

DRAFT Indian Sardine Fishery Improvement Project Action Plan

July 2019

Background

Omega Fishmeal and CP India have progressed the implementation of a Fishery Improvement Project (FIP) as part of their commitment to ensuring responsible and sustainable fisheries in India. The companies have chosen to use the Responsible Sourcing Standard of the International Fishmeal and Fishoil Organisation (IFFO RS) as the goal for guiding management improvements in the fishery as this aligns with the FAO Code of Conduction for Responsible Fisheries, which has also been adopted by the government of India.

This Action Plan is a key part of the process established by IFFO RS to ensure that all stakeholders are committed to making measurable progress towards a fishery approval under the IFFO RS program. When finalised it will be a publicly available document that forms the basis for regular reporting by the companies and will be subject to scrutiny by interested parties from around the world. The companies have set up a website to provide background information and Action Plan updates which can be accessed at: <http://indiasardinefip.co.in/index.php>

Endorsement of the FIP by the IFFO RS Approvals Committee is a necessary step to enabling access to certain supply chains that require verifiable evidence that a credible FIP is in place that will deliver a fishery that can produce responsibly sourced fish meal and oil. Ongoing achievement of the actions is required for the Approval and supply access to be maintained.

This Action Plan sets out:

- the actions required to address the gaps between the current performance of the fishery
- the timetable for achieving the aims of the actions
- responsibilities for implementation
- time based budgets where feasible
- reporting activities

Units covered

The India sardine FIP covers the catching of Indian oil sardine and the lesser (fimbriated) sardine in the waters of Goa and Maharashtra States and adjacent nationally managed waters.

Outcome of the fishery assessment

The fishery evaluation was conducted by an independent consulting company, RS Standards, in January 2018, which is approved by IFFO RS to evaluate fisheries against the Responsible Sourcing Standard. The IFFO RS Standard is based on a pass/gap fishery assessment system and criteria which have been judged to pass require no further work in this Action Plan.

Table 1 summarises the outcomes of the fishery assessment and is used as the basis for the draft Action Plan (Table 2).

Table 1 – output from the fishery assessment conducted by RS Standards.

M1	Management Framework –Minimum Requirements		
	M1.1	There is an organisation responsible for managing the fishery.	Pass
	M1.2	There is an organisation responsible for collecting data and assessing the fishery.	Pass
	M1.3	Fishery management organisations are publically committed to sustainability.	Pass
	M1.4	Fishery management organisations are legally empowered to take management actions.	Pass
	M1.5	There is a consultation process through which fishery stakeholders are engaged in decision-making.	Pass
	M1.6	The decision-making process is transparent, with processes and results publically available.	Pass
M2	Surveillance, Control and Enforcement - Minimum Requirements		
	M2.1	There is an organisation responsible for monitoring compliance with fishery laws and regulations.	Gap
	M2.2	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.	Yes
	M2.3	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.	Gap
	M2.4	Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.	Gap
F1	Impacts on ETP Species - Minimum Requirements		
	F1.1	Interactions with ETP species are recorded.	Gap
	F1.2	There is no substantial evidence that the fishery has a significant negative effect on ETP species.	Gap

	F1.3	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.	Gap
F2	Impacts on Habitats - Minimum Requirements		
	F2.1	Potential habitat interactions are considered in the management decision-making process.	Pass
	F2.2	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.	Pass
	F2.3	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.	Pass
F3	Ecosystem Impacts - Minimum Requirements		
	F3.1	The broader ecosystem within which the fishery occurs is considered during the management decision-making process.	Gap
	F3.2	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.	Gap
	F3.3	If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.	Gap

Species Name	Indian Oil Sardine		
A1	Data Collection - Minimum Requirements		
	A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	Yes
	A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	GAP
A2	Stock Assessment - Minimum Requirements		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	GAP

	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	GAP
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	GAP
	A2.4	The assessment is subject to internal or external peer review.	GAP
	A2.5	The assessment is made publically available.	GAP
A3	Harvest Strategy - Minimum Requirements		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	GAP
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	GAP
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	GAP
A4	Stock Status - Minimum Requirements		
	A4.1	<p>The stock is at or above the target reference point, OR IF NOT:</p> <p>The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:</p> <p>The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.</p>	GAP

Proposed Actions

The actions proposed in the table below were discussed in a series of six thematic workshops with members of the FIP Stakeholder Committee at a meeting in Panjip (Goa, India) in February 2018. The draft was peer reviewed in January 2019 and this revised version prepared in response to this review.

