

Project Evaluation Series

**Terminal evaluation of the project
“Sustainable management of bycatch in
Latin America and Caribbean trawl fisheries”
(REBYC-II LAC)**

**GCP/RLA/201/GFF
GEF ID: 621538**

Annex 4. Country report for Mexico

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Abbreviations and acronyms

BRD	Bycatch removal device
CCRF	Code of Conduct for Responsible Fisheries
CETMAR	Centro de Estudios Tecnológicos del Mar
CRIAP	Centro Regional de Investigación Pesquera
CONAPESCA	Comisión Nacional de Pesca y Acuicultura
EAF	Ecosystem Approach to Fisheries
EPOMEX	Institute of Ecology, Fisheries and Oceanography of the Gulf of Mexico
FAO	Food and Agriculture Organization of the United Nations
FIDEMAR	National Programme on the Use of Tuna, the Protection of Dolphins and Other Related Protected Aquatic Species (Mexico)
GDO	Global Development Objective
GEF	Global Environment Facility
GEO	Global Environment Objective
INAPESCA	Instituto Nacional de Pesca y Acuicultura
M&E	Monitoring and evaluation
MTE	Mid-term evaluation
OED	Office of Evaluation (FAO)

Executive summary

Introduction

1. This document presents the preliminary findings of a country study of Mexico carried out as part of the Food and Agriculture Organization of the United Nations (FAO) terminal evaluation of the regional project “Sustainable management of bycatch in Latin America and Caribbean trawl fisheries” (the REBYC-II LAC project), GCP/RLA/201/GFF.
2. The terminal evaluation’s specific objectives are to: i) assess the results achieved by the project during its implementation period and the extent to which these results contributed to the project’s objectives; ii) assess the sustainability of the project intervention and its potential impact, if any, in the long term; and iii) identify lessons learned from project design, implementation and management. The geographic scope of the evaluation in Mexico spanned one major shrimp fishing site, the Bay of Campeche in the Gulf of Mexico, where around 100 trawlers from a semi-industrial fleet mainly catch pink shrimp (*Farfantepenaeus duorarum*).
3. The evaluation methodology incorporates the GEF evaluation criteria (relevance, effectiveness, efficiency, including project implementation and execution, and sustainability, as well as factors affecting performance, among other things) and requirements to facilitate comparison with GEF reports and to contribute to the GEF programme selection process.

Main findings

Relevance

4. The EAF approach used by the project has proved essential for fisheries management in Mexico, generating new information on drag reduction, product processing, market opportunities, marine environment protection and the well-being those in the fisheries sector.
5. The project’s approach enabled the identification of informational, legal and administrative gaps in shrimp/bottom-trawl fisheries management in Mexico.
6. The regional project opened up the possibility of accessing and exchanging information and knowledge between participants in different Latin American countries.

Effectiveness

Component 1: *Improving institutional and regulatory frameworks for shrimp/bottom-trawl fisheries and co-management*

7. The pink shrimp consultative committee in Campeche was launched and is now operational, with an annual workplan. The project's co-management exercise also had a positive unintended result: it was successfully used to implement other consultative committees for shrimp fisheries in the Gulf of Mexico.

Component 2: *Strengthening bycatch management and responsible trawling practices within an EAF framework.*

8. The project successfully tested the prototype gear and its technical advantages for sustainable shrimp/bottom-trawl fisheries in the Bay of Campeche. Still, it couldn’t persuade local social actors of the convenience of adopting this particular type of fishing net.

9. The EAF-based onboard observer programme was an important achievement, as it enabled an update of biological data collection and baselines for shrimp fisheries in Mexico and incorporated spatio-temporal bycatch monitoring, integrating it into national database systems.

Component 3: *Promoting sustainable and equitable livelihoods through enhancement and diversification.*

10. The project developed value-added products using discarded catch and created local capacity for their processing and preparation.
11. The project conducted a first analysis of the socioeconomic impacts of bycatch. It was determined that fishing crews were the primary beneficiary of bycatch, but with marginal economic benefit.
12. The semi-industrial trawling fleet and small-scale fishers in the Bay of Campeche interact in common fishing areas on specific, but important fishing resources.

Component 4: *Monitoring, evaluation and information dissemination and communication.*

13. The project helped to enhance awareness of bycatch management, seeking ways to disseminate information and lessons learned. However, effective communication to promote social participation will take more time and may have started too late in the project timeframe.

