



OCEAN OUTCOMES
Fish | Food | Livelihoods

Mexico El Rosario and Isla Cedros finfish - trap/handline Three-Year Audit Report

Version 1.2, September 2021

Purpose

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

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

FIP Information

Target species scientific name(s) and common name(s)	Ocean whitefish (<i>Caulolatilus princeps</i>) California sheepshead (<i>Semicossyphus pulcher</i>) Barred sand bass (<i>Paralabrax nebulifer</i>) Vermilion rockfish (<i>Sebastes miniatus</i>) Red rockfish (<i>Sebastes constellatus</i>)
Fishery location	El Rosario and Isla de Cedros in Baja Peninsula, Mexico.
Gear type(s)	Hand line and traps
Estimated FIP Landings (weight in tons)	302 metric tons (Data from FIP profile, March 2021)
Vessel type(s) and size(s)	Small-scale vessels (Approx. < 10 meters in length)
Number of vessels	Number of small-scale vessels: 20
Management authority	National Fisheries Commission (CONAPESCA)
Auditor name(s)	Ivan Martinez-Tovar
Auditor Organization/Affiliation	Ocean Outcomes
Date of report completion	May 24, 2023

FIP Background

The finfish fisheries are multi-species fisheries that are common in Mexico. These fisheries also tend to have a variety of fishing gear that adapts to the ecology of the target species. In the case of the current project, handlines and traps are used by producers in Northwest Baja Peninsula to target ocean whitefish (*Caulolatilus princeps*), California sheephead (*Semicossyphus pulcher*), barred sand bass (*Paralabrax nebulifer*), red rockfish (*Sebastes constellatus*) and vermilion rockfish (*S. miniatus*). Commercial producers use small-scale vessels to target these species and decided to start a fishery improvement project in 2017. By 2020, the stakeholders agreed to transition to a comprehensive FIP. The project aims to collect biological and fishery information to improve management (currently minimal or lacking) and more specific details about the fishery's impacts on Habitat and ecosystem. This report evaluated the information reported by participants and the progress achieved during the last three years. It is important to mention that the SCPP Pescadores Nacionales de Abulon, which operates in Cedros Island region, has been an active participant in the project since August 2022, with less than a year in the FIP, which limits the potential impact within the past three years and was not considered for this evaluation.

Stakeholder Consultation & Meetings

The review team reviewed the background and material needed to understand the current status of MSC Performance Indicators (PIs) and the level of progress on the client's action plans. The communications occurred through scheduled meetings. The list below provides information for participants on specific communications.

Name	Affiliation	Date and Subjects Discussed
Alesa Flores	Comunidad y Biodiversidad A.C. (COBI AC)	<u>May 5th, 2023</u> <ul style="list-style-type: none">• Data collection efforts• Barriers and efforts to mitigate• FIP Actions• Scope of the project
Cecilia Blasco, Enrique Hernandez, Rocio Urapiti, Alejandro Rodriguez	Smartfish A.C.	<u>May 2nd, 2023</u> <ul style="list-style-type: none">• Action plan• Fishery interactions with market and commercial activities• Engagement with stakeholders.
Dr. Emiliano Garcia	CICESE	<u>May 24th, 2023</u> <ul style="list-style-type: none">• Stock assessments' methodology (approach, robustness, data source)• Principle indicators
Dra. Mariela Brito	INAPESCA	<u>May 4th, 2023</u> <ul style="list-style-type: none">• Stock assessments' methodology (approach, robustness, data source)

		<ul style="list-style-type: none"> ● Collaboration, the scope of the project ● Principle indicators
Sr. Miguel Bracamontes	Cooperativa Ensenada	<p style="text-align: center;"><u>May 6th, 2023</u></p> <ul style="list-style-type: none"> ● Data collection efforts - Pesca Data ● FIP Actions ● Scope of the project
Javier Van Cauwelaert	Smart Fish Inc.	<p style="text-align: center;"><u>May 8th, 2023</u></p> <ul style="list-style-type: none"> ● Market participation, incentives ● Collaboration ● Support (incentives)

