



Work Plan for the Indian Ocean Tuna – Longline Fue Shin Fishery Ltd. (FSF) Fishery

Prepared by

Ocean Outcomes

December 2022

Introduction

This document presents the workplan taking into account the FSF Indian Ocean longline tuna fishery pre-assessment against the Marine Stewardship Council (MSC) Fisheries Standard for sustainable fishing (Version 2.01). The fishery targets albacore (*Thunnus alalunga*), and catches bigeye (*T. obesus*) and yellowfin (*T. albacares*) and skipjack (*Katsuwonus pelamis*). The pelagic longline vessels are flagged to Taiwan and China and fish on the high seas in the Indian Ocean and the Mauritius and Seychelles EEZ. Vessels on the high seas transship, while some vessels land product in Mauritius. The stocks assessed are Indian Ocean albacore, bigeye, yellowfin and skipjack tunas. The fishery is managed regionally by the Indian Ocean Tuna Commission (IOTC). The aim of the document is to give guidance on gaps against the MSC fisheries standard that could be improved by a Fisheries Improvement Project (FIP).

The fishery under assessment is within the scope of the MSC Fisheries Standard (7.4 of the MSC Certification Process v2.2):

- The target species is not an amphibian, reptile, bird or mammal.
- The fishery does not use poisons or explosives.
- The fishery is not conducted under a controversial unilateral exemption to an international agreement.
- The client or client group does not include an entity that has been successfully prosecuted for a forced labour violation in the last two years.
- The fishery has in place a mechanism for resolving disputes, and disputes do not overwhelm the fishery.
- The fishery is not an enhanced fishery as per the MSC FCP 7.4.6; and
- The fishery is not an introduced species-based fishery as per the MSC FCP 7.4.7.

Pelagic longline gear is used throughout the world's oceans to capture tuna and tuna-like species. Longline gear is typically deployed from a single vessel across many miles of ocean. The vessel deploys a single mainline that is periodically buoyed with floatation devices and thinner branch lines (with baited hooks) are then attached to the mainline between the floats. Within this simple framework, a variety of configurations and operational practices can be employed to specifically target different depths and species of fish. A single set by vessels in the client fleet usually consists of a mainline around 135 - 150 km in length with ca. 20 - 50 m long branch lines attached at intervals along the length of the line.

The fishery is within scope of the MSC Fisheries Standard. The report considers the following Units of Assessment (UoA):

Table 1. Units of Assessment (UoAs).

UoA #	P1 stock	RFMO	Fished area	Flag state
1	IO YFT	IOTC	High seas	China
2	IO YFT	IOTC	High seas	Taiwan
3	IO YFT	IOTC	High seas	Seychelles
4	IO YFT	IOTC	Coastal states	China
5	IO YFT	IOTC	Coastal states	Taiwan

6	IO YFT	IOTC	Coastal states	Seychelles and Mauritius
7	IO ALB	IOTC	High seas	China
8	IO ALB	IOTC	High seas	Taiwan
9	IO ALB	IOTC	High seas	Seychelles
10	IO ALB	IOTC	Coastal states	China
11	IO ALB	IOTC	Coastal states	Taiwan
12	IO ALB	IOTC	Coastal states	Seychelles and Mauritius
13	IO BET	IOTC	High seas	China
14	IO BET	IOTC	High seas	Taiwan
15	IO BET	IOTC	High seas	Seychelles
16	IO BET	IOTC	Coastal states	China
17	IO BET	IOTC	Coastal states	Taiwan
18	IO BET	IOTC	Coastal states	Seychelles and Mauritius
19	IO SKJ	IOTC	High seas	China
20	IO SKJ	IOTC	High seas	Taiwan
21	IO SKJ	IOTC	High seas	Seychelles
22	IO SKJ	IOTC	Coastal states	China
23	IO SKJ	IOTC	Coastal states	Taiwan
24	IO SKJ	IOTC	Coastal states	Seychelles and Mauritius

Overview of Pre-assessment Results

The pre-assessment only considered publicly available data and no site visits or consultations with stakeholders were carried out. Data was collected from the Chinese and Taiwanese Governments from the IOTC website and other publicly available sources. Additional information was obtained from existing MSC fishery assessments.

The main strengths of the fishery are:

- Indian Ocean skipjack, albacore and bigeye tuna stocks are generally considered to have healthy status based on recent stock assessments, noting the Indian Ocean albacore and bigeye stocks are both subject to overfishing.
- There are established management frameworks for cooperation between countries that fish for tuna, and coastal states have tuna management plans.

- Good observer coverage for the three Taiwanese-flagged vessels assessed.

The main weaknesses of the fishery are:

- There are significant concerns about the stock status of Indian Ocean yellowfin tuna and Indian Ocean albacore and bigeye are subject to overfishing;
- Harvest strategies are not precautionary and either lack official harvest control rules entirely or do not have tools;
- No apparent observer coverage for the Chinese-flagged vessel, and therefore non-representative observer coverage across the fishery ($\leq 5\%$) to assess risk and support associated monitoring and management for Secondary and ETP species;
- Ecosystem impacts from parts of the UoAs are unclear due to limited catch data, observer records, and other data from the fishery;
- On-board operational practices (such as training and handling) and Codes of Conduct in place to mitigate risks to ETP and Secondary species; and
- The main regional management framework, the Indian Ocean Tuna Commission (IOTC) has not been very effective at implementing management measures for achieving environmental sustainability outcomes.

