, pole and line, etc.) so that all sources of fishing mortality are managed (ISSF 2011a, 2011b), ensuring that the stocks fluctuate around levels consistent with MSY (or the target reference point, if the RFMO has adopted one).

- The adoption of harvest strategies (including reference points, clearly-defined harvest control rules and monitoring mechanisms) that are consistent with the MSC requirements. (IO-Skipjack HCR infographic, ISSF 2013a)

- Promote the adoption at RFMOs of science-based capacity limits for all fishing gears and modes of fishing.

- If a target stock is overfished, support the adoption of a rebuilding plan at RFMO level that is consistent with the MSC rebuilding timeframes.

- The fishery should demonstrate (e.g. by human or electronic observer programs) that it is highly unlikely that shark finning takes place in fisheries covered by the RFMO.

Research and capacity building:

- Support Management Strategy Evaluation for testing harvest strategies (see below) for P1 species and support RFMO management objectives in general.

- Participate in research that can lead to more selective fishing. (Restrepo *et al.* 2016a)

- Support research into stock structure and productivity if it is not already available.

- Ensure that flag state authorities know the composition of the fishery in detail and support an equal level of monitoring for all other fisheries and gear types.

- Support training of regional observers, to ensure a consistent supply of high-quality observers for the fishery; where placing observers onboard is problematic, support implementation of electronic monitoring as an alternative or a complement.

Evaluate and assist Compliance with RFMO requirements:

- Comply with flag state and RFMO reporting requirements for fisheries statistics. This should include detailed fishing effort information at the set level (see below), as well as species composition and catch by size in order to feed the information into stock assessments.

- In case data gaps from the longline fishery are identified as a source of uncertainty in the stock assessments, the fishery should facilitate the provision of such data to the flag state and RFMO (RFMO science body).

LONGLINE CATCH AND EFFORT REPORTING FOR ASSESSMENT PURPOSES

Longline fishery data are extremely important for tuna stock assessments, especially of albacore, bigeye and yellowfin. These data are used to construct "standardized indices of abundance", based on catch-per-unit-effort (CPUE). All RFMOs have some type of requirement for member countries to report catch and effort data, often in aggregated fashion (e.g. by geographic quadrant and monthly or quarterly). The domestic management authority of the fishery obviously has to comply with these requirements.

In addition, scores for PIs 1.2.3 and 1.2.4 could be improved if the quality of the stock assessments improved, and the longline fishery can contribute to this by making available **operational-level** data to RFMO science bodies. That is, on a set-by-set basis. Such data are not required by all RFMOs, but they are useful to assessments.

The basic operational data that should be made available by set are the following (unique identifiers for the trip and vessel are also needed):

- Catch in weight and catch in numbers for each species.
- If discarded, the numbers released by individual species.
- Start and finish times of set.
- Position (Latitude, Longitude)
- Number of branchlines between two floats (also known as "hooks between floats").
- Number of hooks in the set.

Additionally, information on type of hook (e.g., circle vs "J") and bait type should be supplied for P2 evaluations.

3.2. P2 (Minimizing Environmental Impact)

NOTE ON SPECIES CLASSIFICATIONS

There are many non-target species caught incidentally in longline fisheries. Classifying them according to the MSC standards will vary, depending on the region (and RFMO) where the fishery operates and on the characteristics of the sets made. Medley et al. (2018) provides pre-assessment classifications and MSC scores for 21 tuna longline UoAs, which should be a useful tool for FIPs.

Primary species are those that are not under P1, but which have management tools and measures in place for them. **Secondary** species are those that are not in P1, are not Primary and are not Endangered, Threatened or Protected (ETP). **ETP** species are those that are protected by national legislation and specific international agreements. In terms of volume, **Main** are those species whose catch is 5% or more of the total catch of all P1 and P2 species, and **Minor** are <5%, unless the species is considered 'vulnerable' (e.g. based on the life history or stock status), in which case the cut-off between main and minor is reduced to 2%. There is no distinction between main and minor for ETP species. A species

may also be considered main if the total catch is very large (despite being a low percentage – i.e. in very high-volume fisheries) or at the discretion of the MSC assessment team.

- If albacore, bigeye, yellowfin and skipjack are in P1 (UoA), there will unlikely be any **main or minor primary** species in the longline fishery. Unless there are additional stocks for which <u>management tools and measures are in place</u>, intended to <u>achieve stock management objectives</u> reflected in either <u>limit or target reference points, such as swordfish and blue and striped marlin, and bluefin tuna stocks (see SA3.1.3.3), but if there are no target and limit reference points for these other stocks, then they default to secondary species.</u>

- The species used for bait in longline fisheries are likely to be classified as **Main secondary** (although they could be **Main primary** if they are the subject of management).

- **Minor secondary** species in the fishery will include swordfish, other billfishes, mahi-mahi, wahoo, opah, barracuda, escolar, ocean sunfish and perhaps some sharks (if not treated as ETP). Depending on their catch percentages, some of these could be classified as **Main secondary**.

- **ETP** species will normally include sharks, pelagic stingrays, sea turtles, cetaceans and seabirds.

GENERAL

For **Primary** and **Secondary** species, the fishery should have a policy on bycatch management that is periodically reviewed and that includes:

- Reporting of catches and discards.

- Promoting retention and utilization, unless retention is prohibited by management. (<u>Lewis 2014</u>, <u>2016</u>)

- Following best practices to release unwanted catch alive (e.g. as in the <u>ISSF Skippers Guidebooks</u>). This includes providing regular training for skippers and crew in bycatch handling (Submon 2014, <u>Andraka and Parga 2016</u>)

- Supporting research on bycatch mitigation. (<u>Restrepo *et al*. 2016a</u>; <u>Hutchinson 2016</u>, ISSF CM 3.1-3.6 <u>infographic</u>, <u>CM</u>)

- Prohibit shark finning and demonstrate that it is not taking place (e.g. through observer data or remote onboard monitoring). (<u>ISSF Conservation Measure (CM) 3.1.a</u>, <u>b</u>, <u>c</u>). Requiring that sharks be landed with fins naturally attached facilitates data collection on species.

