## 6-month review of Mauritania small pelagic FIP under the MarinTrust IP

## Jo Gascoigne, October 2020

## Note:

There are two versions of the FIP workplan, one in the form of a excel spreadsheet / pdf which is available on FisheryProgress, and one in the form of a word document which is used to provide the FIP 6-monthly updates. These have the same activities (verified) but for some reason in a different order. In neither case does the order relate very logically to the MarinTrust standard, while the excel spreadsheet is very difficult to read and the word document numbering system has gone wrong.

To sort out these various problems, I have re-ordered and renumbered the FIP activities in an order which approximates a stock-ecosystem-management structure, so the numbering of tasks and activities here does not relate back to either workplan (but should be used from now on). I have also taken this as a cue to review and revise the workplan and our template for updates, which will be done before the next update.

In addition in the workplan, the milestones are stated as activities (evaluate stock status) rather than milestones (stock status evaluated) – they have therefore been slightly reworded as well.

In red are comments on the workplan in relation to activities that may not be required, or may need revision, based on information we have gathered in the course of the FIP.

Tas	Task		ies	Year 1 milestone	Subsequent milestones	
1	Define the	1.1	Support additional data collection to define	Current stock definitions and	Y2 and Y3: Additional data collection	
	sardinella		suitable stock or management unit	data evaluated, gaps identified	implemented as necessary; Y4: Data	
	stock		boundaries		evaluated	
		1.2	Evaluate stock definitions			
	Progress agains	t Y1	There are two species of sardinella taken in this	is fishery: Sardinella aurita (round sardinella) and S. maderensis (flat		
	milestone		sardinella). The CECAF/COPACE working group			
	stocks, but an evaluation by Ahmede Vall (2019) suggests that it is fairly well-established that there is a single stock of				olished that there is a single stock of S.	
	aurita in the region (S. Morocco to Guinea Bissau). The main problem relates to S. maderensis which is more coastal ar				maderensis which is more coastal and	
			less migratory, and where there is more likely to	o be unrecognised stock structure.		

	Progress agains				.fao.org/in-action/eaf-nansen/en/) to		
	subsequent		research sardinella stock structure (COPACE 2019), but the start appears to have been delayed by covid.				
	milestones		For information about data collection in Mauritania, see Task 2 below.				
2	lana na manua	1 2 4		Resources available for	In consultation with FAO/CODACE if		
2	Improve	2.1	Adapt sampling protocol if required based on		In consultation with FAO/COPACE if		
	fishery- dependent	2.2	Task 1 (not likely to be required)  Evaluate resources available for sampling and	sampling evaluated in relation to sampling required by IMROP	necessary, protocol for size-frequency and other sampling of catches		
	sampling	2.2	develop funding proposals to improve	and FAO/COPACE for improved	evaluated; e.g. coverage of various fleet		
	Sampling		sampling if required	stock assessment; funding	segments, assessment of sampling		
		2.3	Evaluate protocol for size-frequency and	proposals to improve sampling	frequency vs sample size		
			other sampling and adapt if required	coverage if necessary	' '		
			(protocol is set by COPACE – no need to	,			
			change)				
	Progress agains	st Y1	COPACE (2018, 2019) is clear that sampling fror	n Mauritania is not adequate. IMR	OP's resources have not kept pace with		
	milestone		the enormous growth of the coastal fishery (FIP fishery) since ~2015. A key aim for the FIP is to support IMROP and				
			improve data from the fishery, and we have tried to address this in various ways:				
			The new Mauritania Fisheries Policy (20)		-		
		improve data collection. However, the implementation of the policy requires strong and ongoing national					
		commitment. The FIP participants collectively sent a letter to the Minister of Fisheries, expressing their supp					
			, , ,	• •	collection and IMROP is the only route to		
			sustainability for this fishery (see letter		<u> </u>		
			been able to meet the new Minister (O		and we hope to be able to work with her		
			and the Ministry more closely than has		and we hope to be able to work with her		
				•	ect' (funding €35,000 so far from the FIP;		
					npling for the coastal fishery by the end of		
			2020. This includes establishing some fa	_ :			
			well as tablets for collecting data (IMRC				
			-	• •	OP have the governance in place to be able		
			to receive and spend funds in a robust a				
			<ul> <li>It is clear, however, that additional, mo</li> </ul>		to support IMROP. The FIP has been		
					e aim of this project is to find new sources		
			of funding for supporting and improving	g fisheries, and to this end they are	e working with experts in projecting		
				•	<u> </u>		