Information gaps:

- Observer coverage for the Chinese-flagged vessels.
- UoA specific gear characteristics (bait, hooks between floats, set depth), number hooks for vessels.
- UoA spatial and temporal fishing patterns.
- Species and quantity of bait used by UoA.

It is worth noting that while the four mentioned Indian Ocean species stocks assessed in this pre-assessment are nominally the fishery's target species from the FIP perspective, skipjack is not targeted. The catch data provided indicates two fleets involved (China and Taiwan) in the fishery appear to be operating slightly differently. Insufficient spatial and observer data were provided to be able to confirm this observation, however the different catch compositions between the two fleets indicates each fleet may be targeting different species. For example, the Chinese vessels may be targeting yellowfin, bigeye and albacore relatively more evenly and have higher percentages of swordfish and billfishes, while the Taiwanese vessels are targeting albacore more and catching more blue sharks. The two fleets may also be operating in slightly different areas, but this is a supposition. Neither the Taiwanese or Chinese-flagged vessels appeared to have been targeting skipjack, which is one of the nominated target species for this pre-assessment.

This fishery is consistent with the MSC standard in some areas. However, there are still significant environmental impacts from longline fishing and management issues to address.

Tables 2a-c below show the scoring for Performance Indicators (PIs) that scored less than 80 and will therefore be addressed in the FIP. For P1, the PI scores are by target stock, and for P3 the PIs are by geographic UoA.

Legend	<60	60 – 79	80+	Not scored
--------	-----	---------	-----	------------

Table 2a. Principle 1 PIs that score less than 80 and for which the FIP workplan will address the potential deficiencies.

		Indian Ocean
--	--	--------------

PI No.	Performance Indicator	BET	YFT	ALB	SKJ
1.1.1	Stock Status				
1.1.2	Stock Rebuilding	N/A *		N/A	N/A
1.2.1	Harvest Strategy				
1.2.2	Harvest Control Rules and Tools				

* A new IO BET stock assessment was presented and agreed at the 2022 meeting of the IOTC Working Party on Tropical Tuna, 24 - 29 October 2022 and was endorsed by the Scientific Committee in December, however the meeting report is not yet published. The stock moved from a status of subject to overfishing to overfished and subject to overfishing. PI 1.1.2 has a year in which to be rescored and until put rebuilding strategies and monitoring in place.

Table 2b. Principle 2 PIs that score less than 80 and for which the FIP workplan will address the potential deficiencies.

Component	PI No.	Performance Indicator	FSF Indian Ocean
Primary Species	2.1.2	Management	
Secondary Species	2.2.1	Outcome	
	2.2.2	Management	
	2.2.3	Information	
ETP Species	2.3.1	Outcome	
	2.3.2	Management	
	2.3.3	Information	
Habitats	2.4.3	Information	
Ecosystem	2.5.2	Management	
	2.5.3	Information	

Table 2c. Principle 3 approximate scores for RFMO, flag state, and coastal state management tiers and for which the FIP workplan will address the potential deficiencies.

			RFMO	Flag state and EEZ	Indian Ocean EEZs
--	--	--	------	--------------------	-------------------

PI No.	Component	Performance Indicator	IOTC	Seychelles	Mauritius
3.1.2	Governance and policy	Consultation, roles and responsibilities			
3.2.2 ^	Fishery specific mgt system	Decision making processes			
3.2.3		Compliance and enforcement		(Possibly red)	
3.2.4 ~		Management and performance evaluation			

^ In some MSC-certified fisheries, only the RFMO management level is assessed to score PI 3.2.2 SIs a, c, d and e. This approach is taken when the CAB considers the RFMO is where the relevant fisheries management arrangements of the fishery are established/or accountability is held.

~ The overall score for PI 3.2.4, there is a mixed approach to assessment by CABs against the MSC Fisheries Standard. Some fisheries, e.g. for the Western Pacific Sustainable Tuna Alliance (WPSTA) Western and Central Pacific skipjack and yellowfin free school purse seine fishery only the RMFO-level was assessed, however for the Solomon Islands Longline Fishery and the Echebatar Indian Ocean Skipjack Tuna Purse Seine Fishery, the RFMO (WCPFC and IOTC respectively) and EEZ where fishing occurs (Solomon Islands and Seychelles respectively) were both assessed. The approach is dependent on which management level the CAB considers is the relevant fisheries management arrangements of the fishery are established and/or accountability is held.

Introduction to FIP Workplan

Based on the assessment, scoping document, and participant input, the fishery improvement project has developed this workplan with activities that will help it correct the deficiencies necessary to achieve its objectives. This addresses all of the gaps between fishery performance and the MSC Standard identified in the pre-assessment.

This workplan includes:

- FIP coordination to run the FIP by carrying out the actions listed below. Further to these actions, there are necessary FIP coordination tasks that need to be arranged such as hosting steering group and stakeholder meetings, updating FisheryProgress.org and supporting action implementation.
- Objectives — We recommend objectives focus on a time frame of five years (or less). Objectives will address all the fishery's environmental challenges necessary to achieve a level of sustainability consistent with an unconditional pass of the MSC Standard. We also recommend all fishery improvement projects work toward including traceability and addressing social issues as part of their objectives.
- A list of Actions — Actions are major activities that must be completed to address the deficiencies identified in the need's assessment/pre-assessment. The workplan also includes tasks, which break actions down into specific steps that describe how the action will be accomplished.
- Responsible parties — Organisations/people responsible for completing each action.
- Timeframes — An estimate of the timeframe needed to complete each action and/or task.
- An associated budget which estimates the main expenses for the FIP.