Summary of Findings and Recommendations

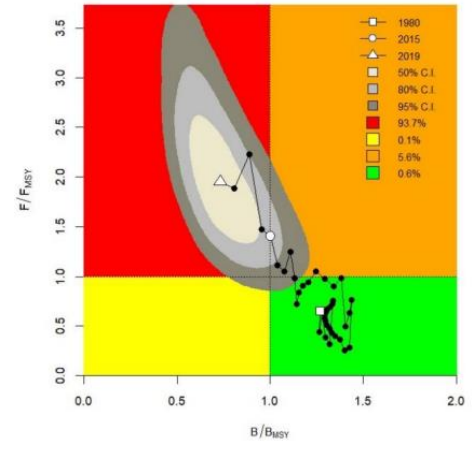
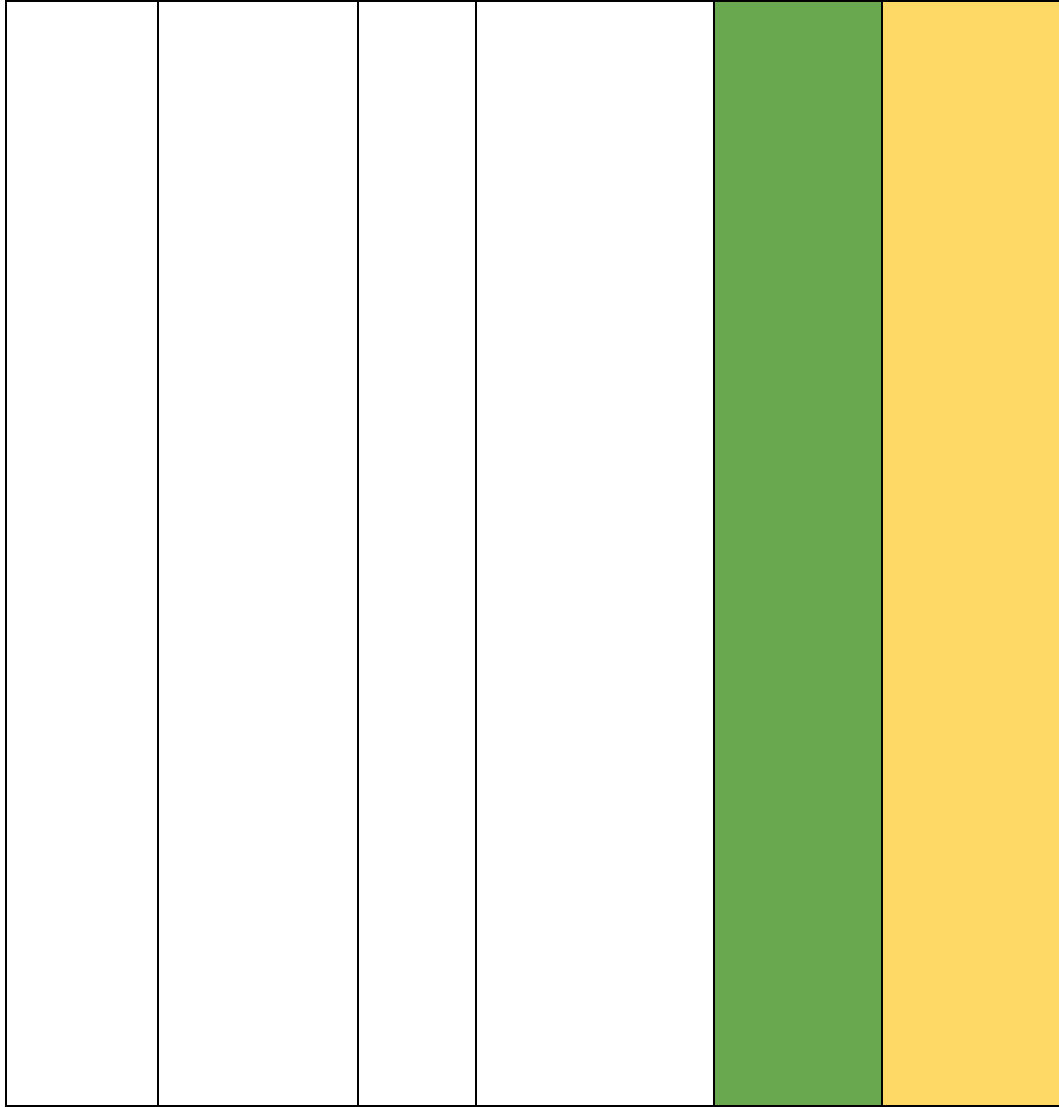
- The project has achieved significant progress in its actions, and the stakeholders have evident support and active participation. However, several expressed their concerns about the limited impact that the project may achieve with current coverage. Explorations about how to increase the number of participants/fishing efforts included will be beneficial and potentially reduce the costs in the long term.
- The project has effectively improved the availability of information and knowledge related to the status of the target species and the widespread impacts that the activities produce in the ecosystem. There is a need to continue generating information and have enough evidence to support the need (or not) for more measures to improve the fishery's sustainability.
- Based on the population evaluations, barred sea bass and ocean white fish might be driving the score for PI 1.1.1, which will trigger the need to develop a rebuilding strategy for these species.
- Results on catch composition allow us to consider this fishery as one that highly likely does not hinder the status of non-target species (including potential impacts on ETP species). Based on the results, the activities have a limited effect on the ecosystem, which can be improved as more data is generated.
- Two actions within the workplan will require close coordination with managers (CONAPESCA) to formalize this at a federal level. 1. The generation of more robust management tools and 2; how these tools are part of a complete harvest strategy. There has been an extensive amount of work that participants have completed. These results and data should be shared with the proper authorities to start constructing the "buy-in process."