- Reporting all catches of minor primary species so that they can be monitored.

- Implementing sufficient observer coverage (human or electronic, see Section 4) to support management. (<u>ISSF 2012</u>, <u>2016</u>; <u>Ruiz *et al*. 2016</u>; <u>ISSF CM 4.3, SPC and FFA 2017</u>)

- Promoting the monitoring and research on primary and secondary species so that the contribution of each fishery to overall fishing mortality of each stock is estimated

- Supporting any efforts (by the RFMO and at the national level) to assess and manage the species so that they are maintained at healthy levels of abundance. This includes documenting the amounts and origin of bait species used.

- Demonstrating compliance with any such management measures. (<u>ISSF CM 1.2</u>, <u>2.2</u>)

For **ETP** species,

- Observer programs are key for collecting data on interactions (capture and fate) with ETP species in longline fisheries. The FIP must ensure high observer (human or electronic, see Section 4) coverage in the fishery to document and quantify interactions. Morgan et al. (2018) conducted a rapid assessment of ETP interactions in FIPs and provide a set of relevant recommendations for pre-assessments.

- Follow best-practice live release methods to minimize mortality and document their use. The fishery should support mandatory adoption of these practices by the flag state and RFMO and provide regular training to skippers and crew. (ISSF Skipper Guidebooks, Murua *et al*. 2018).

- Report interactions and fate of any releases (e.g. released alive; discarded dead, injuries), and collect any data requested by scientists (e.g. photographs).

- Facilitate research that addresses mitigation of ETP species bycatch and voluntarily adopt best practices when these become known (see ISSF 2016 and SFP 2018).

For **Habitats**:

Longline fisheries are unlikely to have substantial habitat impacts. Nevertheless, the fishery should collect and report data on abandoned, lost and discarded fishing gear, and provide information on location of sets.

For **Ecosystems**, some management measures for tuna stocks adopted by RFMOs indirectly serve as a partial strategy to limit the impact of tuna fisheries on ecosystems (e.g. limit on vessel capacity, setting of TACs, etc.).

The fishery should:

- Ensure high observer coverage (human or electronic, see Section 4) which is critical to ensure that the data necessary to evaluate ecosystem impacts are collected.

3.3. P3 (Effective Management)

The management system for the fishery needs to be viewed in three levels: The flag state(s), the RFMO where it operates, and the countries in whose EEZs it is licensed to fish.

GENERAL

As with P1, there are a number of actions that the fishery must broadly support that would ensure effective management for all fisheries targeting tropical tunas, such as:

- Support a transparent mechanism for the resolution of legal disputes.

- Support the adoption by RFMOs of a mechanism to evaluate compliance with the management measures adopted (Koehler 2018).

- Support the full implementation of the relevant RFMO management measures.

- Support explicitly defined and well understood enforcement functions, roles and responsibilities at both the national and RFMO levels. The flag state should be an active member of the relevant RFMO. (ISSF 2013b; Koehler 2018; ISSF CM 1.2)

- Support that management objectives for both P1 and P2 in terms of sustainable use, MSY (or other targets if appropriate), and the precautionary approach, become part of the flag state fisheries legislation.

- Support timely decisions by the RFMO to demonstrate that it takes action when one or more of the target stocks are being overfished, or to address data gaps, etc.

- Support transparency and effectiveness in the decision-making process. Advocate that the national and RFMO management systems includes such a participatory consultation process. (Koehler 2018)

- Support efforts for periodic review of flag state and RFMO management systems.

SPECIFIC TO THE FISHERY

- The vessels must be flagged to a country that is a member of the RFMO, which provides the basis for international cooperation. This is the intent of ISSF CM 1.2.

- If the fishery has faced legal challenges at the RFMO level, flag state level, or in countries in whose EEZ it is licensed to fish, it should be able to demonstrate how it has worked to comply with judicial decisions.

- The MCS system should work for the flag state, the RFMO and also to ensure the laws of the countries where the fishery is licensed to operate are in line with RFMO and international requirements (e.g. Port State Measures Agreement) and, if that is the case, they are respected. MCS tools include vessel licensing and registration, VMS, electronic logbooks, observer coverage and the monitoring of landings or in-port transshipments. (Koehler 2018, ISSF CM 4.1-4.4) Electronic Monitoring systems are a good tool to complement or augment MCS capabilities. (Ruiz *et al*. 2016; ISSF CM 4.3)

- Some longline fisheries transship much of their catch at sea. Without proper monitoring, transshipments can become an environment conducive to non-compliance and other illegal practices. If the fishery practices at-sea transshipments, it must ensure that all transshipments occur under the monitoring of an RFMO observer program, comply with RFMO management measures for at-sea transshipment, provide all data and accurate and timely transshipment declarations, and must be able to demonstrate these actions (van der Geest 2018). The fishery should also support the reform of at-sea transshipment regulation by RFMOs to ensure the practice is well-managed.

- The fishery should ensure that skippers know about regulations at the RFMO and flag state in addition to countries in whose EEZ the vessels are licensed to fish. Some VMS and EMS can be programmed to warn the vessel and managers when approaching an area where the vessel cannot legally fish.

4.CONCLUSIONS

There are many actions that a longline fishery participating in a FIP should undertake in order to be MSC-certified. This includes monitoring, reporting and compliance elements for the fishery as a whole. But it also includes collaborating with other fisheries and the management bodies to ensure that all sources of mortality are sustainably managed in a way that achieves the desired objectives.