Efficiency and factors affecting performance

14. Project implementation in Mexico successfully adapted to changing conditions for the most part. Risks were managed according to needs, while administrative gaps and financial shortfalls were resolved by changes to regional administration and efficient stakeholder communication.
15. The adverse situation created by the COVID-19 pandemic caused meetings and workshops to be delayed and suspended, so the training of fishers and their families was not achieved, leading to low women's participation. These circumstances prompted a rescheduling of project closure.

Sustainability

16. The project's EAF capacity building, including the establishment of the consultative management committees and their collaborative work, will be essential to pursuing the longer-term, sustainable management objectives of Mexico's pink shrimp management plan.
17. The continuity of project outputs could prove challenging, according to interviewees, as the government budget does not typically cover such items and some of the planned adjustments to legal frameworks have not materialized as yet. However, solid capacity and participatory processes can prolong project results.

Monitoring and evaluation

18. The project carried out almost everything to which it committed. Decisions were taken in a complex environment to correct adverse situations with regard to finance, social involvement and the dissemination of advances and findings.

Stakeholder engagement and gender issues

19. The national working group and the co-management consultative management committee were key to involving local social actors, as well as to resolving the challenges that came with administrative changes in the state and federal governments.

20. Stakeholder engagement and collaboration in the Gulf of Mexico were complicated by the complex environmental and socioeconomic situation of the shrimp/bottom-trawl sector (the status of the shrimp stock, governmental subsidies and COVID-19, for instance).
21. The participation of women in processing bycatch was low, as the COVID-19 pandemic stopped project activities targeting women.

Co-financing

22. The project was co-financed successfully and INAPESCA exceeded expectations. Other co-financing contributions were made both in cash and in kind by federal and state government institutions, academia, the trawl fisheries sector and one CSO.

Conclusions and lessons learned

23. The project's participatory and ecosystem approach is of pivotal importance for the long-term sustainable development of shrimp/bottom-trawl fisheries in Mexico, especially as stakeholder engagement remains a major challenge in the Bay of Campeche.
24. Effective dialogue is crucial to promoting stakeholder engagement to reduce the negative ecosystem impact and achieve more sustainable shrimp/bottom-trawl fisheries in the Bay of Campeche. Implementing fishing-net adaptations with a view to introducing BRDs remains a key medium-term challenge that should be followed up with consensus-building by the Mexican authorities, the fishing sector and academic institutions.
25. Improving bycatch use to reduce discards may be feasible, as suitable technology and protocols have been developed and the products that are likely to see the highest market demand and prices have been identified.

Table 1. GEF rating table

FAO–GEF rating scheme	Rating	Summary comments ¹
1) RELEVANCE		
Overall relevance of the project	HS	The project positively influenced the sustainable management of the trawl fisheries in Mexico
2) EFFECTIVENESS		
Overall assessment of project results	HS	Key achievements for the trawl fleet management in the Sonda de Campeche
Outcome 1.1	HS	Consultive committees established
Outcome 1.2	HS	National Working Group established
Outcome 2.1	MS	The project successfully tested the prototype gear, but no ship is currently using the new net. Capacities to implement EAF approach in Campeche
Outcome 2.2	HS	Technological package generated
Outcome 3.1	HS	Improved knowledge about the local social aspects related to bycatch and the technological development of value-added products
Outcome 4.1	HS	Enhanced awareness through a comprehensive dissemination strategy
3) EFFICIENCY, PROJECT IMPLEMENTATION & EXECUTION		
Overall quality of project implementation and adaptive management (implementing agency)	HS	Implementation successfully adapted to most of changing conditions, but COVID-19 emergence caused
Quality of execution (executing agencies)	HS	The project management, oriented to build a participatory process with all involved stakeholders was successful
Efficiency (including cost effectiveness and timeliness)	HS	Implemented efficiently considering the administrative, political, and pandemic challenges. Co-Financing was performed successfully and exceeded
4) SUSTAINABILITY		
Overall sustainability	ML	The continuity of the project's specific outputs will be challenging, but solid capacities and participatory processes can keep project's results
5) FACTORS AFFECTING PERFORMANCE (M&E and stakeholder engagement)		
Overall quality of stakeholder engagement	S	Partnering with stakeholders was efficiently addressed through the National Working Group, but there was low participation of women processing bycatch
Overall quality of M&E	S	(for each component of quality see below summary comments)
M&E design at project start-up	MS	At the beginning, administrative processes and funding transfers were quite long causing delays. The dissemination strategy started too late in the project life
M&E plan implementation	HS	Implementation of monitoring was proactive, and difficulties were resolved