Principle 1: Sustainability of fish stocks

Action Number and Name	1.1 — Stock Status and Rebuilding for IO yellowfin and bigeye tunas
Action Goal	There is evidence of stock rebuilding within a specified timeframe and fishing mortality is reduced to achieve MSY.
Action Description	<p>This action has two goals associated with it:</p> <ol style="list-style-type: none"> 1. PI 1.1.2a – Having a rebuilding timeframe is specified for the IO bigeye and yellowfin stock that is the shorter of 20 years or 2 times its generation time. 2. PI 1.1.2b – There is evidence that the rebuilding strategies are rebuilding the stock, or it is likely based on simulation modeling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe so that SG80 is met. <p>Both require large levels of advocacy to the IOTC and flag states to conduct rebuilding scenarios and build robust, comprehensive rebuilding strategies to enable fishing to be at MSY levels.</p>
Expected Completion Date	February 2026
Priority	High
Estimated Cost	<p>Year 1: US\$ 8,000 for time collecting advocacy and developing positions, to lobby the IOTC. Expenses to attend IOTC meetings are estimated at a further \$6,000 per year.</p> <p>Year 2-5: As per year 1</p>
Responsible Parties	FIP Coordinator, FIP Participants, IOTC, Flag states
MSC PI Addressed by the Action	1.1.1, 1.1.2



Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
1.1a: Lobbying IOTC and flag states to conduct re-building scenarios. Independent scientific assistance to support the IOTC in developing IO YFT re-building scenarios.	FIP Participants, IOTC	Flag states, NGOs, FIP co-ordinator	February 2023
1.1b: Lobbying IOTC and flag states to adopt the robust, comprehensive IO YFT rebuilding strategy (amend Resolution 21/01).	FIP Participants, IOTC	Flag states, NGOs, FIP co-ordinator	February 2023
1.1c: Lobbying IOTC and flag states to adopt a robust, comprehensive IO BET rebuilding strategy.	FIP Participants, IOTC	Flag states, NGOs, FIP co-ordinator	February 2023
1.1d: Re-evaluation of the re-building plan at the end of Year 1. Short-term technical assistance to the IOTC.	FIP Participants, IOTC	Flag states, NGOs, FIP co-ordinator	February 2024
1.1e: Review Stock status relative to reference points annually.	FIP Co-ordinator	IOTC	December 2023
1.1f: Fishing mortality (F) is <FMSY for IO YFT and BET at the end of Year 3.	FIP participants, IOTC	Flag states, NGOs, FIP co-ordinator	December 2025

Action Number and Name	1.2 — Well-managed robust and precautionary harvest strategies (HSs), including well defined and effective Harvest Control Rules (HCRs) and tools for all four tuna species
Action Goal	There are robust and precautionary HSs in place, and well-defined and effective HCRs in place for all four tuna stocks
Action Description	There are now HSs in place for IO bigeye and skipjack in the Indian Ocean, however these still lack the tools to be effective and the IOTC's history of stock management has been absent and/or ineffectual. The fishery should detail how the performance of the harvest strategies are currently monitored, reviews and where necessary amended in response to the state of the stock. Harvest strategies, including HCRs can then be refined or developed from this review. The FIP must also undertake an initial review of the tools which are used to set the exploitation rate in the fishery as determined



	<p>by the HCRs. This can then be used to amend the tools in use to control the exploitation rate as defined by the HCR.</p> <p>This action has four tasks associated with it:</p> <ol style="list-style-type: none"> 1. PI 1.2.1a - explicit harvest strategies for tuna are to be designed 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. 2. PI 1.2.1b - the harvest strategies may not have been fully tested but evidence exists that they are achieving their objectives. 3. PI 1.2.2a - well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. 4. PI 1.2.2b - the eventual IO albacore and yellowfin HCRs are determined to be robust to the main uncertainties. 5. PI 1.2.2c - HCRs tools are determined to be appropriate and effective in achieving the exploitation levels required for all four tuna stocks.
Expected Completion Date	February 2028
Priority	Albacore, yellowfin and bigeye high; skipjack medium
Estimated Cost	<p>Year 1: There will be costs involved in this action related to coordinating and holding meetings. Further, it will be necessary to create related FIP white papers and engagement strategies. A budget of US\$ 3,000 per flag per year is estimated in order to cover the necessary fees and expenses involved in undertaking this activity. Plus US\$ 3,000 for expenses.</p> <p>Year 2 - 4: As per year 1</p> <p>Year 5: none</p>
Responsible Parties	FIP Coordinator, FIP Participants, RFMOs, Flag states
MSC PIs Addressed by the Action	1.2.1, 1.2.2



Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
1.2a: For all four species: monitor and report on harvest strategy (including harvest control rules) development and implementation progress, and if appropriate to participate with, existing advocacy activities such as the NGO Tuna Forum.	FIP co-ordinator	Flag states, FIP Participants, NGOs	April 2023
1.2b: For ALB and YFT: hold meetings with delegation members with the following purpose: i. Proposing practical ways that the governments could support the harvest strategy development process, e.g. via liaison to support capacity-building with flag states, or other activities. Reporting regularly to the delegations so that they are kept informed of current ideas and proposals at RFMO and within flag states where the industry partners have links. ii. Request that delegates support harvest strategies (including HCRs) at RFMO meetings.	FIP co-ordinator, FIP Participants, IOTC	Flag state, NGOs	August 2023
1.2c: Years 1 – 3 for SKJ and BET: work with relevant management authorities to press for IOTC action on implementing measures that are effective in ensuring catch limits for SKJ tuna set using the HCR adopted in IOTC Resolutions 21/03 and 22/03 (or any subsequent amendments) are not exceeded.	FIP co-ordinator, FIP Participants, IOTC	Flag state, NGOs	October 2023
1.2d: For ALB and YFT: engage with RFMO scientists and CPC delegations to advocate for Management Strategy Evaluations (MSEs) as part of the harvest strategies development.	FIP co-ordinator, FIP Participants, IOTC	Flag state, NGOs	October 2023



