

IOS FIP Workplan – FIP under V3.0.		NOTE- assumed start date of FIP is early 2025, assumed completion date is 2029													
Proposed Actions – stock assessment	Comments in fishery assessment	Proposed Actions	Outputs	Year start	Year End	Time budget	Lead responsibility and participants	Year 1 actions in detail	First six months actions in detail	Days budgeted	Budget (USD)	Progress	Audit trace	Notes	
A2.2 – The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	There are indicators that some reference proxies are available, including BMSY and FMSY. While traditional reference points like TRP and LRP are not available here, it is noted that for some fisheries biomass-based reference points may not be applicable and measures such as CPUE might be more warranted. However, as the research by Ratnagiri College of fisheries is not the assessment that government bases their management decisions on, without more comprehension, a gap remains.	Promote and encourage the development of a formal fishery management plan. The focal areas will be 1. Following up the provision of management advice by the CMFRI to the fisheries agencies of Maharashtra and Goa; 2. Seeking information on how the plans will be adopted under relevant fishery laws 3. Seeking information on how comment will be sought, including stakeholder consultation	Fishery management plans  Documentation of contacts with fisheries agencies seeking progress information	Commence early 2025	mid 2028	3 years	FIP consultants and FIP steering committee, departments of fisheries in Goa and Maharashtra	1. Seek 3 monthly meetings with Goa and Maharashtra fisheries agencies to ascertain progress on plan development; 2. Find out what their plans are for engaging stakeholders and receiving input 3. Find out what may be the path taken for ensuring that the management plan has a legal basis. 4. Discuss with fishery agencies the incorporation of reference points and commitments to regular (3 yearly) stock assessments	1. In month 1, seek updates from Goa and Maharashtra fisheries agencies to ascertain progress on plan development. Focus on how they will take the advice form CMFRI and create a Fishery Management Plan - how they plan on consulting stakeholders and how they plan to put the plan into law/regulation/policy commitment. 2. In Month 4, meet with Goa and Maharashtra fisheries agencies to discuss how the plans will incorporate key requirements such as reference points and harvest control rules.	30 days each year for A2.2, A3.2, A3.3 and A4.1 in total	15000 - A2.2, A3.2, A3.3 and A4.1 in total				
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.	Whilst a proxy is used, this still must be applied into the management plan, evidence of which could not be found during this initial assessment.	Promote and encourage the development of a formal fishery management plan. The focal areas will be 1. Following up the provision of management advice by the CMFRI to the fisheries agencies of Maharashtra and Goa; 2. Seeking information on how the plans will be adopted under relevant fishery laws 3. Seeking information on how comment will be sought, including stakeholder consultation	Fishery management plans  Documentation of contacts with fisheries agencies seeking progress information	Commence early 2025	mid 2028	3 years	FIP consultants and FIP steering committee, departments of fisheries in Goa and Maharashtra	1. Seek 3 monthly meetings with Goa and Maharashtra fisheries agencies to ascertain progress on plan development; 2. Find out what their plans are for engaging stakeholders and receiving input 3. Find out what may be the path taken for ensuring that the management plan has a legal basis. 4. Discuss with fishery agencies the incorporation of reference points and commitments to regular (3 yearly) stock assessments	1. In month 1, seek updates from Goa and Maharashtra fisheries agencies to ascertain progress on plan development. Focus on how they will take the advice form CMFRI and create a Fishery Management Plan - how they plan on consulting stakeholders and how they plan to put the plan into law/regulation/policy commitment. 2. In Month 4, meet with Goa and Maharashtra fisheries agencies to discuss how the plans will incorporate key requirements such as reference points and harvest control rules.	30 days each year for A2.2, A3.2, A3.3 and A4.1 in total	15000 - A2.2, A3.2, A3.3 and A4.1 in total				
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).	As there are no limit reference points available for this stock, this cannot pass.	Promote and encourage the development of a formal fishery management plan. The focal areas will be 1. Following up the provision of management advice by the CMFRI to the fisheries agencies of Maharashtra and Goa; 2. Seeking information on how the plans will be adopted under relevant fishery laws 3. Seeking information on how comment will be sought, including stakeholder consultation	Fishery management plans  Documentation of contacts with fisheries agencies seeking progress information	Commence early 2025	mid 2028	3 years	FIP consultants and FIP steering committee, departments of fisheries in Goa and Maharashtra	1. Seek 3 monthly meetings with Goa and Maharashtra fisheries agencies to ascertain progress on plan development; 2. Find out what their plans are for engaging stakeholders and receiving input 3. Find out what may be the path taken for ensuring that the management plan has a legal basis. 