			with Dr Mohammed Vall, director of Ma occasions). The FIP organised a worksho the factory owners and other stakehold in the marketplace, to which both these	ive of the participants). To this enep.). The FIP has also worked to ens with ambassador and fisheries a auritania programme, October 2020 pp in Nouadhibou in March 2020 the sabout the global fishmeal inductory and the organisations were invited, but sple IMROP recently reported probaportance of working closely with ortunately the March 2020 meeting.	d, work is ongoing on a MSC prengage with other bilateral donors in ttaché, October 2020) and GIZ (meetings 20 as well as on several previous to build knowledge and capacity among ustry and the importance of sustainability addy it had to be cancelled due to covid. It is also with access to some factories — the IMROP and providing data has been
	Progress agains subsequent milestones	st	As noted above, COPACE sets sampling protoco IMROP recently held a workshop which evaluat Côtière / System for monitoring the artisanal ar	ed their entire data system (Systè	me de Suivi de la Pêche Artisanal et
3	Improve the acoustic survey frequency / methodology	3.1	Assess options for analysis of survey data and support funding proposals for data analysis and preparation if necessary (survey methodologies and data preparation and analysis are harmonised across the region and this element is already supported by the EAF-Nansen project)	Options for analysis of survey data assessed; funding proposals for support of data analysis and preparation if necessary	Y2: Funding proposals to cover costs of improved survey coverage; requirements and costs for filling key gaps in survey coverage and frequency assessed, Y3: Suitability of existing surveys and key gaps evaluated with regional scientists
		3.2*	Assess requirements, costs and facilities available for acoustic surveys		
		3.3*	Develop funding proposals to support improved survey coverage		
		3.4*	Work with regional scientists to ensure that surveys are addressing the needs of stock assessment		
	Progress against Y1 Encouragingly, there were two acoustic surveys in Mauritanian waters in 2019 (attachment 3a and b); one with the milestone Mauritanian RV Al Awam and a regional survey with the RV Fridtjof Nansen. Another Nansen survey was planned in				· · · · · · · · · · · · · · · · · · ·

	Progress agains	:t	(see <a href="http://www.fao.org/in-action/eaf-nansen/en/">http://www.fao.org/in-action/eaf-nansen/en/</a> ) but had to be cut short due to covid (the scientists were stuck in Norway for some time). The new policy (2020-24) acknowledges that the Al Awam needs maintenance and update, but this is extremely expensive.  Work on locating funding to improve science and data is described under Task 2.				
	subsequent milestones						
4	Management plan for the	4.1*	Develop national-level objectives for the stocks to support the delivery of regional objectives	Current management	Y2: Management plan for the Mauritania sardinella fishery, including		
	sardinella	4.2*	Define a harvest strategy with appropriate reference points	plan and data	appropriate measures for each fleet		
	fishery	4.3*	Within the management plan, define a harvest strategy and reference points for each species	gaps evaluated; catches made by	segment to deliver regional and associated national stock objectives; Y3:		
		4.4*	Implement the management plan, including legislative implements, administrative framework and resources	the fishery and others evaluated	Stock assessment in relation to current objectives, In consultation with		
		4.5*	Assess stock status in relation to objectives		FAO/COPACE		
		4.6*	Evaluate catch and fishing capacity and evaluate whether a reduction is needed				
	Progress against Y1 milestone		A management plan for the small pelagic fishery exists (finalised in June 2013 Attachment 4) but has never been implemented; the fishery has changed so much since then that it needs complete revision. The new Fisheries Policy emphasises the role of management plans, so hopefully this will now come to the fore. There is an established process for development / revision of management plans which involves extensive stakeholder participation, so the FIP should be able to be involved.  In terms of data, the FIP's work to support data collection is outlined in Task 2. Data are available for catch of small pelagically species and fleet (provided by IMROP on request), although they are uncertain to some extent, as outlined above.				
	Progress agains	it	Stock-level objectives and stock assessments already exist, bo	•	· · · · · · · · · · · · · · · · · · ·		
	subsequent		conducts an annual national stock assessment based on the C	COPACE objectives, in	n order to provide management advice to		
	milestones		the government, notably on the level of the TAC).	T			
5	Management	5.1	Work with stakeholders to develop objectives for the obo	If capacity / catch	(not considered – see below)		
	plan for the		stock at Mauritanian level	reduction is			
	obo fishery	5.2	Develop a management plan for the obo fishery	required,			
	(not required	5.3	Define a harvest strategy with reference points	stakeholders			
	– see	5.4	Implement the management plan, including legislative implements, administrative framework and resources	from all fishery segments agree a			

