

Fishery Action Plan - Maharashtra and Goa Trawl									
	Marin Trust requirement	Gap identified	Mitigation score/risk rating	Narrative interpretation or, in the case of risk based, the next level of mitigation	Proposed actions	Short term specific actions - Year 1	Start Date	End Date	Comments
M1.7	The fishery has an up-to-date fisheries management plan (or is linked to Gap such a plan) that incorporates the main principles of the ecosystem approach to fisheries, covering the ecological, social and economic dimensions of sustainable development.	there is no fishery-specific management plan that relates directly to multispecies trawl fisheries in Goa and Maharashtra.	N/A	Work with fisheries management agencies of Goa and Maharashtra to prepare management plans for the trawl fisheries based on CMFRI advice but also based on multispecies stock assessments.	1. Seek support from CMFRI and agency staff for an approach to management that is based on the development of multispecies stock assessments, suitable reference points and management plan preparation for these types of fisheries 2. Collaborate with fisheries agencies to prepare state based management plans for consultation with stakeholders	1. Workshops with CMFRI and fishery agency staff on the development of multispecies stock assessments, suitable reference points and management plan preparation for these types of fisheries 2. use workshop outcomes to seek commitments to the preparation of suitable stock assessments on a regular basis	Upon approval	6 months to workshop and 12 months for agreement on stock assessments	
M1.8	The fishery management plan specifies goals and operational objectives.	There is no fishery-specific management plan for multispecies trawl fisheries and therefore the related measures and objectives required to pass this element of the assessment are not met.	N/A	Work with fisheries management agencies of Goa and Maharashtra to prepare management plans for the trawl fisheries based on CMFRI advice but also based on multispecies stock assessments.	Collaborate with fisheries agencies to prepare a guidance on the preparation of fishery management plans for multispecies trawl fisheries	Collaborate with fisheries agencies to prepare a management plan template	Start date + 6months	End year 1	
M2.1	The organisation identified in the initial screening has an effective management framework in place.	There is no indication that the terms and measures within this Policy (2017 National Policy) are "effective" as required by the scoring element guidelines. Likewise, as mentioned in M1.7 and M1.8, without a specific set of objectives and management measures for multispecies trawl fisheries directly, there is no way to verify that these are effective in their operations. Thus, this element cannot pass.	N/A	This element will need to wait for a management plan to be developed, even in a draft form. The need is for objectives to be developed and for suitable monitoring and reporting elements to be put in place but the stakeholder involvement.	Ensure that mechanisms for evaluating effectiveness of the management measures are included in the management plan and reported on at suitable intervals	Collaborate with fisheries agencies to prepare a management plan template	Start date + 6months	End of year 1	
M2.6	There is a consultation process through which fishery stakeholders are engaged in all aspects of planning and decision-making.	The extent to which stakeholders do engage and interact with these consultation periods is unknown. Likewise, the method by which the government extends invitations for stakeholders and the public to enter the consultation is unclear. The applicability of this measure is largely unknown and therefore cannot be deemed as effective or "in place". Thus, this element cannot pass.	N/A	The law provides mechanisms for the establishment of consultation bodies. Need to find out how the current consultation arrangements work and, if they are not in place, work with fisher groups and governments to put them in place and link to the management plan	1. Work with governments and fisher groups to gain a better understanding of existing consultation arrangements 2. Work with government and fisher groups to develop governance arrangements linked to the proposed fisheries management plans	Prepare a report on current consultation arrangements both formal and informal and look for opportunities for increasing fisher engagement in the management planning process	Start date + 6months	End of year 1	
M2.7	The decision-making process is transparent, with processes and results publicly available.	There is no evidence of publicly available reports on the consultation process nor the decision-making process that could help to disclose the important findings and outcomes of this measure.	N/A	Need to get some information from the government agencies on how they progress and report on significant initiatives such as policy changes, management plans etc. When they meet with fishermen are meeting notes taken and agreed outcomes reported? How are new initiatives like new laws/regulations communicated?	Work with government to generate a better understanding of how consultation, decision making and reporting processes operate and provide a report	Collaborate with fisheries agencies to prepare a management plan template	Start date + 6months	End of year 1	