Some of the main challenges for tuna longline fisheries to become MSC-certified are:

- Bycatch issues, particularly interactions with ETP species.
- Difficulties in evaluating potential impacts on the ecosystem structure and function due to the lack of basic knowledge on many of the bycatch species.
- Demonstrating compliance with existing national or RFMO measures.

Observer programs (human and/or electronic) are essential for the issues above. In terms of quantifying bycatch interactions, NMFS (2004) recommends a level of coverage that achieves a coefficient of variation (CV) of 0.2 to 0.3 (CV is the standard error of an estimate, divided by the estimate). The level of required coverage will vary depending on the frequency of occurrence of the species of interest. For example, Beerkircher et al. (2009) showed that 40% observer coverage in Gulf of Mexico longline fishery would be needed in order to estimate the bycatch of bluefin tuna with a CV of 0.2; in this fishery, bluefin is caught in about 20% of the trips and makes up 2.5% of the catch. However, the coverage will need to be even higher for rare-event interactions, which several ETP species may be. Babcock et al. (2003) suggested that at least 50% observer coverage was needed to estimate bycatch of "rare" species (defined as less than 0.1 % of catch). For compliance and traceability purposes, a coverage level of 100% may be necessary, especially if the fishery engages in at-sea transshipments. Note that it is possible to have 100% observer coverage (e.g. with EM) to strengthen compliance but only review the data for a fraction of the trips or sets (say, 50%, chosen randomly) to estimate species-specific bycatch rates.

Bycatch mitigation in longline fisheries is not straightforward. Techniques that work to reduce one type of interaction may actually increase another type of interaction. For example, the use of circle hooks may reduce catch rates of sea turtles, but increase catch rates of sharks. For this reason, longline fisheries should develop a holistic approach to manage bycatch, taking into account the status and vulnerability of the secondary and ETP species. Collection and analyses of bycatch data are essential in order to determine the most appropriate mitigation approaches.

5.ACKNOWLEDGMENTS

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APPENDIX 1- MSC Performance Indicators (FCR 2.0), Scoring Issues, Scoring Guidelines 80, and best practices to support SG80.

Scoring Issues	SG80	Best practices
Principle 1		
PI 1.1.1 (stock status) The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing.		
(a) Stock status relative to recruitment impairment.	It is highly likely that the stock is above the PRI.	Stock status of a target tuna stock ultimately depends on the impacts of fishing by all fishing gears and fleets. It is unlikely that the fishery in a single FIP can affect stock status unless it accounts for a significant proportion of the fishing mortality. The fishery should support (with the flag states, coastal states where they are licensed to operate, and in the relevant RFMO):
(b) Stock status in relation to achievement of Maximum Sustainable Yield (MSY).	The stock is at or fluctuating around a level consistent with MSY.	- Support the adoption of management measures that clearly identify the shares of the catch and/or effort that should go to different gear types. - Setting of catch or effort limits for the longline fishery and other gear types that will allow the stock to fluctuate around a level consistent with MSY (or the target reference point, if one has been adopted). - Other analyses that support RFMO management objectives (e.g. reduce effort, or the catch of small individuals through time/area closures).
PI 1.1.2 (stock rebuilding) Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe.		
(a) Rebuilding timeframes	A rebuilding timeframe is specified for the stock that is the shorter of 20 years or 2 times its generation time. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.	Similar comments to PI 1.1.1 apply. If the stock is overfished, the fishery should support the adoption by the relevant RFMO of rebuilding plans that are consistent with the MSC requirements for rebuilding timeframes.
(b) Rebuilding evaluation	There is evidence that the rebuilding strategies are rebuilding stocks, or it is likely based on simulation modelling, exploitation	

Scoring Issues	SG80	Best practices
	rates or previous performance that they will be able to rebuild the stock within the specified timeframe.	
PI 1.2.1 (harvest strategy) There is a robust and precautionary harvest strategy in place.		
(a) Harvest strategy design	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.	Similar comments to PI 1.1.1 apply. The fishery should support the adoption by the relevant RFMO of harvest strategies (including reference points, HCR and monitoring mechanisms) that are consistent with the MSC requirements and that take into account the characteristics of the different fisheries.
(b) Harvest strategy evaluation	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	
(c) Harvest strategy monitoring	Monitoring is in place that is expected to determine whether the harvest strategy is working.	
(d) Harvest strategy review	No SG80 guidance	
(e) Shark finning	It is highly likely that shark finning is not taking place.	The fishery should demonstrate that it is highly unlikely that shark finning is taking place, e.g. by observer or electronic monitoring means. The fishery should support regulations for landing sharks with fins naturally attached.
(f) Review of alternative measures	There is a regular review of the potential effectiveness and practicality of alternative measures to minimize UoA- related mortality of unwanted catch of the target stock and they are implemented as appropriate.	Similar comments to SI(a).
PI 1.2.2 (Harvest control rules and tools) There are well defined and effective harvest control rules (HCRs) in place.		

Scoring Issues	SG80	Best practices
(a) HCRs design and application	Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	Similar comments to PI 1.1.1 apply. The fishery should support the timely adoption by the relevant RFMO of harvest control rules that are consistent with the MSC requirements.
(b) HCRs robustness to uncertainty	The HCRs are likely to be robust to the main uncertainties.	
(c) HCRs evaluation	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	
PI 1.2.3 (Information and monitoring) Relevant information is collected to support the harvest strategy.		
(a) Range of information	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data are available to support the harvest strategy.	Similar comments to PI 1.1.1 apply. The fishery should support research into stock structure and productivity if it is not already available. The fishery should ensure that flag state authorities know its composition in detail and support an equal level of monitoring for all other fisheries and gear types. The fishery should support training of regional observers, to ensure a consistent supply of high-quality observers for the fishery. Longline fisheries in particular should provide operational level catch and effort data towards the development of CPUE indices for use in stock assessment.
(b) Monitoring	Stock abundance and UoA removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	The fishery must comply with flag state and RFMO catch and effort reporting obligations. This should include species composition and catch (and discards) by set in order to feed the information into stock assessments.