Updates in profile

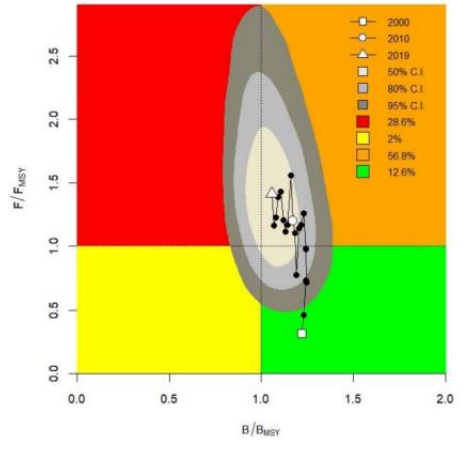
1. Similar to the project led by COBI with the finfish fishery in Guaymas, Mexico, this project is taking advantage of the improvements made by a market-driven approach. Their commercial partner (Healthy Fish) should be included as a participant in the profile.
2. Several completed tasks with evidence supporting their completion are not marked as such ("Completed"). For example, task 7 in action. Although this is not a big issue, verifying progress by third parties more quickly could be helpful.

Summary of MSC Performance Indicator Scores

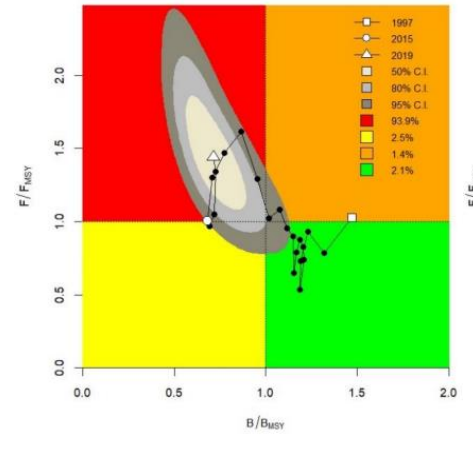
Principle	Component	Performance Indicator		Previous Score	Current Score	Rationale or Key Points
1	Outcome	1	Stock status			<p>The general status of the target species was last reviewed within the 2010 version of the National Fisheries Chart (DOF 2010). During this report, the species were presented as part of the finfish groups or "escama" groups. The profiles included: Pierna and conejo (that contained Ocean whitefish as target species and California sheephead as associated), cabrillas (groupers) (that had the barred sand bass as target species and rockfish species as associated). These profiles considered all species groups exploited within their maximum yield (DOF 2010). When FIP transitioned to comprehensive, the RBF was used to score this PI. As a result, all species reached a >80 score.</p> <p>As part of the FIP action "<i>Develop a stock assessment for the five species and define reference points</i>," FIP participants used the Froese et al. (2017) data-poor methodology to evaluate the different species' status. The figures below show the preliminary results generated by the FIP for Ocean whitefish (a), California sheephead (b), barred sand bass (c), starry rockfish (d), and vermilion rockfish (e). The preliminary results indicate that all the species show signs of over-exploiting.</p>