M3.1	The MCS organisation identified in the initial screening provides effective compliance and enforcement mechanisms that ensure management measures are complied with.	Most of the measures (in the 2017 National Policy) are described as "aims" and whether these have been applied in practice is uncertain.	N/A	Need to generate a list of what the 2017 national policy committed to in terms of MCS arrangements and then walk through this list with the relevant government officials and see what is in place, is planned and how the system is working. Need to get numbers (e.g. how many vessels have AIS/VMS, how many prosecutions there are - on a fishery specific basis) plus have the same discussion with then that is planned for the small pelagic FIP in terms of analysis of data and reporting of results of prosecutions.	1. Generate a checklist or questionnaire of information needs, especially in regards to the 2017 National Policy Commitments and the gaps set out in the small pelagic FIP so that information can be gathered 2. Work through the checklist/questionnaire with government to enhance understanding of how the MCS system is addressing IUU fishing.	Generate checklist or questionnaire	Start date + 6months	End of year 1	
M3.3	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of illegal, unreported and unregulated fishing	There is a significant information gap regarding the extent of IUU fishing. Lack of mechanisms to accurately track bycatch discards from trawlers, with current data relying on limited sources such as participatory programs and selected trawler operators, further indicating potential gaps in monitoring and reporting compliance.	N/A	There are two components to this gap. One relates to the controls over illegal fishing which can be covered under the actions proposed in M3.1. The other relates to catch monitoring. For the latter we need to dig further on what data are held by CMFRI (and other research bodies) on discarding and better document any changes over time. There are reports that discarding is declining as more fish get diverted to fishmeal plants but finding facts is challenging.	1. Generate a checklist or questionnaire of information needs, especially in regards to the 2017 National Policy Commitments and the gaps set out in the small pelagic FIP so that information can be gathered 2. Work through the checklist/questionnaire with government to enhance understanding of how the MCS system is addressing IUU fishing. 3. Work with fisheries management agencies to find out what research has been conducted into discarding 4. Check how monitoring works with similar multispecies fisheries (e.g. MSC Northern Prawn or similar) to gain understanding of what is best practice.	1. Generate checklist or questionnaire 2. Prepare a report on monitoring options and feed into management plan template	Start date + 6months	End of year 1	
M3.5	Stakeholders in the fishery are aware of, and understand, the laws and regulations.	The infrequency of awareness campaigns and assessments on implementation contributes to this gap. Article 6.16 of the Code emphasizes the need for states to promote awareness of responsible fisheries through education and training, highlighting the importance of fishers and fish farmers understanding the conservation and management of the resources they depend on. However, the report indicates a substantial lack of awareness among stakeholders.	N/A	This works in with other aspects relating to relating to consultation with fishermen. The Annual report of CMFRI sometimes covers consultation workshops which we need to document but there may be other session with the state fisheries agencies that we need to find out about. Also need to get some information about how changes are communicated to fishermen - is it by direct notification to licence holders, message boards at landing sites, meetings etc?	1. Work with government to generate a better understanding of how consultation, decision making and reporting processes operate and provide a report (see M2.7) 2. Review any public documents that may contain reports of awareness raising exercises with fishermen 3. Discuss with governments how information is made available to fishermen.	Prepare a report on current consultation arrangements both formal and informal and look for opportunities for increasing fisher engagement in the management planning process	Start date + 6months	End of 6 months	
A Total Aggregate catch			High						

A1	A1: Management objectives and reference points	The fishery has not developed any objectives or target reference points to ensure that the total multi-species assemblage is maintained or restored to levels capable of producing the TRP (e.g. multi-species maximum sustainable yield (MMSY) as qualified by relevant environmental and economic factors).	0	The fishery has informally adopted objectives and target reference points to ensure that the total multi-species assemblage is maintained or restored to levels capable of producing the TRP.	1. Meet with CMFRI to seek agreement on the use of multispecies MSY as the basis for setting Target and Limit Reference Points for the fishery. 2. Seek discussions with fisheries management agencies about the preparation of a management plan based on a multispecies MSY approach. Ensure that the plan has clear objectives which can be measured against indicators so as to track progress over time.	Ongoing meetings with fishery managers and CMFRI to discuss the inclusion of workable objectives and reference points into the proposed management plan.	Regular (every 3 to 6 months or as required) from approval date	Each year	