Scoring Issues	SG80	Best practices
(c) Comprehensiveness of information	There is good information on all other fishery removals from the stock.	The fishery should support an equal level of monitoring for all other fisheries and gear types.

PI 1.2.4 (Assessment of stock status)
There is an adequate assessment of the stock status.

Scoring Issues	SG80	Best practices
(a) Appropriateness of assessment to stock under consideration	The assessment is appropriate for the stock and for the harvest control rule.	Similar comments to PI 1.1.1 apply. The fishery must comply with its reporting obligations and support equal levels of monitoring for all other fisheries so as to enable robust stock assessments. In case lack of certain data from the longline fishery are identified as a source of uncertainty in the assessment, the fishery should facilitate such data to the flag state and RFMO (RFMO science body). Data reported with sufficient time lag so as to not be commercially sensitive can still be useful for assessment purposes.
(b) Assessment approach	The assessment estimates stock status relative to reference points that are appropriate to the stock and can be estimated.	
(c) Uncertainty in the assessment	The assessment takes uncertainty into account.	
(d) Evaluation of assessment	No SG80 guidance	
(e) Peer review of assessment	The assessment of stock status is subject to peer review.	

Principle 2

PI 2.1.1 (Primary species outcome)
The UoA aims to maintain primary species above the point where recruitment would be impaired (PRI) and does not hinder recovery of primary species if they are below the PRI.

Scoring Issues	SG80	Best practices
(a) Main primary species stock status	Main primary species are highly likely to be above the PRI OR If the species is below the PRI, there is either evidence of recovery or a demonstrably effective strategy in place between all MSC UoAs	**Primary** species are those that are not under P1, but which have management tools and measures in place. **Main** are species whose catch is 5% or more of the total catch of all P1 and P2 species. If albacore, yellowfin, skipjack and bigeye are all in the UoA, there is no other individual species likely to be classified as 'main primary'. Therefore, this SI should not normally apply. However, some species (e.g. mahi-mahi) could switch from secondary to primary once they begin to be managed. Also, some bait species (normally secondary) may be managed and thus be classified as primary.

Scoring Issues	SG80	Best practices
	which categorise this species as main, to ensure that they collectively do not hinder recovery and rebuilding.	
(b) Minor primary species stock status	No SG80 guidance	**Minor** primary species are all other species for which there are (RFMO or national) management tools and measures in place, but whose catch is <5% of the total catch of all P1 and P2 species; unless the species is considered 'vulnerable' (e.g. based on the life history or stock status), in which case the cut-off between main and minor is reduced to 2%.
		Skipjack catches in longline fisheries tend to be small and some MSC assessments treat it as a minor primary species. However, this document assumes that it is included in the UoA, together with albacore, bigeye and yellowfin. For some longline fisheries and in some RFMOs, swordfish and other billfish species could be treated as minor primary or main primary depending on the magnitude of their catch relative to the catch of tunas and on management measures in place.
PI 2.1.2 (Primary species management strategy) There is a strategy in place that is designed to maintain or to not hinder rebuilding of primary species; and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch.		
(a) Management strategy is in place	There is a partial strategy in place for the UoA, if necessary, that is expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are highly likely to be above the PRI.	If the catches by the fishery are negligible compared to other gears, measures and a partial strategy may not be necessary. Nevertheless, the fishery should support any efforts (by the RFMO and at the national level) to assess and manage primary species so that they are maintained at healthy levels of abundance. The fishery must demonstrate compliance with any such measures that affect it (e.g. catch limits, closed areas).
(b) Management strategy evaluation	There is some objective basis for confidence that the measures/ partial strategy will work, based on some information directly about the UoA and/or species involved.	The amount of catches of these primary species in the fishery should be negligible compared to other fisheries (gears) and it is likely that there would be an objective basis to determine if management of these impacts be important in terms of maintaining the stocks at healthy levels.
(c) Management strategy implementation	There is some evidence that the measures/ partial strategy is being implemented successfully.	See above

Scoring Issues	SG80	Best practices
(d) Shark finning	It is highly likely that shark finning is not taking place.	The fishery should prohibit shark finning and demonstrate that it does not take place. Shark finning policy templates available among ISSF resources:
(e) Review of alternative measures	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA- related mortality of unwanted catch of main primary species and they are implemented as appropriate.	It is unlikely that there will be main primary species (see PI 2.1.1 SIa). For minor primary species, alternative measures are needed when part of the catch is discarded. The fishery should have a policy on bycatch management that includes: - reporting of catches and discards by species - promoting retention and utilization, unless retention is prohibited by management - following best practices to release unwanted catch alive (e.g. as in the ISSF Skippers Guidebooks). This includes providing regular training for skippers and crew in bycatch handling - Supporting research on best practice bycatch mitigation techniques In addition, adequate monitoring is needed to track in changes in catch composition over time.

PI 2.1.3 (Primary species information)
Information on the nature and amount of primary species taken is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage primary species.

(a) Information adequacy for assessment of impact on main primary species	Some quantitative information is available and is adequate to assess the impact of the UoA on the main primary species with respect to status. OR If RBF is used to score PI 2.1.1 for the UoA: Some quantitative information is adequate to assess productivity and susceptibility attributes for main primary species.	It is unlikely that there will be main primary species (see PI 2.1.1 SIa).
(b) Information adequacy for assessment of impact on minor primary species	There is no SG80 guidance	The fishery must report all catches of minor primary species so that they are included in the assessments. This would allow estimation of the impact of the UoA on minor primary species with respect to status.

