

Eastern Pacific Ocean tuna - purse seine (Marpesca) Three-Year Audit Report

Version 1.2, September 2021

1st September 2022/updated 9th November

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</p> <p>Bigeye Tuna</p> <p>Scientific Name</p> <p><i>Thunnus obesus</i></p> <p>Common Name</p> <p>Skipjack Tuna</p> <p>Scientific Name</p> <p><i>Katsuwonus pelamis</i></p> <p>Common Name</p> <p>Yellowfin Tuna</p> <p>Scientific Name</p> <p><i>Thunnus albacares</i></p>
<p>Fishery location</p>	<p>FAO 77/ FAO 87 (Pacific, Eastern Central), EEZ Nicaragua, Panama and Ecuador)</p>

Gear type(s)	Purse seine
Estimated FIP Landings (weight in tons)	13,399 metric tons
Vessel type(s) and size(s)	Large-scale vessels (>1000GT)
Number of vessels	5
Management authority	IATTC
Auditor name(s)	Albert Arthur
Auditor Organization/Affiliation	Sea Strategies LLC
Date of report completion	12/16/2022

FIP Background (Optional)

The Eastern Pacific Ocean tuna-purse seine (Marpesca) FIP is a comprehensive FIP to meet the MSC standard's unconditional pass by January 2025. The FIP has the following objectives:

- Sustainable Fish Stocks – To ensure tuna and other primary species catches across the Eastern Pacific Ocean do not exceed sustainable levels
- Minimizing Environmental Impacts – To promote the ecosystem-based approach to fisheries management
- Effective Management – To strengthen governance systems in Flag States, RFMO, and Eastern Pacific Purse Seine Tuna fishery.

The FIP consists of 5 purse seiners (Hells Tuna, Tunamar, Pescatun, Seatuna, Tunapesca) with a flag from Panama. They fish using Fish Aggregation Devices (FADs) and free school (non-FAD associated).

The fishing area is within IATTC convention area, Nicaragua, Panama, and Ecuador EEZ, and the target species are bigeye, yellowfin, and skipjack. The FIP includes two types of gear (free school and FAD). Therefore, the FIPs is composed of multiple UoAs.

Stakeholder Consultation & Meetings

In-person and virtual interviews with stakeholders are meant to inform the auditor regarding the fishery's performance and to elicit information regarding the contributions that the FIP's participants have provided in making progress toward 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>Roger Gonzalez</p> <p>Pablo Guaraca</p>	<p>Client Group</p>	<p>Essential to identify what is missing to achieve certification</p> <p>COVID made progress on actions difficult</p> <p>The FIP aims to achieve and maintain certification</p> <p>FADs program: Nonentangling FADs policy, but have not started the biodegradable FADs</p> <p>5 vessels and carry no more than 160 FADs</p> <p>A third party validates this data</p> <p>It is not a big problem as we don't carry many FADs. We haven't found an effective biodegradable FADs</p> <p>Vessels collect FADs that are found in the ocean (from other vessels)</p> <p>100% observer coverage from IATTC that reports on interaction on ETP and incidental catch</p> <p>FAO 87 and 77 fishing area</p> <p>We work with the guidelines of ISSF for the release of ETP</p> <p>Panama law is still in revision</p> <p>FIP has worked on improving the social responsibility of the company and the conditions of the crew</p> <p>The fishery has a lot of reporting, and data to demonstrate its impacts</p>
<p>Dario Lopez</p>	<p>Director de investigación y Desarrollo, Autoridad de los recursos Acuáticos de Panamá. ARP</p>	<p>We don't have close contact with them. They need to obtain information on the fleet. But we need to ask IATTC, for information on the vessel activity.</p> <p>IATTC has all the information. The government does not have access to this fishery. There is very limited monitoring we do for fleets that IATTC manages.</p> <p>Starting this year, we are having more engagement with IATTC.</p>

		<p>They are managed by quota; they have 100% observer coverage. There is a company in Panama that manages the observers' templates. Good observer program.</p> <p>There are no significant concerns for this fishery.</p> <p>CITES has protected blue sharks, and Panama needs to meet the new measures, e.g., to monitor the situation with the bycatch. This was only approved last week.</p>
Gabriel Caballero	Abogado de la Autoridad de Recursos Acuáticos de Panamá, ARAP. (Until August 2022)	<p>The strength of the fishery is the presence of observers. There has not been any incident reported for this fishery. There have not been any issues with sharks nor any other incidents with bycatch.</p> <p>Fleets offload in Ecuador and meet the Ecuador regulations that have strong measures.</p>

Summary of Findings and Recommendations

The FIP has active actions in Principles 1, 2, and 3 to address the weaknesses identified in the Pre-assessment.