1.2e: For SKJ and BET: the client will monitor reports to demonstrate that the available evidence indicates that the tools in use to ensure catch limits for SKJ and BET set using the HCR and harvest strategy respectively, are appropriate and effective in achieving the exploitation levels required under IOTC Resolutions 21/03 and 22/03 (or any subsequent amendments).	FIP co-ordinator	Flag states, FIP Participants, NGOs	November 2025
--	------------------	-------------------------------------	---------------

Principle 2: Minimising Environmental Impacts

Action Number and Name	2.1 — Improve information available for Principle 2 species outcome status, management and monitoring
Action Goal	Comprehensive logbook and observer data available across all UoA vessels
Action Description	<p>Availability of comprehensive logbook data and observer data for the entire UoA fleet would ensure the appropriate species are designated as Primary or Secondary main or minor primary species. This in turn would provide more certainty in assessment outcome and ability to pass MSC criteria unconditionally.</p> <p>Quantitative catch data, comprehensive fleet effort data combined with additional information from observer data will provide a better understanding of the catch profile required to designate which species would be scored as main or minor under Primary and Secondary designations. Catch proportions can be estimated from a combination of observer data and logbook effort data for those species that might only be reported by observers.</p> <p>For example, at present, the extent of vulnerable billfish species (e.g. black marlin) UoA catch is unclear; a precautionary approach would be taken at full assessment to include these species as main and given the uncertainty around the stock status and the lack of IOTC billfish-specific management measures in place; the fishery may not meet SG60.</p> <p>Similarly, the quantities of species which would be designated as Secondary main differ between logbook and observer data and there is insufficient data to conform or estimate the proportion of catches the UoA contributes to overall removals, required to assess the risk of the UoA hindering recovery of vulnerable species.</p>
Expected Completion Date	May 2025
Priority	High



Estimated Cost	<p>Year 1: Task 2 - US\$2,000 (3 days consultant time per flag state)</p> <p>Task 3 - US\$3,500 (5 days consultant time per flag state)</p> <p>A brief report explaining the findings of Task 2 and 3 will be created and shared with the FIP Participants highlighting gaps and recommending changes to the FIP documents as well as amended improvement actions. A budget of \$7,000 is recommended for this review to be undertaken.</p> <p>Year 2: Task 4: \$2,000</p> <p>Year 3: Task 5: Implement increased observer coverage and EM US\$ TBC depending on the approach taken for cost recovery of camera units and footage analyses.</p> <p>Year 4: TBC</p> <p>Year 5: TBC</p>
Expected completion date	TBC
Responsible Parties	FIP participants, FIP coordinator, fisheries consultant
MSC Pls Addressed by the Action	<p>Bringing together all the information available from the UoA fleet cross-cuts Pls 2.1.1, 2.2.1 (and 2.3.1) but would specifically address following scoring issues which did not meet SG60/SG80 in the pre-assessment:</p> <ul style="list-style-type: none"> • 2.2.1a evidence that the UoA is not hindering recovery of vulnerable main secondary species • 2.2.3c Information is adequate to support a partial strategy to manage main secondary species • 2.3.1a for some ETP shark species might provide sufficient evidence that UoA does not hinder their recovery

Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
2.1a: FIP coordinator to liaise with FIP participants for provision of existing comprehensive logbook and observer data (linked to logbook set IDs) and to	FIP coordinator, fishery/industry, flag	IOTC	December 2023



request IOTC observer data for relevant flag states (<i>cross-cuts with Action goal 2.2 task 2.2a</i>).	state data manager		
2.1b: FIP consultant/ NGO to complete a review of current observer coverage for UoA/flag state fleet. Based on published guidelines for coverage levels required for appropriate percentage confidence by species, explore options for implementing enhanced monitoring and provide recommendations for scientifically robust levels of human and electronic observer coverage (electronic monitoring) appropriate to risks, with associated estimated costs. <i>Subsequent milestones for this task will be reviewed and further defined once this analysis has been carried out.</i>	FIP consultant/NGO	FIP consultant/NGO	April 2024
2.1c: FIP consultant/NGO to characterise catch profile based on data provided and draw up a list of Primary/ Secondary species designated as main/minor.	FIP consultant/NGO	NGO, fishery	August 2024
2.1d: FIP coordinator to liaise with FIP participants to develop data collection strategy for reporting of all UoA catches and discards for monitoring purposes based on target levels of observer and EM coverage recommended under Task 3; facilitate crew and observer training on specific associated data collection protocols.	FIP coordinator	Fishery, flag state data/fishery manager, observer provider	December 2025
2.1e: Implement improved data collection strategy (enhanced on board observer coverage, EM).	FIP coordinator	Fishery/fleet manager or observer provider	December 2026
2.1f: Promote monitoring and research on designated primary and secondary species so that the contribution of each fishery to overall fishing mortality of each stock is estimated.	FIP coordinator, FIP participants	IOTC, flag state	December 2027