This consultation sought comment from members of the stakeholder committee who then agreed to discuss with member organisations and government agencies about the content of the plan. The stakeholder representatives then discussed the proposed action with their members prior to final agreement and sign-off.

Table 2 – proposed Actions to close the gaps

Proposed Actions – stock assessment Gaps addressed A1.2, A2.1-A2.5	Outputs	Year start	Time budget	Key agency and personnel
<p>1. Organise a workshop to cover the following topics:</p> <ul style="list-style-type: none"> • future approaches to stock assessments aimed at reducing the amount of time between assessments to three years. Include analysis of rapid assessment approach and what may be needed to enable it to produce estimates of sustainable yield • catch composition – what sampling needs to be undertaken to generate a more detailed understanding of catch composition 	<p>Report that will include:</p> <ul style="list-style-type: none"> • preferred stock assessment model and data needs; • mechanisms for sourcing data from neighbouring jurisdictions • preferred methods for surveying catch composition (including boat based observers and landing site surveys) 	<p>Year 1 Completed – July 2019</p>	<p>6 months</p>	<p>Ratnagiri College of Fisheries</p>

<p>(catch and bycatch)(F1.1 to F1.2 and F3.1 to F3.2)</p> <ul style="list-style-type: none"> Investigate alternative data collection approaches if stock assessment cycle cannot be changed by government (A1.1) <p>Workshop to include industry groups, fishery managers, science providers and other interested parties</p>				
<p>2. Data collecting program based on results of workshop.</p>	<p>Research report that will cover:</p> <ul style="list-style-type: none"> Outcomes of catch sampling – will clarify the role of mackerel in the catches and the contribution of sardines other than IOS and Lesser Sardine. Will enable categorisation of species according to IFFO RS requirements Any information on whether purse seining interacts with seabed habitats (F2.2) Information on any interactions between purse seining and ETP species (F1.1 to 1.2) and 	<p>Year 1</p>	<p>24 months</p>	<p>Ratnagiri College of Fisheries</p> <p>Collaborating fishing vessels</p>

	<p>ecologically significant species (F3.1 to F3.2)</p> <ul style="list-style-type: none"> Options for increasing frequency of stock assessments 			
Obtain relevant data (e.g. landings) from other jurisdictions in which the two sardine species are caught (e.g. Karnataka and Kerala)	Data for input into stock assessment arising from workshop	Year 2	3 months	Local consultant
Draft preliminary stock assessment. Assessment to contain estimate of sustainable yield and assessment of current state versus draft reference points (see next Section)	Report	Year 2	12 months	Ratnagiri College of Fisheries
Arrange peer review of stock assessment (refer M1.6, A2.1-2.5)	Report	Year 3	1 month	External expert to be identified
Ensure that stock assessment is publicly available	Web page	Year 3	3 months	Ratnagiri College of Fisheries, FIP project
Proposed Actions – harvest strategy Gaps addressed A3.1-A3.3	Outputs	Time Table	Time budget	Key agency and personnel
Evaluate options for establishment of reference points and harvest strategy for the sardine stocks based on best practice.	Discussion document	Year 2	3 months	FIP consultant

Workshop reference point and harvest strategy options with government agencies and stakeholders	Workshop report to cover	Year 2	3 months	Goa and Maharashtra departments of fisheries Stakeholders from all sardine fisheries FIP consultant
Establish harvest control rules	Discussions with fisheries agencies aimed at adopting agreed harvest strategy and reference points into regulation	Year 3	12 months	Goa and Maharashtra departments of fisheries Stakeholders from all sardine fisheries FIP leadership
Prepare and publish regulations to give effect to control rules	Advisory document	Year 4	6 months?	Goa and Maharashtra departments of fisheries
Proposed Actions – Monitoring, Control and Surveillance Gaps addressed - M2.1, M2.2, M2.3, M2.4	Outputs	Time Table	Time budget	Key agency and personnel
Clarify MCS arrangements in Maharashtra State -	Short report that covers arrangements for the control of IUU fishing such as: <ul style="list-style-type: none"> Fishery monitoring activities undertaken by the fisheries 	Year 1	Draft available – to be reviewed in context of National	FIP support consultant and staff from the Maharashtra department of fisheries