Scoring Issues	SG80	Best practices
(c) Information adequacy for management strategy	Information is adequate to support a partial strategy to manage main primary species.	There are no main primary species. For minor primary species, the fishery should collect the data required for a partial strategy (e.g. sufficient observer coverage and port sampling).

PI 2.2.1 (Secondary species outcome)
The UoA aims to maintain secondary species above a biologically based limit and does not hinder recovery of secondary species if they are below a biologically based limit.

(a) Main secondary species stock status	Main secondary species are highly likely to be above biologically based limits. OR If below biologically based limits, there is either evidence of recovery or a demonstrably effective partial strategy in place such that the UoA does not hinder recovery and rebuilding. AND Where catches of a main secondary species outside of biological limits are considerable, there is either evidence of recovery or a, demonstrably effective strategy in place between those MSC UoAs that have considerable catches of the species, to ensure that they collectively do not hinder recovery and rebuilding.	Secondary species are those that are not in P1, are not Primary (see PI 2.1.1 Sla) and are not ETP. The bait species used in the longline fishery may be classified as **Main secondary**. The FIP must understand what the status of these stocks is likely to be, and the magnitude of bait used relative to the total catch of those stocks.
(b) Minor secondary species stock status	There is no SG80 guidance	**Minor secondary** species in the fishery could include swordfish, billfishes, mahi-mahi, wahoo, opah, barracuda, escolar, ocean sunfish and perhaps some sharks (if not treated as ETP).

Scoring Issues	SG80	Best practices
		The magnitude of the catches of minor secondary species needs to be corroborated with observer data.
		The status of most or all of these stocks is likely unknown so that SG100 is probably not met.

PI 2.2.2 (Secondary species management strategy)
There is a strategy in place for managing secondary species that is designed to maintain or to not hinder rebuilding of secondary species; and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch.

Scoring Issues	SG80	Best practices
(a) Management strategy in place	There is a partial strategy in place, if necessary, for the UoA that is expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits or to ensure that the UoA does not hinder their recovery.	Bait species will likely be main secondary species. For these, if the amounts used by the fishery are negligible, measures and a partial strategy may not be necessary. Nevertheless, the fishery should support any efforts (at the national or RFMO level where the bait species are caught) to assess and manage secondary species so that they are maintained at healthy levels of abundance. The partial strategy should include, at a minimum, monitoring of fishing operations.
(b) Management strategy evaluation	There is some objective basis for confidence that the measures/ partial strategy will work, based on some information directly about the UoA and/or species involved.	The amount of the minor secondary species used in the fishery should be negligible compared to other fisheries (gears) and it is likely that there would be an objective basis to determine if management of these impacts will matter in maintaining the stocks at healthy levels.
(c) Management strategy implementation	There is some evidence that the measures/ partial strategy is being implemented successfully.	See above.
(d) Shark finning	It is highly likely that shark finning is not taking place.	The fishery should prohibit shark finning and demonstrate that it does not take place.
(e) Review of alternative measures to minimise mortality of unwanted catch	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA- related mortality of unwanted catch of main secondary species and they are implemented as appropriate.	It is unlikely that there will be unwanted catch of main secondary species. Appropriate monitoring should exist to account for changes in catch composition over time and areas. Also, alternative measures are required only when unwanted catches exist i.e. part of the catch is discarded

Scoring Issues	SG80	Best practices
PI 2.2.3 (Secondary species information) Information on the nature and amount of secondary species taken is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage secondary species.		
(a) Information adequacy for assessment of impact on main secondary species	Some quantitative information is available and is adequate to assess the impact of the UoA on the main secondary species with respect to status. OR If RBF is used to score PI 2.2.1 for the UoA: Some quantitative information is adequate to assess productivity and susceptibility attributes for main secondary species.	The fishery needs to document the amounts and origin of bait species in order to allow for an assessment the level of use of these species in relation to overall population size. Appropriate monitoring of fishing operations should be in place.
(b) Information adequacy for assessment of impact on minor secondary species	There is no SG80 guidance.	
(c) Information adequacy for management strategy	Information is adequate to support a partial strategy to manage main secondary species.	Information on baitfish amounts and origin needs to be collated in a way which allows consideration of its adequacy to support a partial strategy.
PI 2.3.1 (ETP species outcome) The UoA meets national and international requirements for protection of ETP species. The UoA does not hinder recovery of ETP species.		
(a) Effects of the UoA on population/ stocks within national or international limits, where applicable	Where national and/or international requirements set limits for ETP species, the combined effects of the MSC UoAs on the population/stock are known and highly likely to be within these limits.	ETP (Endangered, threatened or protected) species are those that are recognized by national legislation and specific international agreements. In tuna longline fisheries, this will normally include sharks, turtles, cetaceans and sea birds. SIa will be relevant if there are national or international limits for any of these. This is a cumulative issue, which needs to consider the combined effects of all MSC-certified fisheries.