	A2: Data and information	The fishery monitors indicators relating to total catch with a low degree of precision and regularity and collects some information that could be used to estimate the status of the fishery resources through proxies.	8	The fishery monitors indicators relating to total catch with a high degree of precision and frequency and collects sufficient data and information to formally assess the current status of the fishery resources.	1. Work with CMFRI and stage government fisheries agencies to identify what data relevant to the fisheries are collected on a regular basis. 2. Works with CMFRI and fisheries agencies to develop a list of data needs that will help monitor the overall catch and link to a multispecies MSY management approach	Prepare a report on monitoring options and feed into management plan template. Include indicator species, keystone species and hub species but also measures of effort, fishing distribution (spatial)	Start date + 6months	End of year 1	
	A3: Fishery resource information	The status of the fishery resource is based on indirect evidence from indicators or proxies of stock status.	8	The fishery resource status has been recently assessed using a scientifically sound methodology.	1. Work with CMFRI to establish a multispecies (aggregate yield) stock assessment for the fisheries. This assessment can also be used to satisfy elements of Part B and Part C below.	1. Workshops with CMFRI and fishery agency staff on the development of multispecies stock assessments, suitable reference points and management plan preparation for these types of fisheries 2. use workshop outcomes to seek commitments to the preparation of suitable stock assessments on a regular basis	Upon approval	6 months to workshop and 12 months for agreement on stock assessments	
	A4: Status of the fishery resource	The current status of the fishery resource with respect to a target reference point is unknown.	0	The current status of the fishery resource with respect to a target reference point is known with a low level of certainty and is based on proxies.	1. Work with CMFRI and state agencies to develop fisheries management plans incorporating suitable target reference points. 2. Utilise the information obtained in A3 to estimate the status of the fishery resource against the Target Reference Point	nothing proposed in Year 1 beyond preparations as set out in M1.7			
	A5: Management measures and their effectiveness	There are management measures in place to control total catch, but they are not effective.	8	There are management measures in place to control total catch, which are effective.	1. Discuss with fisheries agencies the design and adoption of management measures the suit the multispecies nature of the trawl fisheries 2. Incorporate these measures into the proposed fisheries management plans 3. Have an ongoing data collection plan that supports the evaluation of the success of the management measures.	nothing proposed in Year 1 beyond preparations as set out in M1.7			
	A6: Management performance	The fishery has failed to achieve the objectives it has set in relation to the aggregate catch OR there are no such objectives.	0	The fishery is making progress to meeting the objectives it has set in relation to the aggregate catch.	Work with government to ensure that when the plan is adopted, data are collected in order to evaluate the performance of the management system.	nothing proposed in Year 1 beyond preparations as set out in M1.7			
	Part B: High-risk species/species groups		Very high						

	B1: Management objectives and reference points	The fishery has not identified high-risk species/species groups and has not developed any objectives or limit reference points to ensure that these species or groups of species are not being pushed past their PRI.	0	The fishery has identified some high-risk species/species groups and the fishery has informally adopted objectives and limit reference points for these species or groups of species.	1. Provide short report for fisheries agencies on what may be included in the category of high risk species/species groups and workshop this to enable agreement on a final list 2. Workshop the design of objectives and limit reference points suitable for these species and ensure that these are incorporated into the proposed fisheries management plans	Prepare a report on monitoring options and feed into management plan template. Include indicator species, keystone species and hub species	Start date + 6months	End of year 1	
	B2: Data and information	Monitoring does not include indicators that can be used for evaluating management performance or conducting stock assessments for high-risk species/species groups.	0	Monitoring includes some indicators that can be used for evaluating management performance or stock assessments for some high-risk species/species groups.	Design a monitoring/sampling program to ensure that the status of these species is tracked against the agreed reference points as Part of B1	Prepare a report on monitoring options and feed into management plan template. Include indicator species, keystone species and hub species but also measures of effort, fishing distribution (spatial)	Start date + 6months	End of year 1	
	B3: Assessment of high-risk species/species groups	There is no or unreliable assessment of the status of high-risk species/species groups.	0	The status of high-risk species/species groups has been recently assessed based on indirect evidence from indicators or proxies of stock status.	Evaluation to be conducted once B1 and B2 are completed	nothing proposed in Year 1 beyond preparations as set out in B1 and B2			
	B4: Status of high-risk species/species groups	The status of high-risk species/species groups with respect to the limit reference point is unknown.	0	The status of the high-risk species/species groups with respect to the limit reference point is known with a low level of certainty.	Eavluation to be conducted once B1 and B2 are completed	nothing proposed in Year 1 beyond preparations as set out in B1 and B2			