Action Number and Name	2.2 — ETP Species Outcome, Management and Information
Action Goal	Ensure that all ETP species potentially interacted with are taken into account in the assessment and the fishery



	causes minimal harm to ETP species.
Action Description	<p>Due to the sporadic nature of fisheries interaction with some ETP species, combined with the low levels of observer coverage required for the IOTC LL fleet (~5%); an alternative source of information is required in the short term to assess the potential risks to ETP species from the fishery.</p> <p>Ecological Risk Assessment (ERA) can be applied in data limited situations to identify and rank ecological risks associated with fishing and can also be used to prioritise future management action and data collection. Without comprehensive logbook and observer data to assess risks to ETP, an initial assessment of which ETP species would potentially interact with the fishery, based on fishing location and the geographical range of the ETP species known to interact with wider longline fleet in these areas would enable the SG60 outcome benchmark to be met. This process will also focus data collection plans and management approaches best suited to these species for incorporation into later steps/actions in the workplan.</p> <p>Focused data collection will improve the availability of fisheries specific information over time, and raise the fishery performance to a level where there is 'information adequate to support measure to manage ETP species' and therefore meet higher scores. required for an unconditional pass.</p>
Expected Completion Date	February 2028
Priority	High
Estimated Cost	<p>Year 1: Costs for Task 2.2a are covered under Action goal 2.1.</p> <p>Task 2 - Costs of US\$7,000 are based on 10 days consultant time to analyse positional data and prepare potential ETP hotspot maps.</p> <p>Task 3: Costs associated with completion of PSA will depend on the number of species, e.g. 0.5 consultant days per species. E.g. US\$4,000</p> <p>Year 2 - 5: A budget of US\$ 5,000 is recommended per year to update and review data.</p>
Responsible Parties	FIP coordinator, fisheries consultant, fishery participants
MSC PIs Addressed by the Action	2.3.1, 2.3.2, 2.3.3



2.4.3c fishery location determined to assess risk of gear loss to coral reefs.

Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
<p>2.2a: Collate and prepare data required for ERA:</p> <ul style="list-style-type: none"> i. Collate existing UoA logbook data and/or request nominal IOTC data for relevant flag states (<i>Cross-cuts with Task 2.1a of Action Goal 2.1</i>). ii. Compile national and international ETP species lists and associated geographical range information for comparison with fishery location. 	FIP coordinator/NGO	fishery/industry, flag state data manager IOTC; flag state fisheries/protected species managers	December 2023
<p>2.2b: Analyse positional data to determine fishing locations spatially and temporally; summarise data on reported ETP catches/interactions.</p> <p>Prepare maps to highlight potential interaction hotspot locations for relevant ETP species, prioritised by vulnerability and/or evidence of interaction in existing data.</p>	FIP consultant	NGO/FIP Coordinator	January 2024
2.2c: Carry out PSA for ETP species, where appropriate.	FIP consultant	NGO/FIP Coordinator	January 2024
2.2d: Develop ETP species management plan and associated data collection strategy (<i>cross-cuts with Action goal 2.1</i>), including materials for on board vessels on best practices and purchase associated equipment, go to consultation if necessary.	FIP coordinator	NGO, fishery; flag state fishery manager; observer providers	July 2024
2.2e: Deliver skipper training to teach best practices, safe handling and release, species identification and other elements consistent with ISSF guidance.	FIP coordinator	Fishery, observer provider; flag state fishery manager, observer provider	September 2023



2.2f: Implement enhanced scientific observer coverage of FIP participants through engaging with the human observer schemes or Electronic Monitoring.	FIP coordinator	Fishery, observer provider; flag state fishery manager, observer provider	September 2023
2.2g: Collect evidence from FIP participants that shark finning is not taking place on UoA vessels (<i>cross-cuts with Action goal 2.1 e.g. EM, observer implementation</i>).	FIP coordinator	Fishery, observer provider; flag state fishery manager	September 2024
2.2h: Review EM and observer coverage data and summarise spatial and temporal patterns in ETP interaction, observer data on ETP species condition/interaction type.	TBC	Possibly fisheries consultant	September 2024 - 2027
2.2i: Engage with IOTC and flag states in improving the management of ETP species across wider flag state/RFMO fleets. e.g. RFMO: mandatory turtle mitigation measures (taking similar approach as seabird IOTC measures); Flag state: NPOA for turtles, seabirds; sharks etc.	FIP coordinator	IOTC, Flag State; NGO; FIP participants	September 2024

Action Number and Name	2.3 — Improve Primary species management
Action Goal	There is evidence from the fishery (or species involved) that measures in place for main primary species will work.
Action Description	<p>P1 action goals related to yellowfin and albacore tuna rebuilding plans should address shortfalls in management for these primary main species.</p> <p>However, if swordfish and black marlin are confirmed as main primary species (through implementation of Action 2.1), Action 2.3 will be further elaborated to incorporate tasks to improve management associated with vulnerable billfish species.</p>
Expected Completion Date	If determined to be needed, February 2028



Priority	Medium
Estimated Cost	Dependent on the outcomes of Action 2.1.
Responsible Parties	TBC
MSC PIs Addressed by the Action	2.1.2b management strategy evaluation.