¹ Include hyperlink to relevant sections in the report

1. Introduction

1.1 Purpose of the evaluation

1. This document presents the preliminary findings of a country study of Mexico carried out as part of the Food and Agriculture Organization of the United Nations (FAO) terminal evaluation of the regional project “Sustainable management of bycatch in Latin America and Caribbean trawl fisheries” (the REBYC-II LAC project), GCP/RLA/201/GFF. The project was funded by the Global Environment Facility (GEF) and implemented by FAO, which was also responsible for its overall execution.
2. The terms of reference of the terminal evaluation are presented in Annex 1 of the regional terminal evaluation report. The execution of project activities in Mexico was led by the National Institute of Fisheries and Aquaculture (INAPESCA). The findings presented in this document will be incorporated into the regional terminal evaluation report and its recommendations will inform those formulated at programme level.
3. The terminal evaluation, envisioned in the project document in accordance with GEF and FAO requirements, has the dual purpose of promoting accountability and learning. On the one hand, the evaluation informs the donor (GEF) and the various regional body and national government actors and counterparts involved in the project’s execution. On the other hand, in assessing the achievement of results, their impact and FAO’s contribution to the objectives of the REBYC-II LAC project, it should identify measures to consolidate the sustainability of project results and highlight the main lessons learned that could advance such activities in future.

1.2 Intended users

4. The primary audience/users of the evaluation are the main project decision makers, implementing/executing agency and co-executing agency – specifically, INAPESCA (the main project partner in Mexico), the Western Central Atlantic Fishery Commission, the Caribbean Regional Fisheries Mechanism, FAO and other members of the Project Steering Committee, as well as the national focal points and other co-executing partners. In addition, the report is designed to inform the GEF, as well as the GEF–FAO Coordination Unit. They will benefit, in particular, from the evaluation findings, lessons and recommendations on how to improve the design and implementation of future projects.

1.3 Scope and objective of the evaluation

5. The mid-term evaluation of the REBYC-II LAC project was carried out between October 2018 and June 2019, while final evaluation focused on the period from May 2019 to the time of assessment (March/June 2021), spanning all project components and activities. The terminal evaluation also took into account the first part of the project’s implementation, its design and the conclusions of the 2019 mid-term evaluation.
6. The terminal evaluation’s specific objectives are to: i) assess the results achieved by the project during its implementation period and the extent to which these results contributed to the project’s objectives; ii) assess the sustainability of the project intervention and its potential impact, if any, in the long term; and iii) identify lessons learned from project design, implementation and management. The evaluation also provides recommendations targeted at the various

stakeholders (including the GEF, project team and partners) and, where applicable, government counterparts in the six countries included.

7. The geographic scope of the evaluation in Mexico spanned one major shrimp fishing site, the Bay of Campeche in the Gulf of Mexico, where around 100 trawlers from a semi-industrial fleet mainly catch pink shrimp (*Farfantepenaeus duorarum*). The country study focused on project achievements at this pilot site.

1.4 Methodology

8. The evaluation adhered to United Nations Evaluation Group norms and standards² and to FAO Office of Evaluation (OED) manual, methodological guidelines and practices. It took a consultative and transparent approach to both internal and external stakeholders throughout the evaluation process. Findings and judgments were based on sound evidence and triangulated (verified by different sources) where possible. The triangulation of evidence underpins the validation and analysis and supports the evaluation's conclusions and recommendations.
9. The evaluation methodology incorporates the GEF evaluation criteria (relevance, effectiveness, efficiency, including project implementation and execution, and sustainability, as well as factors affecting performance, among other things) and requirements to facilitate comparison with GEF reports and to contribute to the GEF programme selection process. In this respect, the evaluation presents an assessment of each of these criteria using the GEF qualification scheme (Appendix 2) and a series of associated evaluation questions (see the Evaluation Matrix in Annex 1 of the regional terminal evaluation report).
10. Primary and secondary data in response to the evaluation questions were collected using the following methods and sources:
 - i. **A desk review** included documents such as i) background reports and papers, such as the project design document and related country reports; ii) annual workplans and budgets, annual project implementation reviews reports, semi-annual project progress reports, country monitoring matrices and the mid-term evaluation (MTE) report; iii) technical reports produced by the project; and iv) reports of FAO support missions; and v) letters of agreement and budgets (Appendix 3).
 - ii. **Semi-structured interviews** were conducted in person or remotely³ (using interview protocols developed by the evaluation team) with FAO country staff and national project stakeholders based in the capital city. Face-to-face interviews were conducted with shipowners and captains (Appendix 1). Efforts were made to ensure that a representative cross section of stakeholders was consulted.
 - iii. **Focus group discussions** were held in person or remotely (using appropriate protocols) with project participants and stakeholders.
 - iv. A **questionnaire** with dichotomous (yes/no) and open responses was e-mailed to key stakeholders (Appendix 4).

