



# Eastern Pacific large pelagics - longline (Martec)

Three-Year Audit Report

Version 1.2, September 2021

December 2023

## Purpose

The three-year audit report template was developed by FishChoice. The objectives of the three-year audit report are:

1. To assess the fishery's MSC performance indicator scores
2. To verify the results of the FIP's environmental workplan progress as reported on FisheryProgress
3. Optional: To provide recommendations to the FIP on environmental workplan actions that should be modified, including recommendations for additional actions/tasks that should be taken or suggested changes to timelines, to help the FIP achieve their stated objectives.

## FIP Information

<p>Target species scientific name(s) and common name(s)</p> <p>[state target stock(s), if relevant]</p>	<p>Common Name: Yellowfin Tuna</p> <p>Scientific Name: <i>Thunnus albacares</i></p> <p>Common Name: Mahi-mahi</p> <p>Scientific Name: <i>Coryphaena hippurus</i></p> <p>Swordfish</p> <p>Scientific Name: <i>Xiphias gladius</i></p>
<p>Fishery location</p>	<p>Area 77 (Pacific, Eastern Central), EEZ Costa Rica, Ecuador, Panama</p>
<p>Gear type(s)</p>	<p>Longline</p>
<p>Estimated FIP Landings (weight in tons)</p>	<p>5,000 metric tons</p>

Vessel type(s) and size(s)	Longliner
Number of vessels	approx. 100-150
Management authority	IATTC
Auditor name(s)	Albert Arthur
Auditor Organization/Affiliation	Sea Strategies, LLC
Date of report completion	12/13/2023

### FIP Background (Optional)

The Eastern Pacific large pelagics-longline (Martec) FIP is a comprehensive FIP with the aim of meeting an unconditional pass of the MSC Standard by 2025. The FIP has the following objectives:

- Sustainable Fish Stocks – To ensure tuna, swordfish, and mahi mahi catches across the Eastern Pacific Ocean do not exceed sustainable levels.
- Minimising Environmental Impacts – To ensure we are not having a negative impact on primary, secondary and ETP species.
- Effective Management – To strengthen governance systems in Flag States, RFMO, and the Eastern Pacific Longline Large Pelagics (Martec) fishery.

The UoA consists of 3 target species (yellowfin, mahi mahi, and swordfish), one gear (longline), and the fishing area within FAO 77, Ecuador, Panama, and Costa Rica.

This FIP was part of the Costa Rica large pelagics - longline and green stick, which split in the past years. Currently, there are several overlapping FIPs and MSC certified and in assessment fisheries.

### Stakeholder Consultation & Meetings

*In-person and virtual interviews with stakeholders are meant to inform the auditor with regards to the fishery's performance and to elicit information regarding the contributions that the FIP's participants have provided in making progress towards the FIP's objectives. Stakeholders represent the most critical source of information regarding a fishery independent of the FIP lead and FIP participants. Stakeholders can shed light on the diversity of perspectives on the fishery and can highlight any areas of controversy. The stakeholder consultation process allows an auditor to hear a range of perspectives and make an objective and balanced evaluation of the fishery against the MSC Fisheries Standard and the environmental workplan results.*

*A successful stakeholder consultation process will instill confidence in stakeholders that the assessment of a given fishery was well informed by a balanced, accessible, and equitable process to which they were able to contribute meaningfully. It should not be a forum to debate issues, but to identify the full range of relevant information and issues and bring them to the attention of the auditor. It should also help the auditor identify the improvements that have occurred in the fishery as a direct result of the FIP's activities and provide a foundation upon which the auditor can provide recommendations for potential adjustments that need to be considered for the FIP to fulfill the environmental objectives that they have set out to achieve. For additional guidance on conducting stakeholder consultation, see Annex GPX of the [MSC Fisheries Certification Requirements and Guidance Version 2.0](#).*

*Fill in the following table and include a high-level summary of the subjects that were discussed. Additional rows may need to be added or modified depending on number of participants and meetings completed. Stakeholders may include: official participants in the fishery improvement project, as well as government representatives, industry (fishers, processors, exporters, mid supply chain and end buyers, etc.), environmental and social NGOs, and the scientific community, or those who are impacted by the project or have a role in making changes to address environmental challenges in the fishery.*