	explanation	5.5	Assess the stock status of obo in relation to management	management			
	below)	5.5	objectives	management approach			
	Delow)	5.6	Evaluate catch / capacity in relation to the obo resources	consistent with			
		3.0	available	agreed objectives			
		5.7	If capacity / catch reduction is required agree a	agreed objectives			
		3.7	management approach to achieve agreed objectives				
	Progress agains	t V1	NB: obo = bonga shad = éthmalose = Ethmalose fimbriata				
	milestone	,,,,	Having obtained catch data which is broken down by fleet se	ector from IMROP, it i	s apparent that the proportion of obo in		
	······cscoric		the catch has declined, and in 2018 was only 0.4% of the total		• •		
			seas freezer trawler excluded as not supplying factories in FI				
			workplan is most likely not required, but will be kept under review as more data are obtained.				
	Progress agains	st	See above				
	subsequent						
	milestones						
6	Increase	6.1	Improve data for mackerel	Data for mackerel	Y2: Identification techniques in use as		
	sampling of	6.2	Investigate more advanced identification techniques	improved	required		
	mackerel	6.3	Evaluate results				
	Progress against Y1		For the FIP's work towards improving data, see Task 2				
	milestone						
	Progress agains	st	It is unclear that this is actually a problem; further north the	re are two species of	mackerel – <i>Scomber colias (japonicus</i> ) and		
	subsequent		S. scombrus. As far as we know, however, in this area it is only S. colias (see for example the statistics in COPACE 2018,				
	milestones		2019), but we will double check with IMROP!				
7	Reduce catch	7.1	Assess the total overlap of the stock	Stock/species	Y2-Y4: FIP supporting improved		
	and effort for	7.2	Advocate for stronger management	definitions clear;	management and enforcement		
	Atlantic horse	7.3	Support stronger management and enforcement	work underway			
	mackerel			to improve			
	<u> </u>		100 414 414 414 414 414 414 414 414 414	management			
	Progress agains	st Y1	NB: Atlantic horse mackerel = <i>Trachurus trachurus</i>				
	milestone		Having abtained actab data which is business days by flast as	atau fuana INADOD :+:	a amparent that NOTO/ of the hous-		
			Having obtained catch data which is broken down by fleet se	-	• •		
			mackerel catch (both species combined) in Mauritanian waters in 2019 was taken by the high seas pelagic freezer trawler fleet, which is not part of the FIP (this is a fleet made up of Russian and EU freezer trawlers, fishing in Mauritania under				
fleet, which is not part of the FIP (this is a fleet made up of				ussian and EU freeze	i trawiers, fishing in Mauritania under		

	Progress agains subsequent	t	Fishing Agreements – the catch does not supply the factor to COPACE (2019; data from 2018) only 28% of this catch in This means that this part of the workplan is most likely not obtained.  See above	s <i>T. trachurus</i> – the res	st is <i>T. trecae</i> (see below).		
8	milestones Improve	8.1	Improve data collection	Additional data	Y4: Stock definition and data collection		
	understanding	8.2	Evaluate stock definitions	collection	suitable for stock assessment		
	of Cunene horse mackerel	8.3	Evaluate data collection to make sure it is sufficient				
	stock						
	Progress against Y1		NB: Cunene horse mackerel = <i>Trachurus trecae</i>				
	milestone		See under Task 7 above. For information on data collection, see Task 2.				
	Progress against subsequent milestones		See under Task 7 above				
9	Improve	9.1	Improve data	Current stock	Y3 and Y4: Stronger management		
	management	9.2	Evaluate current management measures	assessed and	measures in place if required		
	of false scad	9.3	Support stronger management measures as required	overlap with fishery mapped			
	Progress against Y1 milestone						