² <http://www.uneval.org/document/detail/21>

³ Using regular telephone and online platforms such as Skype, Zoom, and MS Teams.

- v. The evaluation team drew on the ***technical knowledge and experience*** of the national evaluation consultant.
11. This country study, similar to the regional evaluation report, is structured around key evaluation questions corresponding to the evaluation criteria. The evaluation team developed an evaluation matrix to answer the key questions; for each criterion, it includes the evaluation questions, proposed indicators and primary sources of information. The key questions are broken down into sub-questions to capture specific features of project implementation at the country level, taking into account specific features of the fisheries sector and project workplan in Mexico.

1.5 Limitations

12. Efforts were made to obtain the point of view of a wide range of stakeholders with respect to their social, cultural, economic and intellectual diversity, as well as their expertise and role in the project.
13. The degree and level of stakeholder participation in an evaluation process will vary depending on budgetary and time constraints. In addition, the increasing number of COVID-19 suffers in Campeche, Mexico in June and July 2021 presented challenges in terms of the evaluation. Electronic tools were used to obtain inputs from a comprehensive sample of stakeholders (for example, email, telephone calls, online platforms, etc.).
14. Because of the COVID-19 pandemic, field visits to project sites to make direct observations were cancelled. Face-to-face interviews with shipowners and one captain were conducted in their offices, always taking appropriate COVID-19 measures to reduce the risk of contagion.⁴ In mid-June, all interviews were cancelled when the state government imposed new restrictions aimed at suppressing the third wave of infections in Campeche. Interviews were also interrupted by the electoral ban in Mexico (3–6 June 2021). All these decisions were based on the criteria set out in the methodology section of the inception report (see Appendix 8 to the main evaluation report) and followed flexible plans for conducting the investigation phase amid COVID-19 pandemic restrictions.
15. A final limitation was the lack of availability of stakeholders to provide answers to the questionnaire due to timeline constraints. They were sometimes no longer available, or no longer represented the interest groups they had represented during project implementation. Another obstacle to locating people in the fisheries value chain was that there were no fishing activities in the warehouses due to the shrimp ban. However, all sectors participating in the entire value chain of shrimp/bottom-trawl fishery were represented in the exercise for Mexico.

⁴ Status of Mexico's COVID-19 Traffic Light Monitoring System, safety distance, using face masks.