The FIP has actively engaged with IATTC and governments to address the outstanding management issues identified in the Pre-assessment. These actions have resulted in the implementation new management measures in IATTC related to harvest strategy and FAD management.

In addition, the stock assessment methodologies for the assessment of yellowfin, bigeye, and skipjack were revised, taking into account the uncertainties. The revision of the stock assessment methodology triggered all P1 scores for yellowfin to increase to a level consistent with an unconditional pass of the MSC. However, bigeye and skipjack's harvest strategy and stock status are still at levels between 60 and 79. Therefore, the recommendation is for the FIP to continue the advocacy and lobbying actions to implement measures to improve Principle 1 scores for skipjack and bigeye.

An external review of the Panamanian Fishing Law was carried out in response to the yellow card imposed by the EU for non-cooperation in fighting illegal, unreported, and unregulated (IUU) fishing. Panama is reviewing the fishery law 204 aligned with the MSC requirements in Principle 3. In addition, as there are other overlapping certified fisheries, it is recommended to harmonize the scores in Principle 3 to reflect recent improvements.

Finally, the FIP also improved Principle 2 actions, mainly by adopting a new FADs policy, improving data collection and management.

Strengths:

- New stock assessment methodology revised
- Yellowfin tuna status meeting 80 SG
- The fishery has 100% observer coverage, providing confidence in the collected data.
- The fishery has implemented non-entanglement FADs and has developed an internal policy for the management of FIPs
- Improvements on Principle 3

Weaknesses

- Uncertainty in stock assessments
- The stock status of bigeye (does not meet 80)

- Harvest strategy of skipjack (does not meet 80)
- Interactions with sharks and other ETP
- There is some information on FADs deployed, but not much information on FADs lost and impacts
- Lack of sufficient management strategies and/or information concerning FAD interactions with habitats

Recommendations

1. Noting the harmonization requirements of the MSC and the newly certified tuna fisheries in the East Pacific, it is recommended to do a harmonization exercise for Principles 1 and 2 with the latest certified tuna fisheries. Scoring should be updated if the harmonization report demonstrates an increase in scoring
2. Some UoAs are performing better than others, some of which could be at a level consistent with the 80 MSC. The FIP could consider alternative UoA where the target species on P1 is yellowfin tuna and the primary species assessed under P2 (bigeye and skipjack).
3. The workplan and information on FP.org should also be revised to reflect the improvement of each UoA and relevant actions
4. The following actions could be added to the current FAD management actions of the FIP:
 - There is a risk of unobserved mortality due to animals entangled in FADs. However, the magnitude of FAD entanglement mortality has not been assessed. It is recommended to develop an action to understand the unobserved mortality and gear lost. The action could include evaluating gear lost impact, which should include activities for quantifying the number of FADs used and lost, the type of FADs, and research to improve understanding of unobserved mortality.
 - Gather quantitative information on ETP interactions to ensure it is highly likely not to hinder recovery ETP -During the interviews, it was claimed that the level of interactions with sharks and other ETP is minimal. However, there is no quantitative or scientific evidence to support this observation. As the fishery already counts with 100% observer coverage, activities could involve training observers in identifying species, developing procedures and protocols to record the data, collecting the observers' information, and preparing reports on the interactions with ETP species.
 - Actions should be in place to assess the impacts of FADs in VMEs. Information on the number of active FADs per vessel per month, and locations of FADs that are lost and become beached is needed. Information is also required to understand the impacts on VMEs, i.e., spatial extent, timing, and location of FAD interactions with coral reefs. Research could be undertaken to improve the understanding of the impacts of FADs on coral reef structure and function, analyzing the direct impacts.
 - Improve the reporting of the loss of FADs. This information will be the basis for building a strategy to minimize or eliminate the impact of FADs on VMEs and ETP
 - Continue to implement measures to minimize gear lost and FAD recovery and record the implementation of such measures