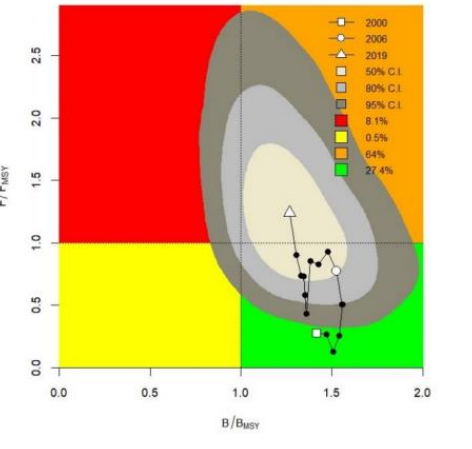
a



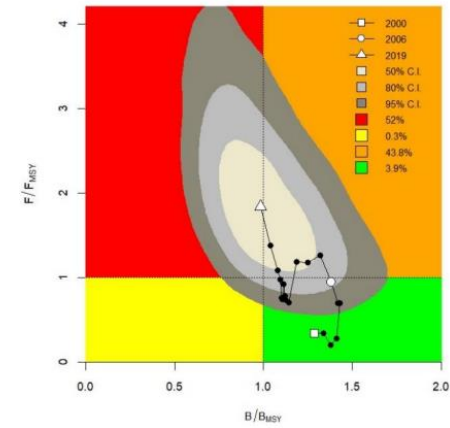
b



c



d



e

Based on the results, ocean white fish and barred sand bass (a and c) show that Biomass (B) has been below B_{MSY} in the most recent years, while the rest of the species are showing B values around B_{MSY} , but with fishing mortality (F) increasing, for all the species (FIP draft report, 2022).

The authors mentioned that catch-based methodologies have some limitations, in particular, because they do not consider the age structure of the catches of the different fleets, so their results must be taken cautiously. In addition, the Mexican fishing registry system needs to be improved to be more confident about population assessments.

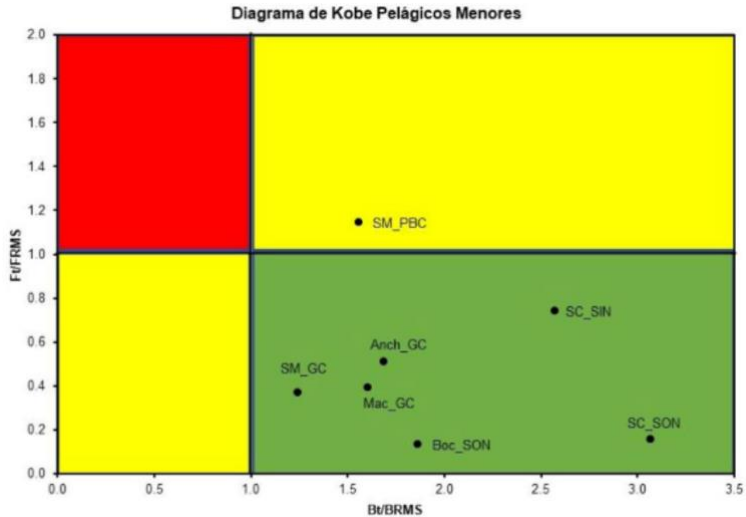
However, this exercise represents the most recent effort to evaluate the status of the different populations. Based on the results, it is likely that the stocks are above the PRI (considering the species' biology), and overall, the stocks of rockfish species and California sheep head are fluctuating around MSY. However, this might not be true for barred sand bass and ocean whitefish. If results are confirmed and used for management, this PI will likely score 60-70 because it will be driven by the lowest-scoring species, in this case, barred sand bass and ocean whitefish assessment.

1.1.2

Stock rebuilding

Currently, this PI was scored as Not applicable because P1.1.1 achieved an 80 score obtained by using the RBF during the pre-assessment. Based on the results of the evaluation exercise (see PI 1.1.1), there might be a need for a rebuilding