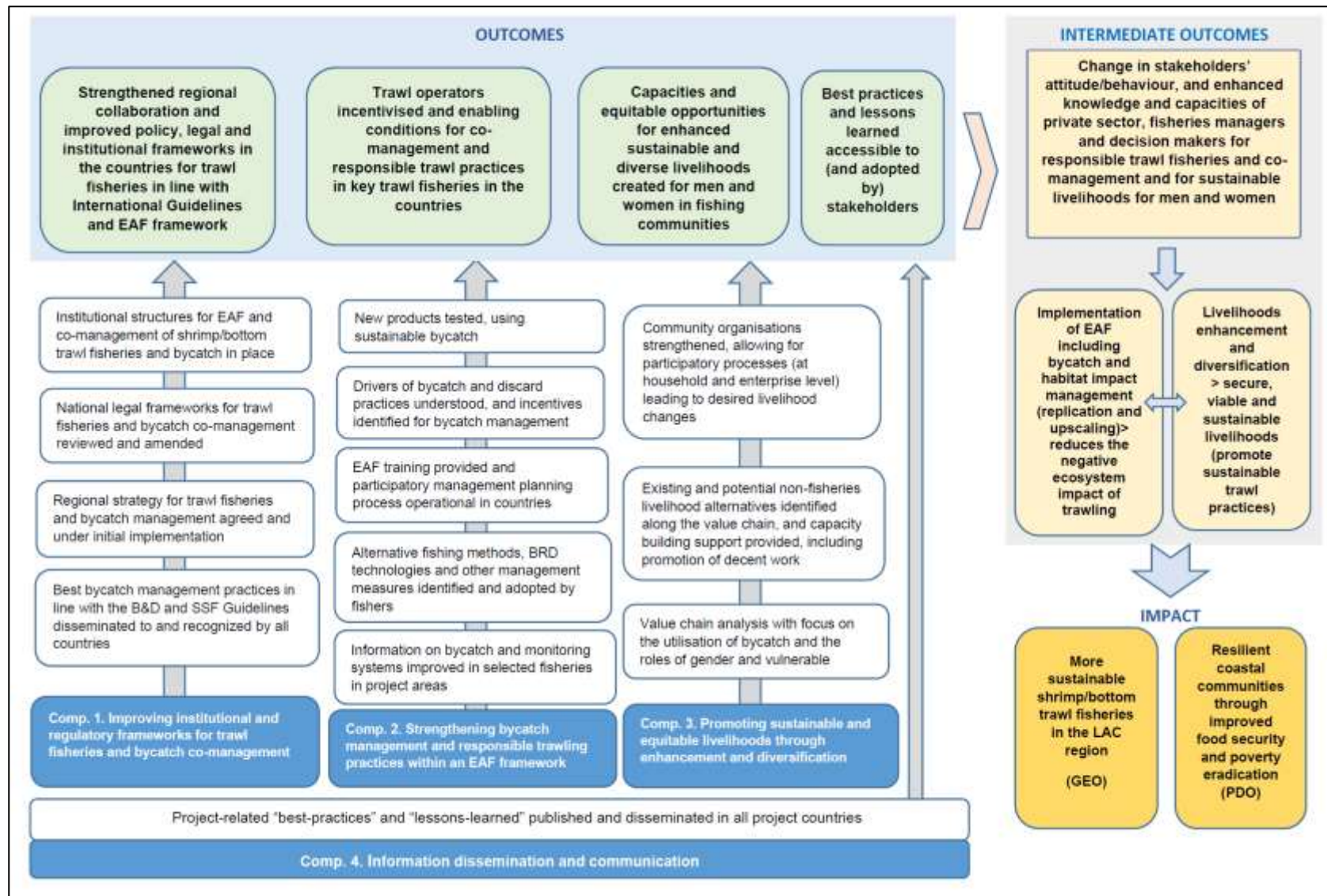
2. Background and context of the project

2.1 Theory of change

16. The REBYC-II LAC project addresses the major barriers to better regional management of bycatch and, thus, supports the sustainable development of the trawl sub-sector and the people who depend on and are affected by it, including other fisheries. This includes: i) ensuring that enabling institutional and regulatory frameworks are in place; ii) encouraging effective management of bycatch through improved information and technology, participatory approaches and appropriate incentives; and iii) supporting enhanced and equitable livelihoods.
17. The project's theory of change is illustrated in Figure 1. Underpinning the project's Global Environment Objective (GEO) is the recognition of the threat of unsustainable trawl practices (resulting in high quantities of bycatch and discards as well as physical damage to marine habitats) to the health of marine ecosystems and biodiversity, and in turn, to the sustainability of fisheries resources that support the trawl sub-sector and dependent livelihoods. The Global Development Objective (GDO) is linked to the GEO by the premise that the environmental benefits generated by the project will form the basis of livelihood enhancement and diversification and contribute to food security and poverty eradication. Furthermore, by securing livelihoods, the responsible trawling practices the project has introduced are more likely to be maintained and contribute to environmental sustainability.
18. While the project aims to reduce the capture of bycatch and to control destructive fishing practices through technical and management measures, it was recognized that gear restrictions alone would not be sufficient to achieve sustainable trawl fisheries. Therefore, REBYC-II LAC adopted a more holistic approach consistent with FAO's Code of Conduct for Responsible Fisheries (CCRF) and its principles. A practical way to fully implement the CCRF is the Ecosystem Approach to Fisheries (EAF), a management planning process that incorporates the principles of sustainable development, including the human and social elements of sustainability, not just the ecological and environmental elements.⁵ The project incorporates these key elements in its GEO and GDO, which it aims to achieve through its three mutually supportive components (see the main regional evaluation report for an in-depth presentation of the theory of change).

⁵ FAO EAFnet: <http://www.fao.org/fishery/eaf-net/en>

Figure 1. REBYC-II LAC project: draft theory of change



3. Evaluation questions: key findings

Relevance: To what extent is the project relevant to countries' priorities and GEF and FAO priorities, strategic objectives and programmes?

Effectiveness: To what extent has the project contributed to the achievement of stated environmental and developmental objectives? Were the results achieved as expected and were there any unintended results?