Name	Affiliation	Date and Subjects Discussed
<p>Sebastian Madriz, Director Comercial</p> <p>Patrick Roulet, CEO</p> <p>Gabriela Daboub, Gerenta de Capital Humano, Sostenibilidad y Sistema de Gestion</p> <p>Alessandro Mazzali, ex Gerente de Sostenibilidad e Innovación</p>	<p>Martec -Aquafood Group</p>	<p>15/11/2023</p> <p>Issues with the implementation of cameras</p> <p>Information on the camera is not accessible. Initially, with KT, they analyzed data and published it on FP.org, which created conflict with other fisheries. So, currently, they don't have access.</p> <p>Total of vessels in the FIP:</p> <p>200 vessel in Costa Rica</p> <p>The company is the processor/exporter, and vessels supply this company. They have no direct contact with the vessels.</p> <p>Shark finning is prohibited onboard but allowed once offloaded. This is regulated in Costa Rica.</p>
<p>Emily Wardrop</p> <p>Tom Evans</p>	<p>Key Traceability</p>	<p>There are many overlapping FIPs that can potentially merge in the future (Nicaragua, Costa Rica, etc).</p> <p>Harmonization with other MSC fisheries. SWD</p> <p>Mahi mahi stock composition uncertainties.</p> <p>EMS: Pilot undertaken.</p>
<p>Alvaro Teran</p>	<p>The Nature Conservancy LatAm</p>	<p>Pilot EM in Panama, 3 vessels with EMS.</p> <p>Their ongoing efforts include collaborating on a new EM project with Martec, slated for launch next year.</p>

## Summary of Findings and Recommendations

The FIP encompasses three stocks, each associated with various actions under Principle 1. Significant progress has been made for yellowfin tuna. Recent management measures introduced by the IATTC, in conjunction with published stock assessments, demonstrate that all Principle 1 scores for yellowfin tuna now meet the unconditional pass of the MSC Standard.

While improvements have been noted for Mahi Mahi and swordfish, challenges persist, particularly concerning the harvest strategies and control rules. The FIP has active actions for advocating for and presenting position statements to the IATTC, aiming to influence the implementation of harvest strategies and harvest control rules designed explicitly for swordfish and mahi mahi.

In Principle 2, the FIP has successfully met all criteria except for the ETP PIs, scoring below 80 due to uncertainties surrounding the FIP's impact on Endangered, Threatened, or Protected (ETP) species. The FIP has implemented best practices for managing ETP species, including providing skipper training to enhance sea turtle identification and handling. While some vessels have begun using circle hooks, the adoption rate remains limited.

A pilot program for implementing an Electronic Monitoring System (EMS) has been initiated, allowing for data collection and analysis, confirming the absence of main secondary species. Consequently, this initiative has improved the scores for the secondary species' performance indicators (PIs). However, the usage of EMS is currently limited to a few vessels, and uncertainty persists regarding the extent of its adoption across the fleet. A notable deficiency in the FIP is the inconsistent analysis, publication, and data accessibility, which remains a significant weakness. Addressing this issue is crucial to provide greater certainty that the FIP is not hindering the recovery of ETP species. This may also have implications and lower scores of the information PIs across Principle 2.

In the past 3 years, significant progress has been achieved in Principle 3 for Ecuador, Panama, and IATTC, with all indicators of Principle 3, except for 3.2.3, meeting the unconditional pass of the MSC Standard. However, Costa Rica requires further improvement. The FIP is actively engaged in collaborative efforts aimed at the Joint Integrated, Ecosystem-based Management of the Pacific Central American Coastal Large Marine Ecosystem (PACA). This action seeks to strengthen regional management frameworks, improve decision-making processes, and enhance fishery-specific management approaches.

Overall, the FIP has made some progress in elevating the scores of numerous Performance Indicators across Principles 1, 2, and 3. Some of the UoA seems ready to enter Full Assessment when Principle 2 scores have been increased.