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 [2020]	Current Score [2022]	Rationale or Key Points
1	Outcome	1.1.1	Stock Status	<p>Yellowfin 60-79</p> <p>Bigeye >80</p> <p>Skipjack >80</p>	<p>Yellowfin >80</p> <p>Bigeye 60-79</p> <p>Skipjack > 80</p>	<p>There is no analytical stock assessment for skipjack in the EPO, determining MSY is not possible.</p> <p>Although skipjack tuna and bigeye have similar susceptibility scores (overlap with fisheries), skipjack has a higher productivity score (and therefore a lower BMSY and a higher FMSY), and if the status of bigeye tuna (or yellowfin tuna) is such that $B_{current} > BMSY$, IATTC contends this must also be true for skipjack.</p> <p>In 2021 an interim assessment was done for skipjack. The term interim results from additional improvements being expected in the skipjack assessment methodology. The reference model and most sensitivity analyses estimate that the current biomass is above the target reference point and the fishing mortality is below the target fishing mortality.</p> <p>Results from the 2020 benchmark yellowfin tuna assessment indicated that the stock is not overfished and not experiencing overfishing (Minta-Vera et al., 2020), while for bigeye tuna, there was a 53% probability the stock is overfished and a 50% probability that overfishing is taking place.</p>
		1.1.2	Stock rebuilding		Bigeye <60	<p>IATTC has not yet agreed on the need for a rebuilding plan. Nevertheless, MSC guidance indicates that PI 1.1.2 is to be scored if PI 1.1.1 scores below 80. IATTC Resolution C-16-02, C-17-01, and C-17-02, outline the management measures for bigeye that include:</p>

						<p>Multi-year management measures will attempt to keep F below FMSY for the species requiring the strictest management (i.e. the most vulnerable of the three tropical tuna species in terms of stock status);</p> <ul style="list-style-type: none"> ▪ if the probability that $F > F_{lim}$ is $>10\%$, management measures shall be established such that there is at least a 50% probability that F will reduce to FMSY or below, and a probability of $<10\%$ of $F > F_{lim}$; and ▪ if the probability that $SB < SB_{lim}$ is $>10\%$, management measures shall be established such that there is at least a 50% probability that SB will recover to SBMSY or above, and a probability of $<10\%$ that SB will decline to $<SB_{lim}$ within two generations or 5 years, whichever is greater. ▪ closure of 72-days for purse seine vessels <p>(While these actions do not constitute a formal rebuilding plan, it is considered meet the SG60).</p>
Management	1.2.1	Harvest Strategy	<p>Yellowfin 60-79</p> <p>Bigeye 60-79</p> <p>Skipjack 60-79</p>	<p>Yellowfin >80</p> <p>Bigeye 60-79</p> <p>Skipjack 60-79</p>	<p>Resolutions C-17-01 and C-17-02</p> <p>Resolution C-16-02</p> <p>The closure duration is set according to the F_{mult} ($FMSY/F_{current}$) level for the stock requiring the strictest management, at present, bigeye tuna. Therefore, the harvest strategy is, in theory, responsive to the state of the more vulnerable species (bigeye tuna), resulting in adopting more precautionary measures for yellowfin and skipjack tuna.</p>	