Efficiency: To what extent has the project been implemented efficiently and cost effectively?

Sustainability: What is the likelihood of the project results continuing to be useful or remaining after the end of the project?

Monitoring and evaluation (M&E): Was the M&E plan practical and sufficient? Did the M&E system operate per the M&E plan? Was information gathered in a systematic manner, using appropriate methodologies? Was the information from the M&E system appropriately used to make timely decisions and foster learning during project implementation?

Stakeholder engagement: To what extent were other actors, such as civil-society groups, indigenous populations, local communities and the private sector, involved in project design or implementation and what was the effect on the project's results?

3.1 Relevance

To what extent is the project relevant to countries' priorities and GEF and FAO priorities, strategic objectives and programmes?

Finding 1. The EAF approach used by the project has proved essential for fisheries management in Mexico, generating new information on drag reduction, product processing, market opportunities, marine environment protection and the well-being those in the fisheries sector.

Finding 2. The project's approach enabled the identification of informational, legal and administrative gaps in shrimp/bottom-trawl fisheries management in Mexico.

Finding 3. The regional project opened up the possibility of accessing and exchanging information and knowledge between participants in different Latin American countries.

19. The project used an EAF approach, which proved essential in the case of Mexico, because of the information it generated on drag reduction, product processing, market opportunities, marine environment protection and the wellbeing of those in fishing communities. This knowledge base was crucial when it came to monitoring and mitigating potential damage and taking advantage of the bycatch produced by shrimp/bottom-trawl fisheries in the Bay of Campeche and the Gulf of Mexico more broadly. For instance, the collected data showed the ratio of shrimp to bycatch to be 1:2.3, around 20 percent less than in the prevailing literature. In addition, the project showed that the species contained in the bycatch had commercial value and were a potential resource that should be appropriately managed.

20. The project approach enabled the identification of informational, legal and administrative gaps in the country's fisheries management. For instance, "accompanying fauna" and "bycatch" terms are used ambiguously in Mexico's official fishery statistics databases, such as the Fisheries and

Aquaculture Information System. The project also noted trawl fishing activity in high-biodiversity zones, where such fisheries are restricted by Mexican regulations (NOM-002-SAG/PESC-2013).

21. The United States of America's most recent embargo on Mexican shrimp went into effect in April 2021, highlighting the inadequate use of sea turtle excluder devices (TEDs) by the country's fleets. To mitigate the socioeconomic impact, Campeche shrimp producers responded by selling the shrimp stocks to the domestic market, demanding that the Mexican authorities better monitor the correct use of TEDs in the open sea. In this respect, the project's observational information proved helpful, as it proved no sea turtles and marine mammals were being captured by the local shrimp/bottom-trawler fleet.
22. The fact that the REBYC-II LAC project is regional opened up the possibility of accessing and exchanging information and knowledge by participants from different Latin American countries. Even though discrepancies in fishing regulations between nations have prevented an in-depth discussion on the regional management of shrimp/bottom-trawl fisheries, for the interviewees, it was an important opportunity to know what was happening in other regions facing similar socioecological challenges. The decision made by other countries to prohibit bottom trawling is an undesirable scenario in Mexico, but the certification processes for shrimp fishing operations were particularly informative for Mexican stakeholders.
23. The overall relevance of the project was highly satisfactory (Appendix 2).

3.2 Effectiveness

To what extent has the project contributed to the achievement of stated environmental and developmental objectives? Were the results achieved as expected and were there any unintended results?

24. The results of the Mexico country study are presented by project component. Their contribution to environmental and social project objectives, along with those of the other countries and regional components, can be found in the regional evaluation report.

Component 1: Improving institutional and regulatory frameworks for shrimp/bottom-trawl fisheries and co-management

Finding 4. The pink shrimp consultative committee in Campeche was launched and is now operational, with an annual workplan. The project's co-management exercise also had a positive unintended result: it was successfully used to implement other consultative committees for shrimp fisheries in the Gulf of Mexico.

25. One key achievement of the project was the consolidation of co-management consultative management committees. The project approach enabled cooperation and collaboration with and between stakeholders, thanks to a methodology focused on gathering knowledge and enabling dialogue – the best way to build participatory management mechanisms in fisheries. Thus, to implement the Gulf of Mexico shrimp fishery management plans, the project established the consultative committees on pink shrimp fisheries in Campeche and brown (*Farfantepenaeus aztecus*) and white shrimp (*Litopenaeus setiferus*) fisheries in Tamaulipas and Veracruz. These teams of consultants and collaborators (representatives of fishers, the fishing industry, academia, research institutions and government agencies) participated in project workshops, where they set out priorities and actions for the coming years. The pink shrimp consultative committee in Campeche remains operational, is regulated, has an annual workplan and meets regularly.