### Recommendation

- Consider undertaking a Pre-Assessment against Version 3.0 of the MSC Standard. Note that fisheries seeking certification for the first time must adhere to the new Standard starting from May 2022.
- Given that the FIP overlaps with many other FIPs and certified fisheries, conducting harmonization exercises with all overlapping fisheries is recommended to align scores.
- The FIP includes actions in the action plan to address PI 1.2.1, below 80 for swordfish and mahi mahi. The action could be more specific to the elements of the harvest strategy that need to be amended, e.g., the harvest strategy for Mahi Mahi and swordfish should be responsive to the state of the stock, and the elements of the harvest strategy should work together towards achieving stock management objectives reflected in PI 1.1.1.
- The FIP includes actions in the action plan to address the PI 1.2.2 below 80 for swordfish and mahi mahi. The action could be more specific to the elements of the harvest strategy that need to be amended, e.g., the development of HCR that is expected to reduce the exploitation rate as the point of recruitment impairment is approached.
- A high priority for the FIP should be implementing action 2.2., assessing the impacts of the FIP under Principle 2. This includes the installation of EMS on vessels, robust data collection, and thorough data analysis.

### Summary of MSC Performance Indicator Scores

Fill in the "previous score" scoring category (<60, 60-79, ≥80) for each performance indicator (PI) according to the most recent set of scores available on FisheryProgress (see the Improvement Progress tab of the FIP's profile — the most recent scores will be on the right-most column).

Fill in the "current score" scoring category (<60, 60-79, ≥80) for each performance indicator (PI) by referring to the [MSC Fisheries Standard v2.01](#). **Provide a rationale that explicitly addresses each of the performance indicator's scoring issues (and references when applicable) only if the current score given is different than the previous score.**

Fisheries that contain combinations of multiple target species, gear types, and/or governing jurisdictions (UoAs) should complete the [Multi-species/Gear/Jurisdiction Indicator Score spreadsheet](#) and use the table below to provide the lowest score for each performance indicator. If a rationale is provided, the auditor may choose to address only the scoring issues for the lowest scoring UoA for that performance indicator.

Principle	Component	Performance Indicator		Previous Score [2022]	Current Score [2023]	Rationale or Key Points
1	Outcome	1.1.1	Stock status	>80	>80	<p>Yellowfin: &gt;80: <a href="https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734">https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734</a></p> <p>Swordfish &gt;80: There are two stocks of North Pacific swordfish: the Eastern Pacific Ocean stock and the Western and Central North Pacific Ocean stock. According to the most recent stock assessments:</p> <p>The Eastern Pacific Ocean stock is not overfished but is subject to overfishing (2014 stock assessment). Summary stock assessment information can be found on Stock SMART.</p> <p>The Western and Central North Pacific Ocean stock is not overfished and is not subject to overfishing (2018 stock assessment). Summary stock assessment information can be found on Stock SMART.</p> <p><a href="https://apps-st.fisheries.noaa.gov/stocksmart?stockname=Swordfish%20-%20Eastern%20Pacific&amp;stockid=11643">https://apps-st.fisheries.noaa.gov/stocksmart?stockname=Swordfish%20-%20Eastern%20Pacific&amp;stockid=11643</a></p> <p><a href="https://apps-st.fisheries.noaa.gov/stocksmart?stockname=Swordfish%20-%20Western%20and%20Central%20North%20Pacific&amp;stockid=11642">https://apps-st.fisheries.noaa.gov/stocksmart?stockname=Swordfish%20-%20Western%20and%20Central%20North%20Pacific&amp;stockid=11642</a></p>