					strategy to be in place for the species driving the score (barred sand bass and ocean whitefish).
Management	1.2.1	Harvest Strategy			<p>There are no specific harvest strategies for any target species. As a whole, all these are part of the "finfish" (escama) fishery, with controls only established at the access level (through a permit or license system) (DOF 2010). In addition, some reference points were included within the 2010 profiles. Managers stated to "<i>take proper actions</i>" if production in Baja California is below 40 metric tons for Pierna and Conejo species (although it does not specify volume per species). Similar production references were established for groupers (200 t for Baja California). However, there are no details about monitoring and evaluating these harvest rates.</p> <p>Overall, all the profiles recommended creating specific management plans to restrict fishing efforts to increase and to have a monitoring program in coordination with INAPESCA. Overall, a robust harvest strategy, with regular monitoring, reference points, and harvest control rules, is not in place for any species. However, considering that production remains relatively stable, these limited measures might be inferred to be effective. Although, a lack of official monitoring does not allow these measures to be responsive to the stock's status, nor is an evaluation of the effectiveness in place. Finally, the species profiles have not been updated since its publication in 2010, so the currently limited strategy is not periodically reviewed and improved as necessary.</p>
	1.2.2	Harvest control rules and tools			Improvements needed for this PI are directly related to the results of new stock assessments that will allow the generation of new strategies, including HCR. Based on the most recent evaluations (See 1.1.1). A baseline for an HCR has been identified. Currently, these are not part of the management, and it needs to be clear that uncertainties tied to the stock evaluation are better understood.
	1.2.3	Information and monitoring			As part of the efforts of the FIP, abundance data and removals are now monitored, and one indicator is available that could be used to establish effective HCR. Managers monitor production through the official landing tickets ("Avisos de arribo"), which are mandatory and should include a description of the composition of the catch. However, no verification exists when these tickets are created, which tends to be inaccurate (Yozell 2020). However, the project provides more relevant information on fishing zones, catch volumes, catch, and fleet composition. The participants are using both their landing tickets and the

						information collected by the Pesca Data app. This information can be used to support a potential harvest strategy.
		1.2.4	Assessment of stock status			<p>The most recent evaluations used the most appropriate methodology based on available data. These assessments estimate the current status of the target species concerning reference points and consider the primary sources of uncertainty.</p> <p>Considering that the best assessment methodology was already defined and moved from the RBF assessment, this PI reaches a passing score. However, there is still the need to include details on catch per gear and age and size structures of the production. In addition, the assessment must continue to be tested and proven robust; alternative hypotheses and assessment approaches must be explored when more data is available.</p>
2	Primary species	2.1.1	Primary species outcome		Both gears	<p>Based on the information available, both gears have limited to no significant impact on species that could be considered primary, except for those used as bait. In the case of the trap, the "sardines" are composed mainly of <i>Sardinops sagax</i>, and for handline, the market squid bought from the USA.</p> <p>Sardines: According to the most recent update on the fishery profile in the National Fisheries Chart, both species are not showing signs of being overfished, nor is overfishing occurring (DOF 2022).</p>  <p>The Kobe Diagram plots F/BRMS (Y-axis, 0.0 to 2.0) against B/BRMS (X-axis, 0.0 to 3.5). The diagram is divided into four quadrants: Red (top-left, F/BRMS > 1.0, B/BRMS < 1.0), Yellow (top-right, F/BRMS > 1.0, B/BRMS > 1.0), Yellow (bottom-left, F/BRMS < 1.0, B/BRMS < 1.0), and Green (bottom-right, F/BRMS < 1.0, B/BRMS > 1.0). Data points are plotted for various species and gears: SM_PBC (Yellow), SC_SIN (Green), SM_GC (Yellow), Anch_GC (Green), Mac_GC (Green), Boc_SON (Green), and SC_SON (Green).</p>

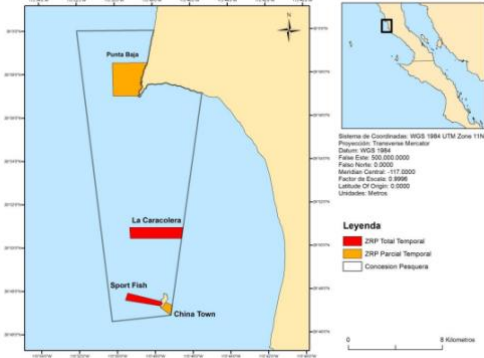
					<p>In addition, the species are part of an MSC-certified fishery in Mexico, with some conditions attached to it. The results of the fourth surveillance audit report (SCS 2023) include details on how both species are above PRI and fluctuate around a level consistent with MSY with a high degree of certainty; this PI could score as >80.</p> <p>California Market Squid: There are no estimates of a sustainable level of abundance for California market squid, and abundance is unknown (PFMC 2010), mainly because the constant population turnover makes it very difficult to extrapolate long-term trends in abundance. A recent assessment by the Seafood Watch program reported that based on the combination of the results of a PSA, life history characteristics indicate moderate-to-high productivity. And concluded that, although abundance relative to sustainable levels is unknown, the combination of a non-high vulnerability to overfishing and multiple data-poor approaches, with distinct data sources suggesting no reason to conclude the stock is overfished, that low concern on the status of the stocks for squid market was found (SFW 2019).</p> <p>Overall, both species are highly likely to be above PRI, and the score for this PI might reach >80</p>
		2.1.2	Management strategy		<p>Sardines: The species are managed through the NOM-003-SAG-PESC-2018 published in the Official Gazette of the Federation) (DOF 2018) and includes a new version of the fishery's Management Plan (draft), which includes INAPESCA's stock assessment, monitors fishing activities, and computes the ABC based on the stock status. The NOM establishes the volume of the fishery's total catch, minimum size limits, the monitoring system in place procedures to determine the biologically accepted catch, and the guidelines to regulate the fishery's operation when this is reached. This PI could be scored as >80 for sardines</p>