Action Number and Name	2.4 — There is adequate knowledge of the impacts of the UoA on the ecosystem
Action Goal	Initiate research into food web interactions and ecosystem modeling work aimed at improving understanding of the main functions of P1 target species, primary, secondary and ETP species and habitats in the ecosystem.
Action Description	<p>There are no available reliable ecosystem models for the western Indian Ocean that measure the fishing impacts on the ecosystem function and structure and there is a lack of information on food web interactions. To date ecosystem modeling has related to the impact of FADs on tuna behaviour, rather than ecosystem impacts.</p> <p>A general profile of the key ecosystem components has been developed through work completed by the IOTC WPEB and other researchers (Juan-Jorda 2019, Juan-Jorda et al 2019¹), but this requires further development.</p> <p>Tasks associated with this action goal will be further elaborated once Tasks 1 and 2 of Action Goal 2.1 has been implemented.</p>
Expected Completion Date	If determined to be needed, November 2027
Priority	Medium
Estimated Cost	Dependent on the outcomes of Action 2.1.

¹ Juan-Jordá, M.J., Andonegi, E., Murua, H., Ruiz, J., Ramos, M.L., Sabarros, P.S., Abascal, F. and Bach, P. (2019) In Support of the IOTC Ecosystem Report Card: Advances in Monitoring the Impacts on and the State Of The “Foodweb And Trophic Relationships” Ecosystem Component. IOTC-2019-WPEB15-30.



Responsible parties	TBC
MSC PIs Addressed by the Action	2.5.3 b-e

Principle 3: Effective Management

Action Number and Name	3.1 — Consultation, roles and responsibilities for IOTC and Mauritius
Action Goal	<p>In the Mauritius and IOTC management systems, organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction. (SIa)</p> <p>The Mauritius management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained. (SIb)</p> <p>The Mauritius consultation process provides opportunity for all interested and affected parties to be involved. (SIc)</p>
Action Description	The pre-assessment found insufficient evidence on consultation, roles, and responsibilities for the IOTC and Mauritius, so the FIP will need to undertake initial fact finding to understand these details. At which point the workplan will need reviewing and advocacy tasks added to promote these additions to fishery management.
Expected Completion Date	February 2028
Priority	Medium
Estimated Cost	<p>Year 1: US\$ 5,000</p> <p>Year 2: US\$ 2,500</p> <p>Year 3: US\$ 2,500</p>



	Year 4: US\$ 2,500 Year 5: US\$ 2,500
Responsible Parties	FIP coordinator, FIP participants, national management bodies.
MSC PI Addressed by the Action	3.1.2

Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
3.1a: Conduct investigation and review the degree to which all roles and responsibilities within the relevant fishery system are clearly defined. Consult with industry and other stakeholders to ascertain how well the functions and responsibilities are understood.	FIP coordinator, FIP participants	National management authorities	May 2023
3.1b: Identify all relevant stakeholders to the fishery.	FIP coordinator	National management authorities, FIP participants	November 2023
3.1c: Ensure all agencies within the management framework are clearly identified and their roles are publicly transparent.	National management authorities	FIP coordinator	November 2024
3.1d: Lobby Fishery authorities to develop a procedure to meet the requirements mentioned in the rationale. This may focus on support of transparency and regularity of the consultation process directly, how output from these processes is inputted/considered in decisions related to domestic and regional management arrangements as well as wider	National management authorities	FIP coordinator	November 2025



engagement and representation in consultations.			
3.1e: Ensure that any/all relevant fishery management plan(s) clearly identifies which departments will undertake which roles in the fishery.	National management authorities	FIP coordinator	November 2026
3.1f: Review and comment on the efficacy of the consultation process.	FIP coordinator	National management authorities	May 2027

Action Number and Name	3.2 — Decision-making processes for IOTC, Seychelles and Mauritius
Action Goal	<p>Decision-making processes for IOTC, Seychelles, Mauritius 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 (SIb).</p> <p>Decision-making processes use the precautionary approach and are based on best available information (SIc).</p>
Action Description	<p>The IOTC repeatedly does not respond to serious and other important issues brought to it, in a timely manner (SIb). It is unclear how responsive fisheries specific management is at the national / EEZ level for Seychelles and Mauritius.</p> <p>The inadequate application of the precautionary approach by the IOTC is demonstrated in a number of ways in the IOTC, for example in responding to the science regarding the Indian Ocean yellowfin and albacore stock statuses (SIc).</p>
Expected Completion Date	February 2028
Priority	Medium



Estimated Cost	<p>Year 1: If needed, the review and reporting would need to be conducted by a qualified team and it is estimated that this could involve US\$ 20,000 of fees. If an in-person engagement is necessary then these expenses would be extra, a budget of \$3,000 per country would be recommended.</p> <p>Year 2: US\$ 5,000 plus expenses if in-person meeting is necessary</p> <p>Year 3: US\$ 2,500</p> <p>Year 4: US\$ 1,000</p> <p>Year 5: US\$ 1,000</p>
Responsible Parties	FIP consultant, FIP participants, national management bodies.
MSC PI Addressed by the Action	3.2.2

Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
<p>3.2a: Contact FCF Co Ltd to determine if they have conducted a review of MCS systems in place in the fishery for their Indian Ocean longline FIP, and if they might share the results.</p> <p>Conduct review of the decision-making processes in the IOTC, Seychelles and Mauritius to fully understand gaps identified in pre-assessment. The reviews should include:</p> <ol style="list-style-type: none"> 1. Is the process transparent, timely and evidence-based? 2. Does the decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation? 3. Does it include the precautionary approach and use of the best science available? 4. Input from management authorities and other relevant stakeholders. 	FIP coordinator, FIP consultant		July 2023