						<p>Mahi mahi &gt;80: The 2022 assessment showed that the dolphinfish stock in the Southeast Pacific is not overfished and not experiencing overfishing, while the 2020 biomass (around 400,000 tonnes) is estimated to be more than 5 times the lowest observed biomass Bloss and 1.69 times BMSY (237,131 tonnes)</p> <p><a href="https://www.iattc.org/GetAttachment/76cad98f-5a38-4aa2-b7cb-df4cfd23ef00/SAC-13-INF-O_Evaluacion-del-stock-de-dorado-OPO-Sur.pdf">https://www.iattc.org/GetAttachment/76cad98f-5a38-4aa2-b7cb-df4cfd23ef00/SAC-13-INF-O_Evaluacion-del-stock-de-dorado-OPO-Sur.pdf</a></p>
		1.1.2	Stock rebuilding	NA		
Management		1.2.1	Harvest Strategy	<p>Yellowfin &gt;80</p> <p>Mahi mahi &lt; 60</p> <p>Swordfish &lt;60</p>	<p>Yellowfin &gt;80</p> <p>Mahi Mahi 60-79</p> <p>Swordfish 60-79</p>	<p>Yellowfin: &gt;80: <a href="https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734">https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734</a></p> <p>Mahi Mahi 60-79: The collaboration between Peru and Ecuador through the MoU, combined with similar management measures that effectively achieve stock management goals, is deemed sufficient to be considered a management strategy at the stock level (SG60). However, it is unclear whether the components of the harvest strategy are adaptable to changes in the stock's condition, and thus SG80 is not met. (harmonisation with Ecuador mahi-mahi Longline).</p> <p>Swordfish 60-79: The current assessment and status information, as well as the monitoring in place, suggest that the measures in place are sufficient to expect stock management objectives to be achieved, meeting SG60 requirements. However, further development of the harvest strategy is required to demonstrate it is responsive to the state of the stock and that</p>

						the elements of the strategy are working together to achieve objectives. SG80 and SG100 are not met. (harmonization Hawaii longline swordfish, bigeye and yellowfin tuna fishery)
		1.2.2	Harvest control rules and tools	<p>Yellowfin &gt;80</p> <p>Mahi mahi &lt; 60</p> <p>Swordfish &lt;60</p>	<p>Yellowfin &gt;80</p> <p>Mahi Mahi &lt;60</p> <p>Swordfish 60-79</p>	<p>Yellowfin: &gt;80: <a href="https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734">https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734</a></p> <p>Mahi mahi &lt; 60: There are no generally understood harvest control rules in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment is approached. Although the fishery has limitations on the fishing season and size limits, these are not established within a specific framework, are not harmonized between countries, and do not reduce exploitation when stock biomass decreases. (harmonization with Ecuador mahi-mahi Longline).</p> <p>Swordfish 60-79: The FIP should demonstrate that there are well-defined HCRs in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, and that are likely to be robust to the main uncertainties. The available evidence should indicate that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs. (harmonization Hawaii longline swordfish, bigeye, and yellowfin tuna fishery)</p>
		1.2.3	Information and monitoring	<p>Yellowfin &gt;80</p> <p>Mahi mahi &lt;60</p>	<p>Yellowfin &gt;80</p> <p>Mahi mahi &gt;80</p> <p>Swordfish &gt;80</p>	<p>Yellowfin: &gt;80: <a href="https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734">https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734</a></p>

				Swordfish 60-79		<p>Mahi mahi &gt;80: Information on catch and effort, length structure, growth, maturity, and fleet composition are all available for the dolphinfish stock in Southeast Pacific. The majority of catches, area of occurrence, and area of operation of the fishery are sampled regularly. All information required by a harvest control rule is regularly monitored with high frequency; thus, both SG60 and S80 are reached. (harmonization with Ecuador mahi-mahi Longline).</p> <p>Swordfish &gt;80: Stock abundance and UoA removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule. (harmonization Hawaii longline swordfish, bigeye, and yellowfin tuna fishery).</p>
	1.2.4	Assessment of stock status	<p>Yellowfin &gt;80</p> <p>Mahi mahi &gt;80</p> <p>Swordfish 60-79</p>	<p>Yellowfin &gt;80</p> <p>Mahi mahi 60-79</p> <p>Swordfish &gt;80</p>	<p>Yellowfin: &gt;80: <a href="https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734">https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734</a></p> <p>Swordfish &gt;80: (harmonization Hawaii longline swordfish, bigeye, and yellowfin tuna fishery)</p> <p>Mahi Mahi 60-79: The assessment carried out by Roa-Ureta et al. (2022) using a generalized depletion and surplus production models estimates stock status relative to reference points, namely F/Z as an FMSY proxy and BMSY and therefore, there are two generic reference points appropriate to the species category and SG60 is met. However, the authors state that MSY reference points are not necessarily appropriate for the stock since dolphinfish behaves as a small pelagic fish, a conclusion also reached by Ayres-da-Silva et al. (2016), and</p>	