	<p>department – e.g. VMS, vessel based, landing sites etc</p> <ul style="list-style-type: none"> • Full description of the legal and regulatory regime under which the fishery operates • Surveillance techniques used to detect breaches of control measures 		Policy on Marine Fisheries	
Liaise with government officials over the need for proper resourcing for MCS in Goa	Meetings with fishery officials in Goa	Year 1	6 months (and repeat if required)	FIP members
Provide evidence of enforcement in both Goa and Maharashtra (M2,2)	<p>Short report documenting:</p> <ul style="list-style-type: none"> • Enforcement activities (both target and random) • Numbers of prosecutions • Results of prosecutions 	Year 1	12 months	FIP support consultant and agency staff
Document how MCS efforts work towards implementation of national policy	Report	Year 2	3 months	MCS Consultant and agency staff
Proposed Actions – ecosystem impacts Gaps addressed F3.1-F3.3	Outputs	Time Table	Time budget	Key agency and personnel
Update and extend current Ecosim with Ecopath (EwE) model for SW India. Include climate change effects and effects of predators such as dolphins	Report covering the relationships between the ecosystem components of the Indian West Coast with a specific emphasis on the role of sardines and the potential impacts of	Year 2	12 months	To be determined

Model and evaluate the effects of the fishery	fishery removals on dependent species			
Workshop results of modelling with stakeholders	Report and recommendations which, depending on the results, may have management implications.	Year 3	6 months	FIP consultant
Incorporate any of the important results of the modelling into the fishery planning.	Fishery regulations	Year 3	6 months	Fisheries management staff and stakeholders
Proposed Actions – protected, endangered and threatened species Gaps addressed F3.1-F3.3	Outputs	Time Table	Time budget	Key agency and personnel
Detailed review of literature, including any local projects, that may have researched this area	Report	Year 1	6months	Consultants Fisheries agency staff from Maharashtra and Goa Researchers
Vessel based observer work	Report One report (PhD available for Ratnagiri area) shows that there are no IUCN Endangered or critically Endangered species taken. No evidence of mammal bycatch. Sea snakes caught and returned to sea.	Year 3	24 months	Consultant, fishermen and science support

Proposed Actions – other retained species	Outputs	Time Table	Time budget	Key agency and personnel
Write to RS Standards regarding the unit of assessment	Email exchange	Already done	Complete	FIP consultant
Resolve catching method for mackerels. Are they caught when fishing for sardines using the same nets? Or are they caught in separate fishing operations?	Short report on mackerel catching Research report (PhD covering Ratnagiri area) which shows that mackerels (and scads) are a small proportion of the catch taken when fishing for sardines. However, there are targeted sets for non-sardines undertaken by purse seiners.	Year 1	3 months	Local consultant
Detailed review of literature, including any local projects, that may have researched this area	Short report	Year 1	3 months	FIP support consultant plus agency staff and Ratnagiri College of Fisheries
Observer based catch sampling	Report	Year 3	24 months	Ratnagiri College of Fisheries and fishermen

Proposed Actions – points raised by peer reviewer but not identified as a gap	Outputs	Time Table	Time budget	Key agency and personnel

M1.1 Maharashtra department of fisheries does not produce an annual report	Annual reports Annual report has been obtained and supplied.	End Year 2	24 months	Local consultant and FIP leadership to liaise with department
M1.6 Evidence that FIP client has appointed a stock assessment provider	Letter from Ratnagiri College of Fisheries has been provided.			
M2.1. Evidence that FIP support consultants have been appointed	Will be undertaken once FIP is approved.			
M2.2. Evidence that sanctions are applied when laws are broken	Report from Maharashtra has been submitted			