Scoring Issues	SG80	Best practices
		For all ETP species, the fishery must report interactions and fate of any releases (e.g. released alive, discarded dead, injuries), and collect any data requested by scientists (e.g. photographs). This will allow assessment of the impacts.
(b) Direct effects	Direct effects of the UoA are highly likely to not hinder recovery of ETP species.	Observer programs are key for collecting data on interactions (capture and fate) with ETP species in longline fisheries. Without good observer coverage, direct effects cannot be determined. The extent of interactions with different ETP species will vary depending on a number of factors such as: Region, latitude, time of the set (day/night) depth of the set, bait type, hook characteristics, use of wire leaders, etc. These factors are fishery specific and observer data are required to understand them. The FIP must ensure high observer coverage in the fishery (human or electronic) to document and quantify interactions. If interactions with any ETP species are high enough to indicate that direct effects could be significant, the FIP should use methods to minimize the interactions and to increase survival after release. Again, observer data are critical to demonstrate the implementation of these mitigation methods. These methods are available in the following: ISSF bycatch workshops: https://iss-foundation.org/what-we-do/areas-of-focus/bycatch/skippers-workshops/skippers-resources-and-certification/ ISSF longline handling and mitigation of bycatch species: https://www.youtube.com/watch?v=egQ-xDr1hYE&list=PLvFm4k9xS1jpIpuWl-jltwRDrAC215x6C https://www.youtube.com/playlist?list=PLvFm4k9xS1jp3DAfQtxZg9aSESHuqC3RC https://www.youtube.com/watch?v=1fr4icCbEaA&list=PLZdqdnP9k_IG1Svz7P_dkgffAa0CsZ96l https://www.youtube.com/watch?v=I02yHtnSrDE&list=PLvFm4k9xS1jpJQF2GWDp4PwzxNHC3zisb SFP Best practices for reducing bycatch in longline tuna fisheries: https://www.sustainablefish.org/Publications RFMO CMMs on handling of turtles and seabirds:https://www.iattc.org/PDFFiles/Resolutions/IATTC/_English/C-11-02_Seabirds.pdf https://www.iattc.org/PDFFiles/Resolutions/IATTC/_English/C-07-03_Sea%20turtles.pdf https://www.wcpfc.int/doc/cmm-2008-03/conservation-and-management-sea-turtles

Scoring Issues	SG80	Best practices
		https://www.wcpfc.int/doc/cmm-2017-06/conservation-and-management-measure-mitigate-impact-fishing-highly-migratory-fish
		http://iotc.org/cmm/resolution-1204-conservation-marine-turtles
		http://iotc.org/cmm/resolution-1206-reducing-incidental-bycatch-seabirds-longline-fisheries
		https://www.iccat.int/Documents/Recs/compendiopdf-e/2013-11-e.pdf
		https://www.iccat.int/Documents/Recs/compendiopdf-e/2011-09-e.pdf
		http://iotc.org/science/species-identification-cards
(c) Indirect effects	Indirect effects have been considered for the UoA and are thought to be highly likely to not create unacceptable impacts.	Possible indirect effects on ETP include competition for forage species and disturbance of ETP species habitat. These are unlikely in the longline fishery.

PI 2.3.2 (ETP species management strategy)
The UoA has in place precautionary management strategies designed to:
  - meet national and international requirements; and
  - ensure the UoA does not hinder recovery of ETP species.
Also, the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of ETP species.

Scoring Issues	SG80	Best practices
(a) Management strategy in place (national and international requirements)	There is a strategy in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species.	In order to ensure that the entire longline fisheries minimize their impacts on ETP species, the fishery should work with the RFMO and flag state to adopt mandatory handling and release practices for ETP species. If the RFMO has adopted such measures but the flag state does not require them, the fishery should work with the flag state to require legislate them. In the absence of binding national or international requirements, the fishery should develop its own policy and require that the vessels use mitigation practices (see PI 2.3.1 SIb.)
(b) Management strategy in place (alternative)	There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species.	See previous SI.

Scoring Issues	SG80	Best practices
(c) Management strategy evaluation	There is an objective basis for confidence that the partial strategy/ strategy will work, based on information directly about the UoA and/or the species involved.	The use of any best practices such as tori lines and live release need to be documented and reported so that any such measures can be evaluated. Sufficient observer coverage (human or electronic) is required to determine if the strategy works.
(d) Management strategy implementation	There is some evidence that the measures/strategy is being implemented successfully.	See previous SI.
(e) Review of alternative measures to minimise mortality of ETP species	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA- related mortality of ETP species and they are implemented as appropriate.	The fishery should facilitate research that addresses mitigation of ETP species bycatch and voluntarily adopt best practices for mitigation (Morgan et al., 2018). Skippers should participate in workshops to learn the use of these methods. In addition, there are opportunities to participate in programs that reduce mortality of ETP species outside the fishery. For example, ISSF projects to protect turtle nesting beaches can greatly increase turtle survival.

2.3.3 (ETP species information)
Relevant information is collected to support the management of UoA impacts on ETP species, including:
  - information for the development of the management strategy;
  - information to assess the effectiveness of the management strategy; and
  - information to determine the outcome status of ETP species

(a) Information adequacy for assessment of impacts	Some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species. OR If RBF is used to score PI 2.3.1 for the UoA: Some quantitative information is adequate to assess productivity and susceptibility attributes for ETP species.	Observer data are the main source of information for ETP species interactions. For very rare interactions (e.g. with cetaceans), 100% coverage is needed to achieve certainty. FIPs should support adoption by the RFMOs of 100% observer coverage (human or electronic). Additional quantitative information can be obtained from port sampling (when vessels unload directly) or from observers in transhipments at sea. It is also important for the FIP to demonstrate compliance by the fishery with existing RFMO and national legislation on ETP species.

Scoring Issues	SG80	Best practices
(b) Information adequacy for management strategy	Information is adequate to measure trends and support a strategy to manage impacts on ETP species	See SI above.

PI 2.4.1 (Habitats outcome)
The UoA does not cause serious or irreversible harm to habitat structure and function, considered on the basis of the area covered by the governance body(s) responsible for fisheries management in the area(s) where the UoA operates.