<p>5. If there are/have been any legal challenges and how these have been addressed by the management system and/or fishery.</p> <p>A report should be produced for relevant and interested stakeholders and should detail the findings and identify the gaps.</p>			
<p>3.2b: Define decision-making processes in the management plan. The process shall include, if necessary, how will evidence be:</p> <ol style="list-style-type: none"> 1. Included (from research, monitoring, evaluation and consultation). 2. Stakeholders consulted. 3. Utilised from best-available information to ensure the precautionary approach. 4. Outcomes communicated - information should be made 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. 5. Process for addressing legal challenges if necessary. 6. Precautionary approach encompassed as a key element of the management plan. 	Ministries, FIP consultant, FIP participants	FIP coordinator, NGOs	February 2024
<p>3.2c: Hold consultations with relevant stakeholders to incorporate above into decision-making processes. Multiple consultations may be needed.</p>	Ministries, FIP consultant, FIP participants	FIP coordinator, NGOs	February 2025
<p>3.2d: Implement the decision-making processes, ensuring stakeholders are consulted and informed (for example via email, website, formal report etc.) best-available information (from RFMOs, research etc.) and the precautionary approach are included.</p>	Ministries, FIP consultant, FIP participants	FIP coordinator, NGOs	February 2026
<p>3.2e: Review the efficacy of the decision-making process, and application of the precautionary approach.</p>	Ministries, FIP consultant, FIP participants	FIP coordinator, NGOs	February 2027



Action Number and Name	3.3 — Compliance and enforcement for IOTC, Seychelles, and Mauritius
Action Goal	Have sufficient evidence to conclude that enforced monitoring, control and surveillance systems are in place (Sla), and sanctions are consistently applied and provide an effective deterrence (Slc).
Action Description	<p>IOTC's strategy to improve compliance cannot be termed a compliance "system" as of yet. The MCS strategy has not yet demonstrated an ability to enforce relevant management measures and systems. The IOTC, Seychelles, Mauritius governance systems need to implement monitoring, control and surveillance systems relevant to the fishery and demonstrate an ability to enforce relevant management measures, strategies and/or rules. (Sla)</p> <p>For IOTC, Seychelles, Mauritius, based on the information available, sanctions to deal with non-compliance exist and there is some evidence that they are applied, SG60 requirements are therefore met. However, there is not sufficient evidence to conclude they are consistently applied and provide an effective deterrence. The FIP will need to provide this evidence and if lacking work with authorities to improve enforcement. (Slb)</p> <p>The IOTC and Seychelles: lacks some evidence to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery (Slc).</p>
Expected Completion Date	February 2028
Priority	Medium
Estimated Cost	<p>Year 1: US\$ 7,500</p> <p>Year 2: US\$ 7,500</p> <p>Year 3: US\$ 2,000</p> <p>Year 4: US\$ 1,000</p> <p>Year 5: US\$ 1,000</p>
Responsible Parties	National management bodies.
MSC PI Addressed by the Action	3.2.3



Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
<p>3.3a: Contact FCF Co Ltd to determine if they have conducted a review of MCS systems in place in the fishery for their Indian Ocean longline FIP, and if they might share the results. The review should include:</p> <ol style="list-style-type: none"> 1. MCS plans and strategies. 2. Information on MCS mechanisms in place (VMS, logbooks, landed catch documentation etc.). 3. Interviews with enforcement personnel. 4. Records of previous infringements, penalties, sanctions and/or court proceedings. 5. Review any previous reviews or evaluations of MCS systems. <p>A report should be produced for relevant and interested stakeholders and should detail the findings and identify the gaps.</p>	FIP coordinator; FIP consultant	Fishery	July 2023
3.3b: Develop plan to combat the gaps identified in the national MCS systems based on findings of report in.	Ministries; FIP consultant; FIP participants	FIP coordinator, NGOs	February 2024
3.3c: Develop plan to promote IOTC MCS measures to be more comprehensive.	National management bodies	FIP coordinator, NGOs	February 2024
3.3d: Hold consultations with relevant stakeholders to discuss implementation and potential adjustments to plan. Meeting minutes should be produced after each consultation to allow topics, actions, opinions, difficulties and progress to be recorded and monitored for all affected parties.	Ministries; FIP consultant; FIP participants	FIP coordinator, NGOs	February 2025



3.3e: Implement finalised plan where necessary, allocating the necessary resources to ensure successful employment of the improved MCS system.	Ministries; FIP consultant; FIP participants	FIP coordinator, NGOs	February 2026
3.3f: Review effectiveness of MCS system implemented and adjust where necessary. A report should be produced and supplied to stakeholders and consultations re-opened if necessary.	Ministries; FIP consultant; FIP participants	FIP coordinator, NGOs	February 2027

Action Number and Name	3.4 — Monitoring and management performance evaluation for Mauritius
Action Goal	The fishery-specific management system of Taiwan is subject to regular internal and occasional external review.
Action Description	<p>The management system has internal processes to evaluate management performance. These include evaluations of policy, research, operations, compliance and enforcement. These are carried out on a regular basis. SG80 is therefore met for SIa.</p> <p>There is no obvious evidence of any regular internal and external reviews, which is not to say that there haven't been any. In the absence of information SG80 cannot be met for SIb. The action covers one scoring issue from PI 3.2.4. This could be a product of the remote pre-assessment that was conducted, which led to precautionary scoring against the MSC Fisheries Standard (SIb).</p>
Expected Completion Date	February 2028
Priority	Medium
Estimated Cost	<p>Year 1: No associated costs</p> <p>Year 2: US\$ 3,000</p> <p>Year 3: US\$ 3,000</p> <p>Year 4: US\$ 2,000</p> <p>Year 5: US\$ 2,000</p>