4. Discuss with fishery agencies the incorporation of reference points and commitments to regular (3 yearly) stock assessments	1. In month 1, seek updates from Goa and Maharashtra fisheries agencies to ascertain progress on plan development. Focus on how they will take the advice form CMFRI and create a Fishery Management Plan - how they plan on consulting stakeholders and how they plan to put the plan into law/regulation/policy commitment. 2. In Month 4, meet with Goa and Maharashtra fisheries agencies to discuss how the plans will incorporate key requirements such as reference points and harvest control rules.	30 days each year for A2.2, A3.2, A3.3 and A4.1 in total	15000 - A2.2, A3.2, A3.3 and A4.1 in total				
A4.1 – The stock is at or above the target reference point; OR IF NOT: 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: the stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited	There is no distinct TRPs in place for this stock, nor are there any LRPs. Therefore, there is also no information available that describes whether the fishery should be closed if these reference points are breached.	Promote and encourage the development of a formal fishery management plan. The focal areas will be 1. Following up the provision of management advice by the CMFRI to the fisheries agencies of Maharashtra and Goa; 2. Seeking information on how the plans will be adopted under relevant fishery laws 3. Seeking information on how comment will be sought, including stakeholder consultation	Fishery management plans  Documentation of contacts with fisheries agencies seeking progress information	Commence early 2025	mid 2028	3 years	FIP consultants and FIP steering committee, departments of fisheries in Goa and Maharashtra	1. Seek 3 monthly meetings with Goa and Maharashtra fisheries agencies to ascertain progress on plan development; 2. Find out what their plans are for engaging stakeholders and receiving input 3. Find out what may be the path taken for ensuring that the management plan has a legal basis. 4. Discuss with fishery agencies the incorporation of reference points and commitments to regular (3 yearly) stock assessments	1. In month 1, seek updates from Goa and Maharashtra fisheries agencies to ascertain progress on plan development. Focus on how they will take the advice form CMFRI and create a Fishery Management Plan - how they plan on consulting stakeholders and how they plan to put the plan into law/regulation/policy commitment. 2. In Month 4, meet with Goa and Maharashtra fisheries agencies to discuss how the plans will incorporate key requirements such as reference points and harvest control rules.	30 days each year for A2.2, A3.2, A3.3 and A4.1 in total	15000 - A2.2, A3.2, A3.3 and A4.1 in total				

B1 – 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).	There is very little information and evidence available to analyse the status of this stock.	Aims would be to: 1. Transition Indian mackerel to become a Part A species (has species specific management arrangements and regular stock assessments) by the end of the FIP (2029). 2. have an aggregate assessment of all sardine species as they are commonly caught together and in relatively small numbers. Discuss options for this with CMFRI and with relevant state agency for inclusion in management plan	Seek agreement with fisheries agencies and CMFRI to regular stock assessments for Indian mackerel and the adoption of species specific management arrangements in the fishery management plans.  Agreement on a way forward to evaluate status of lesser sardines  Assessment of lesser sardines  Incorporation of assessment into management plan	Commence early 2025	mid 2028	3 years	FIP consultants and FIP steering committee, departments of fisheries in Goa and Maharashtra, CMFRI	1. Discuss with CMFRI their proposed timetable for Indian mackerel stock assessments and seek a commitment to a minimum 3 year cycle  2. Seek discussions with CMFRI about their level of knowledge (volumes, species, areas) about the lesser sardines  3. Have a discussion with CMFRI about the possibility of doing stock assessments of groups of species together. This may require a workshop  4. If CMFRI agrees then seek their commitment to aggregate yield assessments (NOTE - this will also require some agreement from Marin Trust).  5. Incorporate both an agreed stock assessment cycle and appropriate reference points into the management plans.	1. In Month 1 write to CMFRI to ascertain their plans for extending the stock assessment for Indian mackerel into the north west region of India.  2. In Month 1 write a letter to CMFRI to follow up the discussions help in late November regarding ways of approaching the lesser sardines issue.  3. Pending response from CMFRI determine next steps in time for six month review  4. In Month 1 seek a formal response from Marin Trust on their view on aggregate yield assessments and how to deal with closely related species.	10 days per year		5,000			NOTE - verbal discussions held in Goa on 27/11/24 about this subject. To be followed up when this plan approved	