	B6: Management performance	The fishery has failed to achieve the objectives it has set in relation to high-risk species/species groups OR there are no such objectives.	0	The fishery is making progress to meeting the objectives it has set in relation to high-risk species/species groups.		nothing proposed in Year 1			
	Part C: Reduction component of the catch		Very high						
	C1: Management objectives (Catch of the reduction component) Mitigation	The fishery has not developed any objectives for the total catch (see Part A) or for the reduction component of the catch to ensure that the reduction component of the catch is maintained at levels capable of producing less than the TRP (e.g. multispecies maximum sustainable yield (MMSY) of the reduction component as qualified by relevant environmental and economic factors).	0	The fishery has developed objectives for the total catch (see part A) but NOT for the reduction component of the catch that indirectly results levels capable of producing less than the TRP (e.g. MMSY) of the reduction component as qualified by relevant environmental and economic factors).	1. Meet with CMFRI to seek agreement on the use of multispecies MSY as the basis for setting Target and Limit Reference Points for the fishery. Discuss concept relating to the total catch, reduction component of the catch and high-risk species. 2. Seek discussions with fisheries management agencies about the preparation of a management plan based on a multispecies MSY approach. Ensure that the plan has clear objectives which can be measured against indicators so as to track progress over time.	Progress as per M1.7, A2 and B1	Start date + 6months	End of Year 1	
	C2: Management objectives (juvenile catch)	The fishery has not developed any objectives relating to the catch of juvenile higher-value fish in the reduction component to ensure that the catch is having a minimal impact on total fish resource of the UoA.	0	The fishery has informally adopted objectives for the catch of juvenile higher-value fish in the reduction component to ensure that the catch is having a minimal impact on total fish resource of the UoA.	1. Review the existing information on the current catch of juvenile, higher value fish in the reduction component. 2. If information is insufficient work with government/researchers to implement a research program (could be vessel based or fishmeal plant based) 3. Work with governments to design suitable management objectives to incorporate into the proposed fishery management plans	Progress as per Progress as per M1.7, A2 and B1	Start date + 6months	End of Year 1	

C3: Data and information (reduction component catch)	The fishery does not monitor any indicators relating to catch of the reduction component nor collect sufficient data and information to assess the current status of the reduction component.	0	The fishery monitors indicators relating to the catch of the reduction component with a low degree of certainty and frequency and collects some information that could be used to estimate the status of the reduction component through proxies.	1. work with industry to generate a more detailed understanding of what is included in the reduction component of catch, i.e. what species and volumes are used for fishmeal 2. With government design a mechanism for monitoring selected components of the reduction component of the catch.				
C4: Data and information (juvenile catch)	The fishery does not monitor any data on the catch of juvenile higher-value fish in the reduction component		The fishery monitors indicators relating to the catch of juvenile higher-value fish with a low degree of certainty and frequency.	1. Ensure that high value juvenile catch component are included in any monitoring of landings	Progress as per M1.7, A2 and B1		End of Year 1	
C5: Assessment and status of the resource (reduction component)	There is no recent or reliable assessment of the status of the fish resources in the reduction component of the catch.	0	The status of the fishery resource in the reduction component is based on indirect evidence from indicators or proxies of stock status.	1. Work with government to undertake a fishery resource assessment based on a suitable Multispecies/Aggregate Yield based approach	nothing proposed in Year 1			
C6: Assessment and status of the resource (juvenile catch)	There has been consideration of the possible impact of the catch juvenile highvalue fish, but no assessment has been made.	6	The impact of the catch of juvenile higher-value fish on the fishery resources in the UoA is known with a fair degree of accuracy	Work with government to better understand the implications of any catch of juvenile high value fish	nothing proposed in Year 1			
C7: Management measures and their effectiveness	There are no management measures in place to control the catch of the reduction component nor the amount of juvenile higher-value fish taken.	0	There are management measures in place to control the catch of the reduction component and the amount of juvenile higher-value fish taken but are not effective.	1. Pending the results of previous assessments (C3 to C6) work with government and the fishing sector to evaluate mechanisms for reducing the take of juvenile high value fish species 2. Work with government to ensure that there are requirements for monitoring that work towards any management targets adopted	nothing proposed in Year 1			