Component 2: Strengthening bycatch management and responsible trawling practices within an EAF framework.

Finding 5. The project successfully tested the prototype gear and its technical advantages for sustainable shrimp/bottom-trawl fisheries in the Bay of Campeche. Still, it couldn't persuade local social actors of the convenience of adopting this particular type of fishing net.

Finding 6. The EAF-based onboard observer programme was an important achievement, as it enabled an update of biological data collection and baselines for shrimp fisheries in Mexico and incorporated spatio-temporal bycatch monitoring, integrating it into national database systems.

26. The prototype gear performed better than current trawl nets in the four pilots, with bycatch reductions of 19–46 percent, better shrimp quality (larger size), longer net usage and fuel savings of up to 38 percent. However, shipowners and fishers remain sceptical, as there were only a few pilots and there were technical differences between testing trips. What's more, they are convinced of the effectiveness of the current trawl nets that they have empirically adapted to their specific needs over many years. In addition, they believe that the technological change will negatively affect the use of bycatch for income and food security in fishing communities.
27. Among other things, the project's onboard observer programme enabled the creation of a species identification guide, comprising 321 species from 182 genera. Thanks to the EAF approach used in this work, INAPESCA was able to update its biological data-collection systems for shrimp fisheries, incorporating bycatch monitoring and integrating them into the national database system. The Data Collection System for Marine Shrimp Fisheries in the Gulf of Mexico consists of an identification guide, an observers manual (edited by the Institute of Ecology, Fisheries and Oceanography of the Gulf of Mexico (EPOMEX) and INAPESCA) and a database that provides a spatio-temporal baseline on the abundance, distribution and composition of bycatch. This baseline and its ecological and spatio-temporal indices were a pivotal project achievement, as INAPESCA, even though it already had shrimp databases, did not have a data-collection protocol to systematically develop a bycatch database.
28. The project facilitated the training of stakeholders and government officials in a series of national workshops and courses aimed at building the capacity to implement an EAF. Three of the events in which Mexican stakeholders participated, for example, were: 1) a hands-on training course provided by the United States National Oceanic and Atmospheric Administration at its Marine Lab in Mississippi; 2) a South–South collaboration between INVEMAR and INCOPECA on fishery information systems and stock assessment; and (3) an EAF training course organized by the World Wildlife Fund. Participants in EEP courses replicated the training teaching fishers and local authorities in Campeche.

Component 3: Promoting sustainable and equitable livelihoods through enhancement and diversification.

Finding 7. The project developed value-added products using discarded catch and created local capacity for their processing and preparation.

Finding 8. The project conducted a first analysis of the socioeconomic impacts of bycatch. It was determined that fishing crews were the primary beneficiary of bycatch, but with marginal economic benefit.

Finding 9. The semi-industrial trawling fleet and small-scale fishers in the Bay of Campeche interact in common fishing areas on specific, but important fishing resources.

29. Because the reduction of bycatch alone does not bring about an improvement in fishers' livelihoods in the short term, the project created four value-added products (fish pulp, sausages, aquaculture feed and octopus bait) using discards and bycatch. These technological accomplishments still require certification, but provide an opportunity for trawl fishers to add value to sustainable bycatch. For instance, the octopus bait comes from natural crustacean

populations – such as *Menippe mercenaria* (the Florida stone crab), *Libinia dubia* (the longnose spider crab) and *Callinectes spp.* (such as the blue crab) – which compromise the sustainability of this artisanal fishery. In addition, the project built capacity to restore technological infrastructure and training as food technicians for students and teachers at vocational and technical schools. The state government certified lecturers, support personal of the Centro de Estudios Tecnológicos del Mar (CETMAR) and stakeholders to teach workshops on food safety and fish processing products. Five students won a state prize for food technology, by developing an artisanal chorizo made with bycatch fish species.