		1.2.2	Harvest control rules and tools	Yellowfin 60-79 Bigeye >60-79 Skipjack >80	Yellowfin>80 Bigeye >80 Skipjack >80	C16-02 with reference points established for the three tuna species.
		1.2.3	Information and Monitoring	Yellowfin >80 Bigeye >80 Skipjack >80	Yellowfin>80 Bigeye >80 Skipjack >80	No change
		1.2.4	Assessment of stock status	Yellowfin >80 Bigeye >80 Skipjack >80	Yellowfin>80 Bigeye >80 skipjack>80	The 2020 benchmark assessment of yellowfin tuna in the EPO represents a new approach (Minte-Vera et al., 2020). Previously, a 'best assessment' approach was used to evaluate stock status using a single 'base-case' model. The new approach is based on 'risk analysis' methodologies, which use several reference models to represent various plausible states of nature (assumptions) about the fish's biology, the stocks' productivity, and/or the operation of the fisheries. It considers the different results, thus effectively incorporating uncertainty into the formulation of management advice.
2	Primary species	2.1.1	Outcome	Free School >80 FADs >80	Free School >80 FADs >80	No other primary species, except for skipjack, yellowfin, and bigeye.
		2.1.2	Management strategy	Free School >80 FADs >80	Free School >80 FADs >80	No other primary species, except for skipjack, yellowfin, and bigeye.
		2.1.3	Information	Free School >80 FADs >80	Free School >80 FADs >80	No other primary species except for skipjack, yellowfin, and bigeye.

	Secondary species	2.2.1	Outcome	Free School >80 FADs >80	Free School >80 FADs >80	No secondary species.
		2.2.2	Management strategy	Free School >80 FADs >80	Free School >80 FADs >80	No secondary species.
		2.2.3	Information	Free School >80 FADs >80	Free School >80 FADs >80	No secondary species.
	ETP species	2.3.1	Outcome	Free School 60-79 FADs <60	Free School 60-79 FADs 60-79	Both gears impact ETP (sea turtles, sharks, and rays), especially the ones using FADs. Data on the impact of gear lost on ETP is not well understood. However, the fishery employs only a minimal number of FADs deployed (160 FADs were used across the 5 vessel), all of which are non-entangling. The interactions of the fishery with ETP seem to be minimal and therefore considered highly likely not to hinder the recovery of ETP species (based on interviews and PA). <i>Note that the auditor could not access observer reports and fishery-independent data. However, the fishery has 100% observer coverage, and data should be available upon request.</i>
		2.3.2	Management strategy	Free School 60-79 FADs 60-79	Free School >80 FADs >80	It is considered that IATTC has a strategy in place to manage the impact on ETP: <ul style="list-style-type: none"> • No retention • 100% observer coverage • Limit the number of FADs used In addition, the FIP has implemented: <ul style="list-style-type: none"> • skipper training for managing and manipulating marine

						<p>mammals, sea turtles and sharks,</p> <ul style="list-style-type: none"> • use of specific equipment to aid release, and formal reporting requirement • The use of non-entangling FADs and FAD management policy includes recovery of any lost FAD.
		2.3.3	Information	<p>Free School 60-79</p> <p>FADs 60-79</p>	<p>Free School >60-79</p> <p>FADs >60-79</p>	<p>The vessels have 100% observer coverage. However, there have been concerns over the correct identification of species.</p> <p>The magnitude of FAD entanglement mortality has not been assessed. Post-release mortality data and unobserved mortality are not available.</p>
	Habitats	2.4.1	Outcome	<p>Free School >80</p> <p>FADs >80</p>	<p>Free School >80</p> <p>FADs >60-79</p>	<p>The FIP operates the Eastern Pacific Ocean close to the Galapagos National Park and Marine Reserve and in the vicinity of other protected areas and coral reefs.</p> <p>There is the potential for lost or FADs becoming beached on coral reefs or drifting into marine protected areas, which are considered VMEs.</p> <p>As the information gear lost is unknown, it cannot be confirmed that it is highly unlikely that the FIP reduced the structure and the function of the VME habitats to a point where there would be serious or irreversible harm.</p> <p>160 FADs were used across the 5 vessels. In addition, the company mentioned it recovers FADs encountered. Even if the numbers of FADs used are low, there is no evidence of the gear lost, and its impacts on VMEs are minimal. Thus, it cannot be said that it is highly unlikely that the UoA will reduce the structure</p>