	Progress agains subsequent	t	See under Task 7 above		
	milestones				
10	Data collection on	10.1*	Evaluate the best way of collection data from the vessels supplying the factories	Improve quality and quantity of	Y2: Data analysed; Y3 Management measures in place if required; Y4:
	discards and ETP species	10.2*	Support IMROP in the analysis of existing observer data, if not already done	observer data	Outcome evaluated
	interactions	10.3*	Implement observer / observation scheme		
		10.4*	Support IMROP for data analysis as required		
		10.5*	Support the implementation of additional management measures for protection of bycatch and endangered species if required		
	Progress against Y1 milestone		It does not seem that data from the high seas EU and Russian trawlers can provide much information about the vessels in the FIP since they are operating in a different zone (further offshore) (Inejih 2020) and with different gear. Three cruise reports from the RV AI Awam (Camphuysen et al. 2012, 2015, 2017) evaluated possible interactions of vessels with birds and marine mammals, but again further offshore from this fishery so probably not relevant.  It has therefore been concluded that it is necessary to put observers directly on the vessels concerned (the coastal fleet). To this end, IMROP has recently held a workshop to train observers (observer protocol, species identification, rights and responsibilities, safety etc.) (being a fisheries observer is not an easy job) (IMROP 2020; report available on request).		
	Progress against subsequent milestones		No data yet available – no progress.		
11	Evaluation of impact on the	11.1*	Support work on evaluating the ecosystem impacts of the fishery in Mauritania	Ecosystem impacts analysed	Y2: The changes needed to the fishery, if any, are evaluated; Y3: Work underway
	ecosystem	11.2*	Incorporate the results of the study into the development of objectives and action plans		to implement changes; Y4: Results evaluated
	Progress against Y1 milestone		An ecosystem model has been developed (Ahmede Vall 2019 (Macha-Allah and Guenette 2018) (thesis co-supervised with fishery is not likely to have catastrophic impact on the ecosys problems which arose with this work in Morocco), the ecosys	IMROP and INRH in lastem at current levels	Morocco). This analysis suggests that the sof exploitation. However (similar to

			biodiverse, and therefore not very amenable to modelling; paper purposes (they are not likely to be sufficiently robust). A different		<u> </u>	
	Progress agains subsequent milestones	st	The key source of ecosystem impacts identified in this study is over-exploitation and reduction in biomass of target species, which are the main source of prey for a wide variety of predators (demersal and pelagic fish, seabirds and mammals in particular). The highest biomass in the zone (and therefore the key prey) is either sardinellas or sardines, depending on the state of the ecosystem (position of the Cap Blanc front) at the time. The sardine stock is healthy (hence why it does not feature in this workplan despite being the main source of fishmeal from this area at present), but the sardinella stocks are not – hence the elements of the workplan which address the management of these stocks (Tasks 2 and 4 in particular) are likely to be the best means of addressing ecosystem impacts.			
12	• •	12.1	Identify gaps in compliance	Gaps in	Y2: Projects developed; Y3: Projects	
	improved	12.2	Identify means to fill gaps	compliance	underway; Y4: Compliance improved	
	compliance	12.3	Support projects to improve compliance	identify		
	Progress agains milestone	56.71	Inejih (2020) identifies the main gaps in compliance for the small pelagic fishery, which is: non-respect of zoning, failure of some vessels to use VMS/AIS, under/mis-declaration of catch and non-respect of bycatch limits. That's not to say that all vessels are doing this, but these issues arise in the fleet as a whole. In terms of catch identification, it is hoped that Task 2 will improve the situation. In relation to VMS and bycatch failures, Inejih (2020) raises concerns about corruption, which is hard for the FIP to tackle. The zoning system is currently under review, the current system having had a series of unintended consequences for the fishery.			
	Progress agains subsequent milestones	st	Inejih report is very recent (October 2020) and since we have had no FIP meetings in 2020 we have not had an opportunity to discuss this issue as yet – no progress.			
13	Support	12.1	Identify gaps in compliance	Gaps in	Y2: Projects developed; Y3: Projects	
	improved	12.2	Identify means to fill gaps	compliance	underway; Y4: Compliance improved	
	compliance	12.3	Support projects to improve compliance	identify		
	Progress agains milestone	st Y1	As part of the development of the 2020-24 fisheries policy, the to control and surveillance for all its fisheries (Attachment 5), and value). Inejih (2020) also identifies the main gaps in compart zoning, failure of some vessels to use VMS/AIS, under/mis-denot to say that all vessels are doing this, but these issues arise hoped that Task 2 will improve the situation. In relation to VM	including small pela pliance for the small cclaration of catch ar e in the fleet as a wh	pelagics (the most important in terms of size pelagic fishery, which is: non-respect of non-respect of bycatch limits. That's nole. In terms of catch identification, it is	