Da	Several of the Category D species did not pass their PSA.	Ensure that the species list provided to the FIP (by Dr Pawar) can be verified both in terms of species composition and percentage of catch. Pending clarification we will either remove the information provided (and evaluated) or ensure that any catch composition work undertaken clarifies a way forward that enables a long term management plan to be put in place	Resolve catch composition issues	Commence early 2025	end 2026 (phase 1), if research is needed then end 2027	3 years	FIP consultants (to be determined if required) CMFRI  Research provider	1. Seek written clarification from Dr Pawar on the fisheries assessed and the actual percentages of species provided in in his presentation dated XX/XX/XXXX 2. Seek data from CMFRI/state governments of the landings (species/volumes) of the industrial purse seine sector as monitored by the enumerators at landing sites 3. for those >0.1% the missing biological information needs to be found via literature searches and/or discussions with relevant biologists. Note some species may occur in several countries and there may be researchers outside of India that could be contacted.	1. Discuss with a research provider the placement of researchers on vessels for the 2025 catch season to document catch composition (fish and ETP species). Pending discussion we may have to revise timeframe. 2. Commission agreed study and seek assurances with researchers have the right species identification training.	10 days per year + research costs		5,000				
Db	All of the species that did not pass Da, also did not pass Db due to lack of management measures.	Further work on this will depend on actions taken for Da		early 2026	mid 2028	3 years	FIP consultants	To be addressed in future revision of the FAP								
<b>Proposed Actions – Monitoring, Control and Surveillance</b>																
M1.5.3 – The fishery management system is subject to periodic internal or external review to validate the decision-making process, outcomes and scientific data.	No information was available to demonstrate that the fishery management system is subject to external review. Only certain reports could be considered for internal review	Discuss with national government on their intentions regarding an update on current status of the revised National Fisheries Policy (2020). Need to seek information from Goa and Maharashtra on what drives policy review - national, local factors, scheduled reviews etc Gain an understanding of what drives change in management - research inputs, evidence of problems, demands from fishermen etc	Reports and, where possible, any supporting documentation from the departments	Commence early 2025	end 2025	1 year	Local consultant, Department of Fisheries (national), departments of fisheries in Goa and Maharashtra	1. Seek an update from the national fisheries agency on the status of and plans for the revised national fisheries policy and revised national fisheries legislation now that the election has been decided 2. Seek a discussion with the state fisheries management agencies about how they make decisions on changes in management	1. In Month 1 write a letter to India's Department of Fisheries to seek an update on their plans for the establishment of a new national fisheries law and the adoption/update of the previously drafted 2020 National Fisheries Policy. 2. By Month 3 seek information from the States of Goa and Maharashtra on the way that the decision making process on fisheries in each State takes place.	5 days		2500				
M2.1.3 – There is evidence of monitoring and surveillance activity appropriate to the intensity, geography, management control measures and compliance behaviour of the fishery.	Despite written documents from Goa and Maharashtra about MCS, only Goa provided any detail. This also demonstrated 19 incidents of violations between 2023-2024 and was not fishery specific. More specific about the fishery required – particularly Maharashtra - as at present it cannot be evidenced the Monitoring and Surveillance is appropriate to the intensity, geography, management control measures and compliance behaviour of the fishery.	Seek an update from the two fisheries agencies but seek more detail on what specifically is done on the purse seine fishery. Develop a report on the scale, location and intensity of the fishery - numbers of vessels, number of days fished, number of sets per day and areas permitted to be fished.	Report prepared	Commence early 2025	mid 2028 - please note, this finalisation date is for the satisfaction of the full observations of the fishery assessment - see Notes - Column O	2.5 years	FIP consultants, departments of fisheries in Goa and Maharashtra	1. Seek updated letters from the departments on enforcement actions but also need more detail on fishery specific actions. Are they now checking fish sizes, for example? 