						<p>and function of the VME habitats to a point where there would be serious or irreversible harm.</p> <p>This is mainly linked to the FADs' impact on VME due to gear lost. Though measures are in place, evidence of habitat impacts on VMEs and other habitat types due to gear lost is not well understood.</p> <p>MSC habitat component is to characterize habitats in the area(s) fished by the UoA (GSA3.13.1 MSC Standard v2.01) or in the 'managed area' (GSA3.13.5, MSC Standard v2.01), and to assess the impacts of fishing attributed to the UoA in the area(s). MSC requirements have higher expectations with VMEs. There have been special guidance and interpretations release to assess fisheries that uses FADs, gear lost, etc. See Box GSA7 (MSC Standard v2.01).</p>
		2.4.2	Management strategy	<p>Free School >80</p> <p>FADs >80</p>	<p>Free School >80</p> <p>FADs >60-79</p>	<p>Resolution C-21-04 also strengthens FAD measures by adopting a progressive reduction in the limit on active FADs annually from 2022-2024 for all purse seine vessel size classes, as below.</p> <p>In 2020, the FIP implemented a FAD best practice management policy that includes:</p> <ul style="list-style-type: none"> • To only deploy Non-Entangling FADs, effective immediately. • All skippers to attend training must understand the reason for these changes and agree on best practices. • Develop a FIP strategy for FAD recovery • Continuously improve procedures in line with best practices.

						<ul style="list-style-type: none"> All vessels will comply with ISSF Best Practices for FAD management Plans, For Biodegradable FADs, they must adopt the following recommendations: <ul style="list-style-type: none"> - Reduce the use of plastics in the FAD structure and document FAD configurations in use - Engage in trials for adoption of a FIP Biodegradable FAD configuration with the following guidelines based on ISSF's recommendation <p>However, note that there is no evidence of implementation in some these measures (eg, biodegradable) and little evidence that these measures reduce impact on VMEs. Therefore, a precautionary score has been awarded.</p> <p>(The score is precautionary as during the interviews the company mentioned that some of these measures were not implemented. Also lack of the data of the effectiveness of these measures. To score 80 there should be some objective basis for confidence that the measures/partial strategy will work, based on information directly about the UoA and/or habitats involved).</p>
		2.4.3	Information	Free School >80 FADs >80	Free School >80 FADs >60-79	<p>There is good information on the spatial locations of fishing and the use of FADs. However, there is limited information on FADs lost and their impacts</p> <p>on coral reefs (Burke et al. 2012). There is reliable information on the spatial locations of fishing,</p> <p>The company indicated that only a limited number of FADs are</p>

						<p>used. However, information on the number of active FADs per vessel per month and locations of FADs lost and became beached is needed. Information is also required to understand the impacts on VMEs, ie. spatial extent, timing, and location of FAD interactions with coral reefs.</p> <p>It is necessary to have sufficient information to determine the real impact of FADs on VMEs, especially on coral reefs and their intensity, and to establish management strategies to prevent these impacts from seriously and irreversibly affecting the structure and function of coral reefs</p>
Ecosystem	2.5.1	Outcome	<p>Free School >80</p> <p>FADs 60-79</p>	<p>Free School >80</p> <p>FADs >80</p>	<p>The UoA does not cause serious or irreversible harm to the key elements of the ecosystem structure and function are meeting the 80SG.</p>	
	2.5.2	Management strategy	<p>Free School >80</p> <p>FADs 60-79</p>	<p>Free School >80</p> <p>FADs >80</p>	<p>Management measures of IATTC consider the ecosystem impacts.</p> <p>Resolution C-20-06 using a suite of temporal, spatial, and technical controls</p> <p>Since 2017, the IATTC has annually published Ecosystem Considerations reports that track the status of 7 ecological indicators, discussed during the regular meeting of the IATTC SAC and Commission.</p> <p>Resolution C-19-01, as well as the conservation measures to minimize the interactions with and release of sharks, rays, and other species. sharks (C-11-10, C-19-05, C-19-06, C-15-04, C-19-04, C-03-08)</p> <p>Collectively these measures manage fishery impacts on trophic structure and function and are considered to constitute</p>	