						for this reason, SG80 is not met. (harmonization with Ecuador mahi-mahi Longline).
2	Primary species	2.1.1	Outcome	>80	>80	
		2.1.2	Management strategy	>80	>80	
		2.1.3	Information	>80	>80	
	Secondary species	2.2.1	Outcome	>80	>80	No secondary species.
		2.2.2	Management strategy	>80	>80	No secondary species.
		2.2.3	Information	>80	>80	No secondary species. While the report from EMS indicates no secondary species, the data analyzed was of 3 vessels (3), which is not representative of the total fleet (100-150). This may affect the information PI scores for P2.
	ETP species	2.3.1	Outcome	< 60	< 60	It is not clear whether or not the UoA interacts with these species and if the effects hinder their recovery. The indirect effects on ETPs have not been considered.
		2.3.2	Management strategy	60-79	<60	Results from the EM systems on board the Martec longline fishing vessels demonstrated some positive and negative aspects of the current operational methodology within the fleet.  While some of the trips used only circle hooks, these gears were not used exclusively across all vessels, despite clear research highlighting the benefits of using these hooks instead of J-hooks for target and bycatch species. There seems to be some uncertainty whether incidents of shark finning are occurring on the vessel which must be

						prohibited entirely if the FIP aims to become MSC certified.
		2.3.3	Information	< 60	< 60	While EMS has been installed in some vessels, it has not been widely adopted; data is not being collected or analyzed, and the score may not change for this PI. The information available may be sufficient for qualitatively estimating the UoA's impact on some ETP species, but score change is not recommended due to uncertainties. Note that the FIP should aim to provide adequate quantitative information to assess the UoA-related mortality and impact and to determine whether the UoA may be a threat to the protection and recovery of the ETP species.
	Habitats	2.4.1	Outcome	>80	>80	No score change
		2.4.2	Management strategy	>80	>80	No score change
		2.4.3	Information	>80	>80	No score change
	Ecosystem	2.5.1	Outcome	>80	>80	No score change
		2.5.2	Management strategy	>80	>80	No score change
		2.5.3	Information	>80	>80	No score change
3	Governance and Policy	3.1.1	Legal and customary framework	>80	>80	No score change
		3.1.2	Consultation, roles and responsibilities	>80	>80	No Score change

		3.1.3	Long term objectives	>80	>80	No score change
	Fisher y specifi c mana geme nt syste m	3.2.1	Fishery specific objectives	Ecuador >80 Panama >80 Costa Rica <60 IATTC: >80	Ecuador >80 Panama >80 Costa Rica <60 IATTC: >80	No score change
		3.2.2	Decision making processes	Ecuador:>80 Panama: >80 Costa Rica60-79 IATTC: >80	Ecuador:>80 Panama: >80 Costa Rica 60-79 IATTC: >80	No score change
		3.2.3	Compliance and enforcement	Ecuador 60-79 Panama 60-79 Costa Rica: 60-79 IATTC 60-79	Ecuador 60-79 Panama: 60-79 Costa Rica: 60-79 IATTC 60-79	No score change
		3.2.4	Management performance evaluation	Ecuador>80 Panama >80 Costa Rica 60-79 IATTC >80	Ecuador:>80 Panama >80 Costa Rica 60-79 IATTC >80	No score change

## Environmental Workplan Results

Fill in the following table by reviewing the latest FIP's environmental workplan (see the FIP's Documents section on the Details tab on the FIP's FisheryProgress profile) and summarizing the results that have been achieved over the past three years (or since the last audit report was completed) by the FIP. A result is defined as:

- A regulatory policy change or regulatory action to improve the fishery (e.g., a new bycatch provision), or fishing practice change (e.g., a change in fishing gear developed voluntarily and implemented by the FIP) to improve the fishery
- A publicly verifiable positive change in the water (e.g., an increase in biomass of target stock, an increase in population of impacted protected species, a decrease in habitat or ecosystem impacted)
- An activity that led to an MSC performance indicator score change in the fishery

It is advised that auditors determine results through stakeholder consultation, however the FIP's Action Progress tab on FisheryProgress may also be a useful resource. For results to be valid, FIP participants must have directly worked on or contributed to the improvement through one or more actions/tasks in the FIP's environmental workplan. For each result:

1. Summarize the result in a short sentence
2. Identify the most closely related action(s), as they are listed on the FIP's Action Progress tab on the [FisheryProgress](#) profile
3. Identify the most closely related MSC performance indicator(s) impacted by the result
4. Provide an explanation of steps that the FIP participants took, or the how the FIP's work played a role in supporting and achieving the result

Result	Related Action on FisheryProgress	Related MSC Performance Indicator	Explanation
Increase stock status of mahi mahi	Action 1.1 – Mahi mahi stock assessment	1.1.1	<p>Due to limited data, the FIP conducted a Productivity Susceptibility Analysis (PSA) to re-evaluate PI 1.1.1. The PSA indicated a score above 80 for Mahi-mahi.</p> <p>The 2022 assessment revealed that the dolphinfish stock in the Southeast Pacific is not overfished or experiencing overfishing. The biomass is estimated to be more than five times the lowest observed biomass and 1.69 times BMSY (237,131 tonnes).</p> <p><a href="https://www.iattc.org/GetAttachment/76cad98f-5a38-4aa2-b7cb-df4cfd23ef00/SAC-13-INF-O_Evaluacion-del-stock-de-dorado-OPO-Sur.pdf">https://www.iattc.org/GetAttachment/76cad98f-5a38-4aa2-b7cb-df4cfd23ef00/SAC-13-INF-O_Evaluacion-del-stock-de-dorado-OPO-Sur.pdf</a></p>
<b>Harvest strategy for yellowfin tuna</b>	Action 1.2 - Develop a well-managed harvest strategy for EPO yellowfin	1.2.1	IATTC established Resolution C-21-04, introducing multiannual management measures

	tuna, mahi mahi, and NEPO swordfish	<p>for yellowfin tuna. These measures include closures, strengthened monitoring, retention requirements, and FAD limits and are outlined below:</p> <ol style="list-style-type: none"><li>1. A 72-day closure for purse seiners greater than 182 tons capacity through 2024;</li><li>2. Additional days of closure for vessels exceeding a particular bigeye annual catch limit (i.e. 8 days more in 2022 if a vessel has exceeded 1200 tons in 2017-2019, and 10-13-16-19-22 days more in 2023-2024 if a vessel has exceeded 1200-1500-1800-2100-2400 tons, respectively, in previous year.</li><li>3. Strengthen the monitoring and control system for tropical tuna species (particularly bigeye) catches through on-board observers, logbooks, port sampling and information from tuna processing facilities to control individual vessel bigeye catches.</li><li>4. A seasonal closure of the purse seine fishery in an area known as "El Corralito", west of the Galapagos Islands, where catch rates of small bigeye are high;</li><li>5. A full retention requirement for all purse seine vessels regarding bigeye,</li></ol>
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			<p>skipjack and yellowfin tunas;</p> <p>6. Limits on the number of active FADs that each purse seiner can have at any time, ranging from 66 FADs/vessel for the smallest ones to 400 FADs/vessel for Class 6 vessels (1,200 m3 capacity). These numbers will decrease to 64 to 340 in 2023 and 50 to 340 in 2024.</p> <p>7. All purse seines are also required to not deploy FADs 15 days before the selected closure period and Class 6 vessels to recover within 15 days prior to the start of the closure period a number of FADs equal to the number of FADs set upon during that same period.</p> <p>8. And in order to support the scientific analysis of FAD fisheries, the measure requires that CPCs or vessels report daily information on all active FADs (position and echosounder biomass data) as well as Vessel Monitoring System (VMS) data to the Secretariat</p>
<b>Harvest strategy for swordfish and mahi mahi</b>	1.3 – Develop Harvest Control Rules (HCRs) and tools for EPO yellowfin tuna, mahi-mahi, and NEPO swordfish	1.2.1, 1.2.2	Peru and Ecuador agreed on an MOU, fostering collaboration in research, assessment, and management dialogue.