C8: Management performance (reduction component)	The fishery has failed to achieve the objectives it has set in relation to the reduction component OR there are no such objectives.	0	The fishery is making progress to meeting the objectives it has set in relation to the reduction component of the catch.	Work with government to ensure that there are management objective for the reduction and juvenile component included in the management plan	Progress as per M1.7, A2 and B1	Start date + 6months	End of Year 1	
C9: Management performance (juvenile catch)	The fishery has failed to achieve the objectives it has set in relation to juvenile catch OR there are no such objectives.	0	The fishery is making progress to meeting the objectives it has set in relation to the juvenile catch.	Work with government to ensure that there are management objective for the reduction and juvenile component included in the management plan	nothing proposed in Year 1			
Section 2b: Endangered, threatened and protected species groups		High						
T1: ETPs are known	There is no list of ETPs and fishers are unaware of the existence of ETPs.	0	Some ETPs have been listed and fishers are familiar with these.	Conduct a thorough literature review of what is known about ETP interactions in these fisheries and seek information on fisher awareness from scientists or fisher associations	nothing proposed in Year 1			
T2: Interaction with ETPs are known	There are ad hoc observations or records of interactions with ETPs.	12	There are reliable and regular records of ETP interactions.	Conduct a thorough literature review of what is known about ETP interactions in these fisheries and seek information on fisher awareness from scientists or fisher associations	nothing proposed in Year 1			
T3: Interaction effects	It is unknown whether the fishery has a significant negative effect on ETPs.	0	There is some evidence to show that the fishery has no negative effect on ETPs	Based on T1 and T2 work with government to conduct an evaluation of the degree of significance of interactions	nothing proposed in Year 1			

	T4: Management measures and their effectiveness	There are some strategies and measures in place to protect ETP species, and to mitigate the impacts of the fishery on ETP species, but they are not effective.	12	There are comprehensive strategies and measures in place to protect ETP species, and mitigate the impacts of the fishery on ETPs, which are effective	Based on the results of T3 work with fishers and government to design and implement	nothing proposed in Year 1			
	Section 2c: Habitats		High						
	H1: Habitat consideration	There is some consideration of potential critical habitat interactions in the management of the fishery.	16	There is full consideration of potential critical habitat interactions in the management of the fishery	1. Document any existing research on the distribution of critical habitats	nothing proposed in Year 1			
	H2: Information on the impact on critical habitats	There is limited information collected on the impacts of the fishery on the main critical habitats.	16	There is comprehensive information collected on the impacts of the fishery on main and critical habitat	1. Document any existing research/arrangements for mapping the location of fishing grounds 2. Review available information on trawl impacts on benthos 3. Work with fishers and government to generate spatial data if none exist	nothing proposed in Year 1			
	H3: Management measures	If the fishery is known to interact with critical habitats AND: There are no measures in place to minimise and mitigate negative impacts.	0	There are some measures in place to minimise and mitigate negative impacts, but they are not effective.	1. Work with fishers and government to design solutions that reduce impacts on critical habitats	nothing proposed in Year 1			
	Section 2d: Ecosystems		High						
	E1: Ecosystem consideration	The impact of the fishery on the broader ecosystem within which the fishery occurs is not considered in management.	0	The impact of the fishery on the broader ecosystem within which the fishery occurs is considered in a superficial way in management.	1. Work with scientists and governments agencies to establish a mechanism for incorporating measures designed to minimise risks to ecosystem structure and function	nothing proposed in Year 1			
	E2: Impacts on the ecosystem structure and function	There is only ad-hoc information about the impact of the fishery on the ecosystem, especially with respect to structure/biodiversity and function.	12	The impact on the ecosystem is well known, especially with respect to structure/biodiversity and function.	Either update EwE models or work with new approaches (hubs, ETI) to evaluate current risks to ecosystem structure and function	nothing proposed in Year 1			
	E3: Impacts on key ecological species/keystone species	There is no data or information on key ecological species in the ecosystem.	0	There is limited data and information that indicates that there is either no key ecological species in the ecosystem or that the impact on the fishery on these is known with a low degree of certainty.	1. Conduct an evaluation of what species may be considered keystone (or hub) species	Prepare a report on monitoring options and feed into management plan template. Include indicator species, keystone species and hub species	Start date + 6months	End of year 1	
	E4: Management measures and strategies	There are some plans/strategies and measures in place for the management and conservation of ecosystem structure and function.	12	There is a comprehensive set of plans/strategies and measures in place for the management and conservation of ecosystem structure and function.	Work with fishery managers on catch controls that will help protect ecosystem structure and function based on model outputs and consultation with stakeholders.	nothing proposed in Year 1			