				Hand lines	<p>Market squid: The market squid fishery is managed by the California Department of Fish and Wildlife under the Market Squid Fishery Management Plan. Measures include weekend closure dates (noon Friday to noon Sunday), which provide for uninterrupted spawning; a restricted access program with provisions for initial entry into the fishery, permit types, permit fees and permit transferability; an annual (1 April to 31 March) catch limit of 118,000 short tons (107,047 MT)(CDFW 2005), and numerous spatial closures. The CDFW is currently in the process of revising the Marine Life Management Master Plan, which will influence the way all California fisheries are managed (CDFW 2018).</p> <p>This PI could be scored as 60-79 for market squid.</p>
	2.1.3	Information			<p>Some quantitative information has been generated. It is available to adequately assess the impact of the UoA on the main bait species concerning their status and support the strategy in place. The FIP should continue monitoring these species' use in its data generation process.</p>
Secondary species	2.2.1	Outcome			<p>Based on the most recent report generated by the FIP, none of the fisheries directly impact species that could be considered secondary species (according to the MSC definition). Flores-Guzman & Diaz-Duarte (2022) analyzed the catch data from January 2015 to June 2022; no species -beyond the target species- presented a volume high enough to be considered a secondary species.</p> <p>Since no main secondary species exist, this PI can be improved to >80</p>
	2.2.2	Management strategy			<p>Considering that, catch composition for both gears shows limited interactions with non-target species. The current nature of the gears can be considered a partial strategy (in addition to controls in fishing efforts). The combination of these is expected to maintain or not hinder the rebuilding of main secondary species at/to levels that are highly likely to be above biologically based limits, or to ensure that the UoA does not hinder their recovery. Considering that data suggest limited catch, there is some objective basis for confidence that this partial strategy works and the data can be regarded as evidence of this. Continuous monitoring keeps showing these results, so this PI could improve its scoring even more.</p>
	2.2.3	Information			<p>Based on the data collection data and reports generated in 2022, there is enough quantitative information to define bycatch for the fishery (Flores-Guzman & Diaz-Duarte, 2022). The quantitative information available is adequate to assess</p>

						productivity and susceptibility attributes for the main secondary species and support the management strategy for the species.
ETP species	2.3.1	Outcome				No ETP species were identified from the fisher's data logs. The qualitative and quantitative information allows us to know the direct effects of the UoA on the species.
	2.3.2	Management strategy				Based on the quantitative information, the UoA does not interact significantly with ETP species.
	2.3.3	Information				Available qualitative information was available during the pre-assessment; in addition, and as part of the FIP, monitoring through fishing logbooks has been conducted, including interactions with ETP species. The quantitative information adequately assesses UoA-related impact on ETP species. In addition, if a monitoring program remains in place, trends might be adequate to evaluate the strategy. The available information on the species that might be considered within the scope is enough to support measures and set a basic strategy.
Habitats	2.4.1	Outcome			Traps	Both gears have a relatively low (trap) and very low (handline) interaction with the habitat. According to a report released in 2011, these gears' impacts are considered minimal, as well as potential damages to the substrate, geomorphology, and biota (Shester and Micheli 2011). According to the drafted report, the overlap of fishing activities (particularly traps) is limited (Cisneros-Soberanis et al., draft). Recently, a CSA was conducted for the fishery as part of the FIP. The results on the use of traps suggested that in El Rosario, some fishing activities are associated with coral and hard-bottom habitats, of which the traps could impact and impact the habitat.
					Handlines	