(a) Commonly encountered habitat status	The UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.	Tuna longline fisheries operate near the surface in deep, oceanic water and the longline gear does not contact the seabed. Any pelagic habitat impacts will probably be minimal. Observer data can be used to corroborate the location where sets take place and the likely depth of the deepest hooks. Lost gear may add to marine debris and it would be useful for the FIP to document the frequency of occurrence of such events, e.g. via logbooks.
(b) VME habitat status	The UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.	Tuna longline fisheries are unlikely to impact VMEs.
(c) Minor habitat status	There is no SG80 guidance.	See SIa.

PI 2.4.2 (Habitats management strategy)
There is a strategy in place that is designed to ensure the UoA does not pose a risk of serious or irreversible harm to the habitats.

(a) Management strategy in place	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	See PI 2.4.1
(b) Management strategy evaluation	There is some objective basis for confidence that the measures/ partial strategy will work, based on information directly about the UoA and/or habitats involved.	See PI 2.4.1

Scoring Issues	SG80	Best practices
(c) Management strategy implementation	There is some quantitative evidence that the measures/ partial strategy is being implemented successfully.	Observer coverage and VMS data can confirm the location of sets in order to demonstrating the lack of habitat contact.
(d) Compliance with management requirements and other MSC UoAs'/non-MSC fisheries' measures to protect VMEs	There is some quantitative evidence that the UoA complies with both its management requirements and with protection measures afforded to VMEs by other MSC UoAs/ non-MSC fisheries, where relevant.	It is unlikely that VMEs are impacted by longline fisheries.

PI 2.4.3 (Habitats information)
Information is adequate to determine the risk posed to the habitat by the UoA and the effectiveness of the strategy to manage impacts on the habitat.

Scoring Issues	SG80	Best practices
(a) Information quality	The nature, distribution and vulnerability of the main habitats in the UoA area are known at a level of detail relevant to the scale and intensity of the UoA. OR If CSA is used to score PI 2.4.1 for the UoA: Some quantitative information is available and is adequate to estimate the types and distribution of the main habitats.	The nature, distribution and vulnerability of both the epipelagic and benthic habitats are generally well known in all oceans.
(b) Information adequacy for assessment of impacts	Information is adequate to allow for identification of the main impacts of the UoA on the main habitats, and there is reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear. OR	See SIa.

Scoring Issues	SG80	Best practices
	If CSA is used to score PI 2.4.1 for the UoA: Some quantitative information is available and is adequate to estimate the consequence and spatial attributes of the main habitats.	
(c) Monitoring	Adequate information continues to be collected to detect any increase in risk to the main habitats.	See SIa.

PI 2.5.1 (Ecosystem outcome)
The UoA does not cause serious or irreversible harm to the key elements of ecosystem structure and function.

(a) Ecosystem status	The UoA 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.	Tuna longline fisheries probably do not cause significant changes in marine ecosystems. If the population sizes of the target tunas are maintained at or above B_{MSY}, a sizeable amount of biomass should remain in the ecosystem, unlikely causing serious or irreversible harm. Nevertheless, there is a large number of species caught in association with longline fisheries for which little is known in terms of biology or ecology. Thus, it is difficult to evaluate this PI.

PI 2.5.2 (Ecosystem management strategy)
There are measures in place to ensure the UoA does not pose a risk of serious or irreversible harm to ecosystem structure and function.

(a) Management strategy in place	There is a partial strategy in place, if necessary, which takes into account available information and is expected to restrain impacts of the UoA on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.	General management measures for tuna stocks adopted by RFMOs indirectly serve as a partial strategy to limit the impact of tuna fisheries on ecosystems (e.g. limit on vessel capacity, setting of TACs or catch limits, closes area/seasons, etc.).
(b) Management strategy evaluation	There is some objective basis for confidence that the measures/ partial strategy will work, based on some information directly about the UoA and/or the ecosystem involved.	The fishery should be engaged with the relevant RFMO to support that the implementation of management measures (described in the previous SI) is closely monitored. All the risks are linked to fishing effort, so it is essential that the fishery provides the required information on effort by set to the flag state and the RFMO.

Scoring Issues	SG80	Best practices
(c) Management strategy implementation	There is some evidence that the measures/partial strategy is being implemented successfully.	Evidence that the measures are being implemented successfully are primarily at the level of the relevant RFMO. This includes fishing effort data, monitoring of the impacts of the fishery (e.g. through stock assessments) and compliance with existing management measures.
PI 2.5.3 (Ecosystem information) There is adequate knowledge of the impacts of the UoA on the ecosystem.		
(a) Information quality	Information is adequate to broadly understand the key elements of the ecosystem.	Information on the components of oceanic ecosystems worldwide is available from several international scientific institutions such as FAO, NOAA, RFMOs, etc.; as well as from local governments. The available information is likely adequate to broadly understand the key elements of the ecosystem.
(b) Investigation of UoA impacts	Main impacts of the UoA on these key ecosystem elements can be inferred from existing information, and some have been investigated in detail.	See SI 2.5.1. a
(c) Understanding of component functions	The main functions of the components (i.e., P1 target species, primary, secondary and ETP species and Habitats) in the ecosystem are known.	Data on primary, secondary and ETP species in longline fisheries are collected almost solely by observer programs. The higher the coverage, the better in terms of understanding ecosystem component functions. The fishery must have high observer coverage (human or electronic) to support this work.
(d) Information relevance	Adequate information is available on the impacts of the UoA on these components to allow some of the main consequences for the ecosystem to be inferred.	See previous SI.
(e) Monitoring	Adequate data continue to be collected to detect any increase in risk level.	Data collected as part of existing RFMO tuna management measures are a source of data to assess potential impact to ecosystem components. Additionally, fisheries must collect adequate data on non-target species through observer programs.
Principle 3		
PI 3.1.1 (Legal and/or customary framework) The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:		