	corruption, which is hard for the FIP to tackle. The zoning system is currently under review, the current system series of unintended consequences for the fishery.						
	Progress against subsequent milestones		Inejih report is very recent (October 2020) and since we have had no FIP meetings in 2020 we have not had an opportunity to discuss this issue as yet – no progress.				
14	Development	14.1	Identify gaps in implementation of legislation and policy	Identify gaps in	Y3: FIP participates as a stakeholder in		
	of legislative instruments to bring policies into	14.2	Support Ministry as required to draft suitable legislative instruments (not required – the Ministry has a legal team and agreed procedures for drafting and agreeing legislation)	legislation / implementation	the development of legislation		
	force	14.3	Support implementation of legislation on the ground as required				
	Progress against Y1 milestone		Since the FIP started, the Ministry has put out a large number instruments including management measures for the fishery i) coherence of these measures and ii) implementation. Received arrêté 28 du 13 janv. 2016 – licensing  circulaire 13 du 1er mars 2016 – TAC  décret 2015-159, arrêté 992 de 2019 and message 4  lettre du Ministère et des Garde Côtes, 4 fév.2020 – for human consumption  arrêté 264 du 9 av.2018 – VMS and logbook  there are also: restrictions on gear mesh size and recent) a requirement for vessels to land catch in planet. As clearly identified by Inejih (2020) and FIP participants, the implement-ability in practice are all problems. To give some exact to human consumption (including all <i>S. aurita</i> ) is restrict standard (although the factories are investing in this aspect); equipment on the vessels. The work to revise and implement best method of addressing these issues – by providing a cohe achieve it, and by allowing stakeholders, including FIP participants.	the problem highlent management means of the problem highlent management means of the problem of the problem highlength of the problem highlength of the problem highlength of the problem	ighted by FIP participants relates more to asures are listed below:  zoning ita to fishmeal, 20% of landings should go a designated port and (reportedly – very an in bulk  measures, unintended consequences and trequirement to land a proportion of the icilities which are of suitable sanitary quired mesh size put strain on the hauling lan for sardinella (Task 4) should be the nat is required and how it is possible to		