					<div data-bbox="1182 132 2063 480" data-label="Figure"> </div> <p data-bbox="1160 528 2123 826">The maps above show the areas where traps got the high rate of catches, used for ocean whitefish (left) and barred sand bass (right) are marked in dark color. Orange dots represent coral reef habitats found. Based on the report, it is unlikely that the traps will reduce the structure and function of the habitats encountered, including the VME (corals), to a point where there would be serious harm. Especially considering that incidental breaking of the corals on which the traps can fall or settle constitutes the destructive impact of this gear. However, there is a need to continue monitoring these impacts on this VME to generate some evidence.</p> <p data-bbox="1160 866 2123 1031">In the case of handlines, these are gears with low-impact habitats. The species fished in midwater and close to the bottom of the sea are considered to have minimal impacts, causing little or no damage to substrate, geomorphology, and biota. The nature of the gear makes it highly unlikely to reduce the structure and function of the commonly encountered habitats, including the overlap with VME.</p> <p data-bbox="1160 1078 2123 1342">Both gears in this fishery are considered low impact (Shester and Micheli 2011) compared to others, such as gillnets or trawling systems. Based on the assessments and data available, the nature of the gears, the existence of no-fishing zones (or refugee zones), and the limits on fishing efforts could be considered a partial strategy that is expected to be successful. In addition, data generated with the use of underwater cameras, and the evaluation of these impacts, using the RBF allow for having some quantitative data that will enable us to have some confidence that these measures are effective.</p>
		2.4.2	Management strategy		

		2.4.3	Information			<p>The types and distribution of the main habitats were inferred using the CSA of the RBF (Cisneros-Soberanis et al. draft report). Qualitative information was adequate to estimate the types and distribution of the main habitats and understand the major impacts the gear could generate. It is important to continue generating quantitative data to improve the effects estimated and detect any increase in risk to the main habitats.</p>
Ecosystem		2.5.1	Outcome			<p>According to the results of the Ecopath with Ecosim developed by Zetina-Rejon et al. (2022), the food network in the El Rosario region is vulnerable but not necessarily due to the removal of the target species, instead driven by the changes in productivity that trigger changes through the entire food network. For example, authors reported that barred sand bass and rockfishes in El Rosario play an essential role in the structure of the ecosystem food web. Still, the effect of their removal depends on the degree of vulnerability and the resilience of the ecosystem.</p> <p>Based on these results, it is highly unlikely that the UoA will disrupt the key elements underlying ecosystem structure and function to a point where severe or irreversible harm would occur. However, there is a need for more evidence to confirm this point.</p>
		2.5.2	Management strategy			<p>The results of the Ecopath analysis can be considered as a partial strategy in place, which takes into account available information and is expected to restrain impacts of the UoA on the ecosystem. Some information about the general trophic structure of the ecosystem has been studied. Data obtained and analyzed allowed to identify the key issues and broadly understand their role. Data obtained through the logbooks can be used to corroborate that gears are highly selective and have a limited impact on habitats. Finally, the groups have in place fishing refuges areas to reduce the potential impacts in the ecosystem.</p>

						 <p><i>Fishing refugees proposals around El Rosario (image taken from SCPP Ensenada report)</i></p> <p>Authorities have not officially recognized these areas. However, the members of the cooperatives recognized these by internal decree and considered these as Community based Marine Reserves that active as protected areas for different species including the target species.</p>
		2.5.3	Information			<p>The project has been increasing the amount of information available, which can be considered as adequate to broadly understand the key elements of the ecosystem. In addition, the main impacts of the fishing activities can be (and have been) inferred from the existing and recently developed data. Overall, the information is relevant to assess impacts on the key components and functions of the ecosystem and the data continues to be collected. For these reasons, this PI remains as scored.</p>
3	Governance and Policy	3.1.1	Legal and customary framework			<p>In Mexico, the general legal and customary framework associated with fishing activities is consistent and well-known by all parties involved. The federal management system sets governance and policy through the national fishery law. This instrument allows two bodies with management (CONAPESCA) and research activities (INAPESCA). The national legal system includes a space for cooperation with other parties, to deliver management outcomes consistent with Principles 1 and 2 of the MSC.</p> <p>The management system allows stakeholders to participate in the deliberations process; regarding management decisions, the process is open, and details are transparent. Finally, the environmental and fisheries laws and regulations</p>