2. Prepare a report on the fishery - number of vessels, number of days at sea, where they fish (where is it open for fishing), this report can assist with other activities such as E2.1.2	1. In Month 1 write to Maharashtra Department of Fisheries seeking further details on Monitoring, Control and Surveillance with a specific focus on the small pelagic purse seine fishery, including seeking information on how they analyse the data collected and make use of it in refining MCS. 2. By Month 4, have prepared a study brief that sets out what information is required to better describe the 'appropriate to the intensity, geography, management control measures and compliance behaviour of the fishery'. This brief will also set out what actions will be taken to source the information and the proposed timetable in greater detail.	5 days per year		2,500			MT requirement: in addition, the FIP will bring forward the clarification of the MCS arrangements. – A first report will be available as soon as a reply is provided by the Maharashtra Department of Fisheries. Please note that in the FAP as originally supplied, this work was committed to in Month 1 (Action 1 in Cell J14)  The reference to 2028 was related to other observations by the fishery assessor. A second action (Action 2 - Cell J14) to address these observations namely:  Note that the need to demonstrate at the scale etc of the fishery was not mentioned in the first fishery assessment and thus new work is required. Aspects such as the intensity of the fishery (days fished per area) and geography, may require detailed analyses of information from the government which is why a 2028 finalisation timetable was put forward.	

E3.1.1 – The level of compliance is documented and updated routinely, statistically reviewed and available.	There is some evidence as provided by the departments (MCS letters), but it is not understood if it is statistically reviewed and how often it is updated, nor what data actually relates to the specific fishery under assessment. Further information required to fully close this out.	Review what other fisheries put forward in response to the same indicator, especially in regards to statistical analyses.  Pending this review develop what information is required from fishery MCS staff.  Describe mechanisms used to police the new size limits (e.g. sample sizes, percentages tolerated etc)	Report prepared	Commence early 2025	mid 2026	1.5 years	FIP consultants, departments of fisheries in Goa and Maharashtra	Seek updated letters from the departments on enforcement actions but also need more detail on fishery specific actions. Do they do any analyses of the data to see if the number of offences is declining, static or increasing?	1. In Month 1 write to Maharashtra Department of Fisheries seeking further details on Monitoring, Control and Surveillance with a specific focus on the small pelagic purse seine fishery, including seeking information on how they analyse the data collected and make use of it in refining MCS.	5 days per year	2,500					
M2.3.2 – Fishers provide additional information and cooperate with management/enforcement agencies/organisations to support the effective management of the fishery.	Adequate information and/or record supporting the fact that fishers provide additional information and cooperate with management/enforcement agencies/organisations to support the effective management of the fishery has not been found.	Develop a better understanding of how the government and the industry interact via discussions with both parties. Have local committees been established in accordance with regulation (e.g. Maharashtra Marine Fishing Regulation Act, 1981)? How can such committees be used in the fishery management planning process?	Report prepared	early 2026	mid 2026	6 months	Local consultant and FIP steering committee	To be addressed in future revision of the FAP								
Proposed Actions – ecosystem and protected, endangered and threatened species		Proposed Actions – protected, endangered and threatened species	Outputs	Year start	Year end	Time budget				Days budgeted						
E1.1.2 – Interactions between the fishery and ETP species are recorded and reported to management organisations.	There is no third-party (e.g. observer) data that would be able to demonstrate that the fishery does not interact with ETP species, therefore, there is no way of understanding how the fishery communicates and reports incidents to management organisations. Scientific papers are available that demonstrate low ETP catch rate in Indian purse seine fisheries compared to gillnet fisheries, but these are largely outdated and are not specific to the fishery being assessed.	Conduct a study of ETP interactions with the fisheries. Can be conducted whilst researchers are on board vessels collecting catch composition information.	Research project documenting any ETP species interactions and catch composition	Second half of 2025 when 2025/26 fishing season starts	mid 2027	2.5 years	FIP consultants	1. Discuss with the college of fisheries (can they do Goa as well as Maharashtra) or CIFT a study of ETP interactions with our fisheries of interest. 2. Discuss the proposed project with fishermen as they will have to collaborate (which will help with M2.3.2). 3. Develop a project proposal for implementation in the 2025/26 fishing season		10 days per year plus research costs	5,000 + research costs (TBD)					