Another element which gives rise for optimism is the new fisheries policy 2020-24 (Attachment analysis and understanding of the problems in the fishery and how they need to be addressed. A of this policy, the Ministry commissioned a review of the effectiveness of governance in the fish Attachment 7). As already noted, the FIP has provided input and support for this policy. Althoug of implementation of the previous policy (2015-19 – Poseidon and Maurifish 2019) shows that the reasonable track record of implementation.  Progress against See above – this is already the case to some extent but as noted above needs improvement subsequent milestones					pe addressed. As part of the development ance in the fisheries sector (MPEM 2020; policy. Although it is ambitious, a review 9) shows that the Ministry has a
15	Promote bilateral or multilateral	15.1 15.2	Evaluate the appropriate geographical level required for management of each stock  Where the appropriate level is national, develop	Appropriate level for management is clear, national	Issues relating to the fishery highlighted at regional level, management cooperation in place in some form*
	agreements of management	15.3	management plans  Support work to bring forward issues at regional level where appropriate	level biomass indicators available	
		15.4	Evaluation options for national-level biomass indicators for regional stocks, to support informal / bilateral cooperation		
	Progress agains milestone	t Y1	Regional fisheries organisations are CECAF/COPACE, CSRP an regulation or any decision-making powers. The main activity stock assessments) – and in this it is very successful. The main support of fisheries management – for example they are curr artisanal fishery (a very big challenge) and ensuring that data CSRP does not include Morocco.) COMHAFAT is a Ministerial participants except by invitation. However discussion have be management to COMHAFAT (Attachment 8).  The geographical level of management required for the main the majority of the catch, with the proportion of the catch co on the oceanographic regime at the time. For the two sardine each, with the other COPACE participants (Morocco, Gambia but no data are available). Management of all three of the mathis might be a more realistic approach than creating a RFMC	of CECAF is scientific n activity of CSRP is to ently supporting Sen collection protocols elevel coordination be een held to see if on stocks in the fishery ming from Mauritan ella species, Mauritan ella species, Mauritan taking a small propo ain stocks is therefor	(supporting regional cooperation for to implement projects at regional level in negal to improve data collection from the are harmonised across the region. (NB ody which is not open to outside the pertinence of delegating fisheries is fairly clear. For sardine, Morocco takes ia varying from low to "third depending nia and Senegal take "50% of the catch ortion (Guinea-Bissau will also take some re possible through bilateral means, and

		As well as the regional COPACE stock assessment, IMROP conduct an annual national-level stock assessment – see for example IMROP 2019. There are also national acoustic surveys – most recent in 2019. There are, therefore, national as well as regional biomass indicators.					
	Progress agains	st	In relation to Morocco, Moroccan scientists and a representa	•	• • •		
	subsequent		organised small pelagic workshop in March 2020 – which wo	· ·			
	milestones		sadly had to be postponed due to covid, and at time of writin				
			Senegal has major problems with fisheries management (e.g 2019). It is very difficult for the FIP to see how to deal with the	-	provide any catch statistics to COPACE in		
16	Support a	16.1	Identify most appropriate regional body	Engagement with	National authorities supported to		
	regional body in developing	16.2	Support work to develop appropriate structures within the organisation	regional organisations	develop regional structures		
	regional-level management	16.3	Apply to attend meetings as an observer – providing input as permitted				
		16.4	Put forward proposals to move the management forward, where necessary				
	Progress against Y1 milestone		See Task 15 – it seems more realistic to try and work at bilateral level (Task 15) than create a regional management organisation (Task 16)				
	Progress against subsequent milestones		See above – this task is unrealistic.				
17	Identify and	17.1	Identify similar FIPs / other similar projects	Engage with	Engage with relevant organisations		
	coordinate	17.2	Engage with these projects	relevant			
	with other			organisations			
	relevant						
	projects						
	Progress agains milestone	st Y1	The work of the FIP to engage with the MAVA/MSC/ClarMondiale project is described under Task 2. In addition to that (and MarinTrust of course), we have had some moral and practical support from SFP, and will be participants in their				
	Progress agains	it	forthcoming Global Reduction Fisheries Supply Chain Roundtable – which has identified NW Africa as a key area requiring				
	subsequent		support. We have identified the fact that the fishery is mainly	•	•		
	milestones		support and cooperation. To this end we have been trying to		· · · · · · · · · · · · · · · · · · ·		
			from reduction fishing to human consumption; several of the				
			and Olvea aims to source from byproducts rather than whole	e fish where possible	(as per Olvea CSR policy). The FIP has		

			been promoting GMP+ certification of the factories as an initial step towards improvement of traceability and sanitary standards.				
18	Identify social	18.1	Assess social components in the fishery	(none)	Y2: Assess social issues; Y3, Y4: Support		
	issues within	18.2	Support change		change as required		
	the fishery						
	·	18.3	Promote social management measures				
	Progress agains	t Y1	n/a				
	milestone						
	Progress agains	t	Some work has been done on social issues in Mauritanian fisheries but the FIP has not yet addressed this issue. As of 2021				
subsequent we will be required to have a social component to our activities as a condition of beir			being on FisheryProgress.org, but their				
milestones social policy is not yet finalised.				<u> </u>			

<sup>\*</sup> these activities reworded and reordered a bit to improve coherence – it seems that in some cases activities have been listed from end to beginning

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