						recognize the dependence on fishing for food and livelihood and include clauses generally respecting these people's customary or traditional legal rights.
		3.1.2	Consultation, roles, and responsibilities			<p>The organizations and individuals involved in the management process are well-identified. Their roles and responsibilities have been explicitly defined within the General Fisheries Law.</p> <p>In addition, the management system includes consulting processes that regularly seek and accept relevant information, including local knowledge. Additionally, when the regulatory update processes are in action, they must be published on the National Commission for Regulatory Improvement web page and in the DOF (Official Federation Paper). This PI remains with no change.</p>
		3.1.3	Long-term objectives			The General Law of Fisheries and Aquaculture explicitly defines long-term objectives and is as well-defined in the CNP. This PI remains with no change
	Fishery specific management system	3.2.1	Fishery-specific objectives			The project has in place one action that the confirmation of the results on the stock evaluations will drive. Currently, the score for this PI is based on the fact that none of the species within the UoA have specific objectives for their management in place.
		3.2.2	Decision-making processes			<p>At a federal level, the contents of the Fisheries National Chart are intended to be binding in the decision-making and adoption/implementation of management measures. The finfish fishery in the National Fisheries Chart outlines recommendations for the management, including a no increase in the fishing effort in place. These kinds of recommendations are provided to CONAPESCA via a technical opinion from INAPESCA. Thus, in theory, the decision-making processes employ a precautionary approach based on the best available information. However, there has not been an update of this recommendation since 2010, so it does not seem that the decision-making processes respond to severe issues identified in relevant research, monitoring, evaluation, and consultation in a transparent, timely, and adaptive manner, and take some account of the broader implications of decisions.</p> <p>At a local level, the project aims to create a local and internal decision-making process that will be triggered once action 3 (define and promote management tools to the fisheries) is triggered.</p>

		3.2.3	Compliance and enforcement			At a federal level, the General Directorate of Inspection and Surveillance aims to preserve CONAPESCA's systems and species. There is a small task force of federal agents (~ 168 Causa Natura 2023) that collaborate via the inter-institutional coordination with other competent authorities to enforce the fishing regulatory framework. However, evidence demonstrating the ability to enforce the management measures is still lacking. Similarly, although a set of sanctions exists, evidence of these being consistently applied and thought to provide effective deterrence is not available. At a local level, the project aims to create a local and internal decision-making process that will be triggered once the action 3 (define and promote management tools to the fisheries) is triggered.
		3.2.4	Management performance evaluation			There are mechanisms to evaluate some parts of the fishery-specific management system. The Carta Nacional Pesquera provides summary information about where, when, and how much fishing is allowed without altering the ecological balance and the most appropriate way to extract species susceptible to exploitation. This should be updated regularly, but the last time the species group was updated was in 2010. Some updates are in preparation but were not public during this audit process.

Environmental Workplan Results

Result	Related Action on FisheryProgress	Related MSC Performance Indicator	Explanation
The status of the target species stock is available using a data-limited approach	Action 1. Develop a stock assessment for the five species and define reference points	1.1.2, 1.2.1, 1.2.4, 1.2.2, 1.2.3, and 1.1.1.	FIP participants and associated consultants coordinated a data mining process to develop stock evaluations using a data-limited approach. To accomplish this, a combination of bibliographic research, data collection, and data mining steps were taken. Recently a draft report was conducted with the results of the data stock assessments and generation of reference points (target biomass, catch, or fishing mortality effort) for the five species. These results are now submitted to a peer-review publication and used as the baseline for parallel work related to harvest strategies and management.

Result	Related Action on Fishery Progress	Related MSC Performance Indicator	Explanation
The impact of the fisheries on habitat and the ecosystem were inferred	Action 2. Analyze the fishery impact on the ecosystem	2.3.3, 2.3.2, 2.3.1, 2.5.3, 2.5.2, 2.5.1, 2.4.3, 2.4.2, 2.4.1, 2.1.3, 2.1.2, 2.1.1, 2.2.3, 2.2.2, 2.2.1	The project, add to the cooperatives' data collection systems and improve the robustness of fish logbooks. In addition, the implementation of the Pesca Data app was included. Data related to catch composition, size structure, fishing zones, and overlap with main habitats were analyzed. The interactions of the gears with the habitat were evaluated, and results were published. Overall, an effective data collection system is in place. This system will be helpful to continue monitoring potential changes in impacts and generate evidence that could be used to improve scoring on some of the related PIs.

Supporting References

- *Causa Natura 2023. Conapesca, una institución compuesta de ausencias.* <https://reportajes.causanatura.org/conapesca-institucion-compuesta-de-ausencia>
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