<p><b>Electronic monitoring systems were installed</b></p>	<p>2.1 – Secondary Species Outcome, Management and Information</p>	<p>2.2.1, 2.2.2, 2.2.3, 2.3.1, 2.3.2, 2.3.3</p>	<p>Electronic monitoring systems were installed on 4 Martec longline fishing vessels to supplement catch data collected by in-person observers. However, the extent of vessel adoption of EMS is ambiguous.</p>
<p><b>No secondary species identified?</b></p>	<p>Action 2.2 – ETP Species Outcome, Management and Information</p> <p>2.1 – Secondary Species Outcome, Management and Information</p>	<p>2.2.1, 2.2.2, 2.2.3</p>	<p>The FIP started to standardize and collect the required information from logbooks in the "FID". However, due to the lack of resources, EMS was installed in the vessels instead.</p> <p>The EMS report indicated that 14% of the landings were secondary species, and no main secondary species existed. However, only the aggregated percentage was provided, not the individual species, to confirm whether there are secondary species.</p> <p>While data was analyzed for a sample of vessels, it's not representative of the total fleet (200). A lack of access to EMS data hinders effective monitoring of vessel catches.</p>
<p><b>ETP Management Strategy</b></p>	<p>Action 2.2 – ETP Species Outcome, Management and Information</p>	<p>2.3.1, 2.3.2, 2.3.3</p>	<p>ETP Management Strategy for the Eastern Pacific Longline Large Pelagic FIP (Martec) was implemented. The plan mentions that the strategy shall be adopted across the FIP fleet on 1 May 2021 and verified through human and electronic observers. The shark finning policy has been posted online.</p>

<p><b>ETP Management Strategy</b></p>	<p>Action 2.2 – ETP Species Outcome, Management and Information</p>	<p>2.3.1, 2.3.2, 2.3.3</p>	<p>In May 2022, skipper training was provided to increase the consistency of the records, enhance identification, and provide release and handling methods on leatherback and other sea turtle species of the artisanal fisheries in the Pacific of Costa Rica and Panama project.</p>
<p><b>Continuous work with governments</b></p>		<p>3.2.1, 3.2.2, 3.2.3</p>	<p>Scores for 3.2.1 have increased for Panama, Ecuador, and IATTC based on the harmonization with certified fisheries.</p> <p>The FIP collaborates through Global Marine Commodities work with SFP to improve governance, stock analysis, and decision-making processes. Efforts in the Pacific Central American Coastal Large Marine Ecosystem aim to enhance regional fishery-specific management.</p>

## Supporting References

1. <https://apps-st.fisheries.noaa.gov/stocksmart?stockname=Swordfish%20-%20Eastern%20Pacific&stockid=11643>
2. <https://apps-st.fisheries.noaa.gov/stocksmart?stockname=Swordfish%20-%20Western%20and%20Central%20North%20Pacific&stockid=11642>
3. [https://www.iattc.org/GetAttachment/76cad98f-5a38-4aa2-b7cb-df4cfd23ef00/SAC-13-INF-O\\_Evaluacion-del-stock-de-dorado-OPO-Sur.pdf](https://www.iattc.org/GetAttachment/76cad98f-5a38-4aa2-b7cb-df4cfd23ef00/SAC-13-INF-O_Evaluacion-del-stock-de-dorado-OPO-Sur.pdf)
4. <https://www.iss-foundation.org/downloads/33297/?tmstv=1697643734>
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