						a partial strategy which considers available information and is expected to restrain impacts of the UoA.
		2.5.3	Information	Free School >80 FADs 60-79	Free School >80 FADs >80	In other fisheries, considerable research has focused on understanding changes in ocean temperature, salinity, stratification, circulation, and production (e.g., Lehodey et al., 2003). Physical effects on predator recruitment using the Ecopath-Ecosym model have also been undertaken.
3	Governance and Policy	3.1.1	Legal and customary framework	IATTC >80 Panama 60-79 Ecuador 60-79 Nicaragua >80	IATTC >80 Panama 60-79 Ecuador 60-79 Nicaragua >80	Please see the MSC harmonization exercise for P3, which has higher P3 scores. It is recommended to do a full harmonization exercise in this Principle.
		3.1.2	Consultation, roles and responsibilities	IATTC >80 Panama >80 Ecuador >80 Nicaragua >80	IATTC >80 Panama >80 Ecuador >80 Nicaragua >80	Please see the MSC harmonization exercise for P3, which has higher P3 scores. It is recommended to do a full harmonization exercise in this Principle.
		3.1.3	Long term objectives	IATTC >80 Panama >80 Ecuador >80	IATTC >80 Panama >80 Ecuador >80	Please see the MSC harmonization exercise for P3, which has higher P3 scores. It is recommended to do a full harmonization exercise in this Principle.

				Nicaragua >80	Nicaragua >80	
Fishery specific management system	3.2.1	Fishery specific objectives	IATTC >80 Panama <60 Ecuador <60 Nicaragua <60	IATTC >80 Panama <60 Ecuador <60 Nicaragua <60	Please see MSC harmonization exercise for P3, which has higher P3 scores. It is recommended to do a full harmonization exercise in this Principle and update the scores.	
	3.2.2	Decision making processes	IATTC >80 Panama <60 Ecuador 60-79 Nicaragua >80	IATTC >80 Panama <60 Ecuador 60-79 Nicaragua >80	Please see MSC harmonization exercise for P3, which has higher P3 scores. It is recommended to do a full harmonization exercise in this Principle.	
	3.2.3	Compliance and enforcement	IATTC >80 Panama 60-79 Ecuador 60-79 Nicaragua <60	IATTC >80 Panama 60-79 Ecuador 60-79 Nicaragua <60	Please see MSC harmonization exercise for P3, which has higher P3 scores. It is recommended to do a full harmonization exercise in this Principle..	
	3.2.4	Management performance evaluation	IATTC >80 Panama 60-79 Ecuador 60-79 Nicaragua 60-79	IATTC >80 Panama 60-79 Ecuador 60-79 Nicaragua 60-79	Please see MSC harmonization exercise for P3, which has higher P3 scores. It is recommended to do a full harmonization exercise in this Principle.	

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
Stock assessment methodology reviewed	Create evidence of yellowfin stock rebuilding or evidence that the stock will be able to be rebuilt within a specified timeframe	1.24	Before 2020, stock assessments were based on a 'best assessment' approach consisting of defining a single stock assessment model (the 'base case') for each of yellowfin and bigeye, which IATTC staff believed represented the most plausible ('best') assumptions and data about the biology and fisheries (IATTC_SAC, 2020b). In 2018 IATTC staff concluded that the results of its stock assessment of bigeye in the EPO were not reliable enough to be used as a basis for management advice to the Commission (in 2019, this conclusion was extended to the assessment of yellowfin; IATTC (2019c)). A major problem with these assessments is that their results became overly sensitive to the inclusion of new data, particularly recent observations for the indices of relative abundance from the longline fishery (IATTC_SAC, 2020b). A workplan was adopted to improve the stock assessments for tropical tunas, including external reviews of the assessments for bigeye and yellowfin, which suggested various alternatives to be considered. In 2020, due to the workplan, a new benchmark assessment was produced for yellowfin (MinteVera et al., 2020). Rather than the 'base case' approach of previous assessments, a 'risk analysis' approach was adopted in which reference models are adopted to represent alternative assumptions about the