E1.3.2 – The measures are considered likely to achieve the objectives of regional, national and international legislation relating to ETP species.	Despite there being letters provided from Maharashtra and Goa about the monitoring and compliance, there are a number of other measures that are unaccounted for	Need to update information from the departments on the rewards scheme and any other actions they are taking.  Need to clarify what is meant by the "...number of other measures...."	Report available updating incentive scheme	mid 2027	Late 2028	1.5 years	Local consultant	Seek information from the fisheries agencies on the reward scheme they run for getting fishermen to release ETP species. Need to get numbers per year, by fishery (especially purse seining) and by species (turtles, dolphins)		5 days per year	2,500					
E2.1.2 – Information on the scale, location and intensity of fishing activity relative to habitats is collected.	Currently, there is no information available about the scale, location and intensity of fishing activity relative to habitats for this fishery. Information about overlapping habitats, including coral reefs, and seagrasses is evident through scientific papers, but without specific information on vessel movements, there is no way to fully verify that the vessels are not operating on these environments.	Need to obtain seagrass and coral distribution maps and overlay the area open for fishing to see if there is any potential for impact. There are researchers who use Geographic Information Systems to map habitats. For example, and there may be a possibility of overlaying some fishery information such as zoning maps to evaluate the risk of habitat interactions	Report on risk to critical habitats available	Commence early 2025	end 2026	1.5 years	FIP consultants, CMFRI, other research providers if we find they have relevant information	1. Seek information from researchers who have mapped seagrasses and corals to see if they have any new information and whether we can have access to base maps (the maps in published papers are very small and large scale and difficult to read). 2. Talk to the hydrographic office to obtain a bathymetric chart of the waters of Goa and Maharashtra 3. Talk to the researchers who use GIS as a tool to see if they can overlay seagrass/coral distribution maps on the bathymetry and add the fishery zoning boundaries	1. In Month 4 the team to identify which departments/researchers have previously studied the distribution of critical habitats and determine what mapping may be publicly available in a form that enables an analysis of the potential risk from purses seining to be undertaken 2. In Month 4 the same investigation as described above for critical habitats also be undertaken for water depths in areas open for purse seining for small pelagics.	10 days per year	5,000 plus any research costs (TBD)					
E2.2.1 – The information collected in relation to E2.1.3 indicates that the fishery does not have a significant negative impact on marine habitats.	Without specific information on the fishery's scale, location and intensity, it cannot be confirmed that the purse seine fisheries does not have a significant negative impact on seabed habitats.	Need to overlay water depth and depth of nets and areas open for fishing to see if there is any potential for impact. Need information from fishermen on how deep the nets fish, distance offshore and bathymetry. Then put into GIS mentioned above.  Onboard researchers to gather data on setting locations and depths of water during sets	Report of discussions with fishermen over their netting practices  Information provided to risk assessment in 1.3.2	Commence early 2025	end 2026	1.5 years	FIP consultants, CMFRI, other research providers if we find they have relevant information	1. Talk with fishermen and gear experts about the depth of the gear (from float line to purse rings) and the depth of water they operate in. 2. Use information from 2.1.2 (bathymetry) to evaluate risk of seabed interaction. 3. Information from onboard research program to be fed into risk assessment.	1. During the design of the study proposed for De a questionnaire designed to seek information from fishermen is developed which will seek operational information on their purse seining, including deployment depths.	10 days per year	5,000					
E3.2 – The information collected in relation to E3.1.3 indicates that the fishery does not have a significant negative impact on marine ecosystems.	The lack of information or variance of specific catch composition limits the ability to accurately assess the contribution of the fishery to total ecosystem impacts. Furthermore, several Productivity and Susceptibility Analysis (PSAs) were conducted as required by Marin Trust assessment criteria, and currently did not pass – which does not provide confidence that the fishery does not have a significant negative impact on the marine	Await the output of the catch composition study and re-evaluate which species may require a PSA  Conduct any PSA's required  If needed collect any missing information to fill the biological gaps  Should also ensure that the Ecopath model is covered in the fishery management plan.		early 2027	end 2027	1 year	FIP consultants	To be addressed in future revision of the FAP								