Responsible Parties	FIP consultant, Mauritius national management body.
MSC PI Addressed by the Action	3.2.4

Tasks/ Milestones	Responsible (lead)	Responsible (supporting role)	Starting date
<p>3.4a: Review fishery-specific management processes currently in place. Ascertain whether these systems are subject to internal and/or external review, the format, the areas already reviewed (e.g. tuna management plan, performance, decision-making, MCS, compliance to RFMO/international regulations etc.) and the frequency to which these reviews occur.</p> <p>Provide comment as to the degree to which reviews have led to change within each respective/cognisant organisation.</p> <p>A short report will be produced for relevant and interested stakeholders and should detail the findings and identify the gaps.</p>	FIP coordinator, FIP consultant	Fishery authority	February 2024
3.4b: Develop plan to correct for the gaps identified in the national fishery-specific systems based on findings of report.	Ministry, FIP consultant	Other national bodies/ agencies, FIP co-ordinator	July 2024
3.4c: Hold consultations with relevant stakeholders to discuss implementation and potential adjustments to plan. At a minimum meeting minutes should be produced after each consultation in a timely fashion to allow topics, actions, opinions, difficulties, and progress to be recorded and monitored for all affected parties.	Ministry, FIP consultant	Other national bodies/ agencies, FIP co-ordinator	February 2025



3.4d: Implement finalised plan with binding commitment and requirements to undertake reviews where necessary, allocating the necessary resources to ensure regular internal and occasional external reviews from relevant bodies.	Ministry, FIP consultant	Other national bodies/ agencies, FIP co-ordinator	February 2026
3.4e: Review effectiveness of review system implemented and adjust where necessary. A report should be produced and supplied to stakeholders and consultations re-opened if necessary.	Ministry, FIP consultant	Other national bodies/ agencies, FIP co-ordinator	February 2027

Actions By Priority

Table 3. High Priority actions for the Fue Shin Fishery (FSF) Longline Tuna Fishery.

Name		Priority	PI Addressed
1.1	Stock Status and Rebuilding for IO yellowfin	High	1.1.1, 1.1.2
1.2	Robust and precautionary harvest strategy, including well defined and effective harvest control rules for IO albacore, bigeye and yellowfin tuna stocks	High	1.2.1, 1.2.2
2.1	Improve information available for Principle 2 species outcome status, management and monitoring	High	2.2.1, 2.2.3, 2.3.1
2.2	ETP Species Outcome, Management and Information	High	2.3.1, 2.3.2, 2.3.3, 2.4.3

Table 4. Medium Priority actions for the Fue Shin Fishery (FSF) Longline Tuna Fishery.

Action Number and Name		Priority	PI Addressed
1.2	Robust and precautionary harvest strategy, including well defined and effective harvest control rules for IO skipjack tuna	Medium	1.2.1, 1.2.2
2.3	Improve Primary species management	Medium	2.1.2
2.4	There is adequate knowledge of the impacts of the UoA on the ecosystem	Medium	2.5.3
3.1	Consultation, roles and responsibilities for IOTC and Mauritius	Medium	3.1.2
3.2	Decision-making processes for IOTC, Seychelles, and Mauritius	Medium	3.2.2
3.3	Compliance and enforcement for IOTC, Seychelles, and Mauritius	Medium	3.2.3
3.4	Monitoring and management performance evaluation for Mauritius	Medium	3.2.4

Budget

The table below lays out the budget as suggested in this workplan. Assumptions were made and this budget is inclusive of possible costs, note electronic monitoring is not included and would be a separate budget stream.

Table 5. Budget for the Indian Longline (Fue Shin) fishery.

Action Number and Name		Year 1 (US\$)	Year 2 (US\$)	Year 3 (US\$)	Year 4 (US\$)	Year 5 (US\$)	Total (US\$)
<i>FIP Coordination</i>		19,000	11,000	11,000	30,000	30,000	101,000
1.1	Stock Status and Rebuilding for IO yellowfin	14,000	14,000	14,000	14,000	14,000	70,000
1.2	Robust and precautionary harvest strategy, including well defined and effective harvest control rules for IO albacore, bigeye and yellowfin tuna stocks	9,000	9,000	9,000	9,000	9,000	45,000
2.1	Improve information available for Principle 2 species outcome status, management and monitoring	12,500	2,000	??,000	??,000	??,000	Unknown
2.2	ETP Species Outcome, Management and Information	11,000	5,000	5,000	5,000	5,000	31,000
2.3 & 2.4	Improve Primary species management; & There is adequate knowledge of the impacts of the UoA on the ecosystem	Dependent on Acton 2.1					
3.1	Consultation, roles and responsibilities for IOTC and Mauritius	5,000	2,500	2,500	2,500	2,500	15,000
3.2	Decision-making processes for IOTC, Seychelles, and Mauritius	23,000	5,000	2,500	1,000	1,000	32,500

3.3	Compliance and enforcement for IOTC, Seychelles, and Mauritius	7,500	7,500	2,000	1,000	1,000	19,000
3.4	Monitoring and management performance evaluation for Mauritius	0	3,000	3,000	2,000	2,000	10,000
Total (US\$)							323,500+