			<p>species' biology, stock productivity, and/or the operation of the fisheries (IATTC_SAC, 2020b).</p> <p>This change, which represents a paradigm shift at IATTC, both for the staff's work and for the Commission's decision-making regarding the conservation of tropical tunas, also allows the staff to evaluate explicitly the probability statements specified in the IATTC harvest control rule for tropical tunas established in Resolution C-16-02</p>
Yellowfin in healthy status	Create evidence of yellowfin stock rebuilding or evidence that the stock will be able to be rebuilt within a specified timeframe	1.1.1	<p>The overall risk analysis results were presented in terms of the probabilities of exceeding the reference points specified in the HCR. For yellowfin, the overall risk analysis results indicate only a 9% probability that the fishing mortality corresponding to the maximum sustainable yield (FMSY) has been exceeded. Aires-da-Silva et al. (2020) conclude that the risk analysis unambiguously shows that the yellowfin stock in the EPO is "healthy". To capture the uncertainty about the population dynamics of yellowfin in the EPO, the 48 reference models, each reflecting a different hypothesis, were considered when evaluating the status of the stock.</p>
Interim Stock Assessment completed for Skipjack	Develop a well-managed harvest strategy for all three tuna species	1.1.1, 1.2.1	<p>An integrated statistical age-structured catch-at-length stock assessment was developed for skipjack tuna in the eastern Pacific Ocean using Stock Synthesis. Although the assessment is termed interim by the staff, the staff considers it reliable for management advice. The term interim results from additional improvements being expected on the skipjack assessment under the ongoing 2021-proposed methodology and workplan to develop a stock assessment for skipjack in the EPO that includes tagging data.</p> <p>MSY-based quantities cannot be estimated, and a conservative proxy for the target biomass for bigeye and yellowfin and the fishing mortality are used as target reference points.</p> <p>The reference model and most sensitivity analyses estimate that the current biomass is above the target reference point and the fishing mortality is below the target fishing mortality (Maunder et al, 2021).</p>
Harvest strategy reviewed	Develop a well-managed harvest strategy for all three tuna species	1.2.1	<p>The new measure (Resolution C-21-04) came into effect on 01st January 2022 for three years (2022-2024). This new measure includes additional fishery closure days for purse seine vessels exceeding a defined bigeye tuna annual catch threshold. For example, in addition to</p>

			<p>the existing 72-day full fishing closure for purse seine vessels, vessels which caught more than 1200 mt of bigeye in the previous year are subject to an additional 10 days of closure in 2023 and 2024. Vessels which exceed an annual catch limit of 2400 mt will be subject to an additional 22 days of closure.</p> <p>Class 1-3: 50 FADs</p>
Strengthen the FAD management policy (IATTC)	FAD Management	2.3.2, 2.4.2, 2.3.3, 2.4.3, 2.5.2, 2.5.3, 2.5.1, 2.3.1, 2.4.1	<p>Resolution C-21-04 also strengthens FAD measures by adopting a progressive reduction in the limit on active FADs annually from 2022-2024 for all purse seine vessel size classes, as below.</p> <p>CPCs shall ensure that purse-seine vessels flying their flag have no more than the following number of FADs active at any one time:</p> <p>For 2022:</p> <ul style="list-style-type: none"> • Class 6 (1200 m3 and greater): 400 FADs • Class 6 (< 1200 m3): 270 FADs • Class 4-5: 110 FADs • Class 1-3: 66 FADs <p>For 2023:</p> <ul style="list-style-type: none"> • Class 6 (1200 m3 and greater): 340 FADs • Class 6 (< 1200 m3): 255 FADs • Class 4-5: 105 FADs • Class 1-3: 64 FADs <p>For 2024:</p> <ul style="list-style-type: none"> • Class 6 (1200 m3 and greater): 340 FADs • Class 6 (< 1200 m3): 210 FADs • Class 4-5: 85 FADs
FAD management plan implemented (FIP)	FAD Management	2.3.2, 2.4.2, 2.3.3, 2.4.3, 2.5.2, 2.5.3, 2.5.1, 2.3.1, 2.4.1	<ul style="list-style-type: none"> • FIP updated FADs policy to align with ISSF requirements • Use of non-entangling FADs • Record on skipper logbook data detailed information about the use of, deployment, retrieval, and number of FADs used on board • Vessels authorized to remove all FADs owned by the fishing company • 160 FADs used by the 5 vessels
Fisheries law in Panama updated	Legal and/or customary framework	3.1.1	<p>Panama laws reviewed. Law N° 204, which regulates fishing in Panama, was issued.</p>

Shark finning policy updated	Secondary species management – shark finning	2.3.2	Company shark finning policy was updated to reflect that sharks should be landed with fins naturally attached.
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Provide a list of references that are referred to within this document.

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