Scoring Issues	SG80	Best practices
- Is capable of delivering sustainability in the UoA(s) - 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.		
(a) Compatibility of laws or standards with effective management	There is an effective national legal system and organised and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2.	The management system for the fishery needs to be viewed in terms of the flag state(s), the RFMO where it operates, and the countries in whose EEZs it is licensed to fish. The vessels must be flagged to a country that is effectively a member of the RFMO, which provides the basis for international cooperation. This is the intent of ISSF Conservation Measure 1.2.
(b) Resolution of disputes	The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the UoA.	The fishery must advocate for a transparent mechanism for the resolution of legal disputes at both the national and RFMO levels, if such mechanisms do not exist.
(c) Respect for rights	The management system has a mechanism to observe the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	All tuna RFMOs contemplate this aspect in their management systems to some degree (for example in quota allocations). longline fisheries should advocate for the correct implementation of the relevant RFMO measures, if necessary.
PI 3.1.2 (Consultation, roles and responsibilities) The management system has effective consultation processes that are open to interested and affected parties. The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties.		
(a) Roles and responsibilities	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities	Generally, the RFMOs will have well understood roles for monitoring, stock assessment and management. Enforcement will likely be at the national level. The fishery must advocate for explicitly defined and well understood functions, roles and responsibilities at both the national and RFMO levels, if necessary.

Scoring Issues	SG80	Best practices
	are explicitly defined and well understood for key areas of responsibility and interaction	
(b) Consultation processes	The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained	At the RFMO level, the consultation processes differ. In most cases, local knowledge is provided by the RFMO member countries. And, relevant information from NGOs, industry and other stakeholders is usually considered (although not always accepted). The scoring of this SI may be more variable at the national level. The fishery should advocate that the national management system includes such a participatory consultation process.
(c) Participation	The consultation process provides opportunity for all interested and affected parties to be involved.	

PI 3.1.3 (Long-term objectives)
The management policy has clear long-term objectives to guide decision- making that are consistent with MSC Fisheries Standard, and incorporates the precautionary approach.

(a) Objectives	Clear long-term objectives that guide decision- making, consistent with MSC Fisheries Standard and the precautionary approach, are explicit within management policy.	Long-term objectives tend to be clear in most RFMOs in terms of sustainable use, MSY, and the precautionary approach. At the national level this is not necessarily the case. If it is not, the fishery should advocate so that objectives become part of the national fisheries legislation.

PI 3.2.1 (Fishery-specific objectives)
The fishery- specific management system has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.

(a) Objectives	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- specific management system.	See P1 and P2 in general. The RFMO should have short and long-term objectives for albacore, bigeye, yellowfin and skipjack (the P1 species) as well as for P2. If this is not the case, the fishery should engage with its flag state to ensure management objectives are established with the RFMO.

Scoring Issues	SG80	Best practices
PI 3.2.2 (Decision-making processes) The fishery- specific management system includes effective decision- making processes that result in measures and strategies to achieve the objectives and has an appropriate approach to actual disputes in the fishery.		
(a) Decision- making processes	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives	Scoring of these SIs will vary by RFMO. It is important that the RFMO demonstrates that it takes action when one or more of the target stocks are being overfished, to address data gaps, etc. The fishery must promote this adaptive decision-making and act proactively to build support for action (e.g. by lobbying their flag state, working with other FIP fisheries etc.).
(b) Responsiveness of decision-making processes	Decision- making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.	
(c) Use of precautionary approach	Decision- making processes use the precautionary approach and are based on best available information.	
(d) Accountability and transparency of management system and decision-making process	Information on the fishery's performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring evaluation and review activity.	Information on tuna longline fisheries is generally available from RFMOs, although there is substantial variation in transparency. It is not always clear how available information has been used or why it has not been used. The fishery must support transparency in the decision-making process.
(e) Approach to disputes	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	If the fishery has faced legal challenges at the RFMO level, flag state level, or in countries in whose EEZ it is licensed to fish, it should demonstrate how it has worked to comply with judicial decisions.

Scoring Issues	SG80	Best practices
PI 3.2.3 (Compliance and enforcement) Monitoring, control and surveillance mechanisms ensure the management measures in the fishery are enforced and complied with.		
(a) MCS implementation	A monitoring, control and surveillance system has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.	MCS tools include vessel licensing and registration, VMS, electronic logbooks, observer coverage and the monitoring of landings or transshipment observer programs. Electronic Monitoring systems are a good tool to complement or augment MCS capabilities. The MCS system should work for the flag state, the RFMO and also to ensure the laws of the countries where the fishery is licensed to operate are followed. Some longline fisheries transship much of their catch at sea. Without proper monitoring, transshipments can become an environment conducive to non-compliance and other illegal practices. If the fishery practices at-sea transshipments, it must ensure that all transshipments occur under the monitoring of an RFMO observer program and must be able to demonstrate it.
(b) Sanctions	Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence.	The scoring of this SI will depend on the RFMO, flag state and license countries and the fishery must be able to provide this evidence.
(c) Compliance	Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.	The fishery should make available this evidence. In addition, it would be good practice for the fleet manager to instruct skippers about regulations at the RFMO and flag state in addition to countries in whose EEZ the vessels are licensed to fish. Some VMS and EMS can be programmed to warn the vessel and managers when approaching an area where the vessel cannot legally fish.
(d) Systematic non-compliance	There is no evidence of systematic non- compliance.	
PI 3.2.4 (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.		
(a) Evaluation coverage	There are mechanisms in place to evaluate key parts of the fishery-specific management system.	Key parts of the fishery-specific management system will be at the RFMO and flag state level and it should be easy to demonstrate the mechanisms in place.

Scoring Issues	SG80	Best practices
(b) Internal and/or external review	The fishery- specific management system is subject to regular internal and occasional external review.	External reviews of all RFMOs have taken place. The fishery should support efforts to review the flag state management system if they are absent.

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