30. The project conducted an initial foray into the socioeconomic impacts of bycatch (FAO, GEF and INAPESCA, 2019), undertaking study to specifically evaluate the socioeconomic value of the bycatch used by fishers and to record the entire value chain of shrimp/bottom-trawl fishery in Campeche, including fishers' socioeconomic conditions and women's roles. Fishing crews were found to be the primary beneficiaries of bycatch, consuming some species (such as fish, squid, blue crab and small sharks) themselves or selling them on local markets, although with marginal economic profit.
31. Another pioneering study aimed to understand the spatio-temporal interactions between the semi-industrial trawl fleet and small-scale fishers in the Bay of Campeche (Caballero-Chávez et al., 2021). The project identified six species caught by both fleets in common fishing areas, although trawler bycatch generally comprised smaller specimens.

Component 4: Monitoring, evaluation, and information dissemination and communication.

Finding 10. The project helped to enhance awareness of bycatch management, seeking ways to disseminate information and lessons learned. However, effective communication to promote social participation will take more time and may have started too late in the project timeframe.

32. The project monitoring system is working and systematically providing information on the progress of results and products in Mexico.
33. The project helped to enhance awareness of bycatch management by seeking ways to disseminate information and lessons learned. Project websites were created to share information among partners (as a forum for questions/answers, information-sharing sessions, podcasts) and a communications campaign was developed using publications in local informative media, interviews, conference by experts, webinars, podcasts and a video. This dissemination strategy was strongly implemented at the end of the project, when the results were conclusive, but impeding effective communication to promote social involvement within the project timeframe.
34. The overall assessment of the project was highly satisfactory (Appendix 2).

3.3 Efficiency and factors affecting performance

To what extent has the project been implemented efficiently and cost effectively?

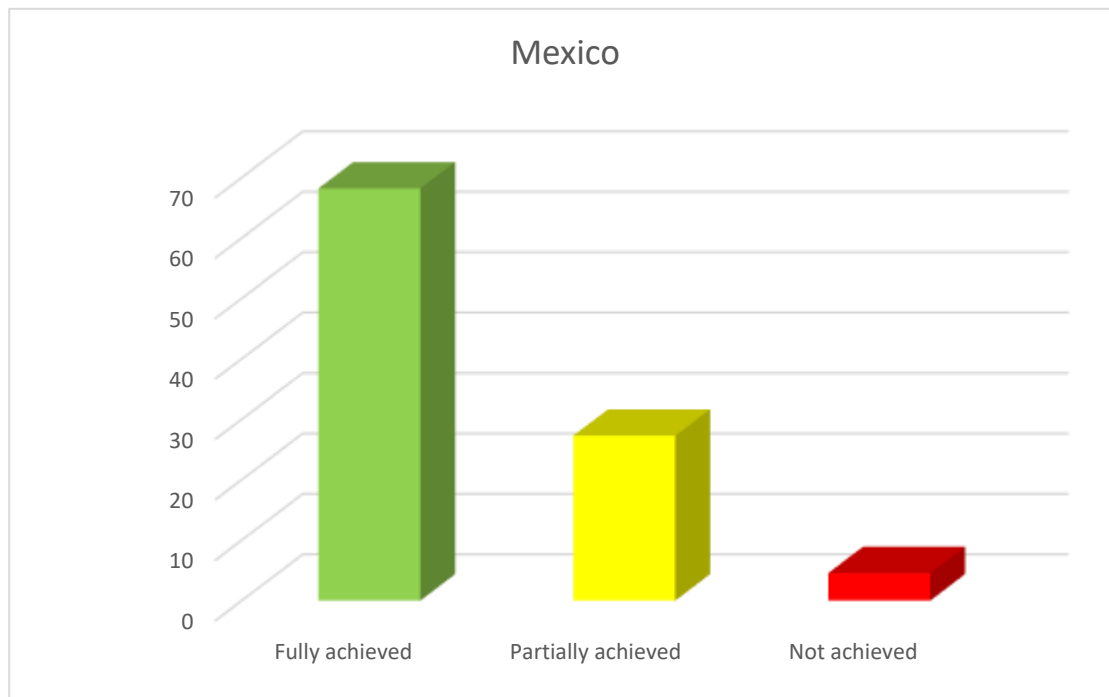
Finding 11. Project implementation in Mexico successfully adapted to changing conditions for the most part. Risks were managed according to needs, while administrative gaps and financial shortfalls were resolved by changes to regional administration and efficient stakeholder communication.

Finding 12. The adverse situation created by the COVID-19 pandemic caused meetings and workshops to be delayed and suspended, so the training of fishers and their families was not achieved, leading to low women's participation. These circumstances prompted a rescheduling of project closure.

35. The project was implemented efficiently, taking into account the administrative, political and pandemic-related challenges. All outputs in project component 4 were completed in full, while components 1, 2 and 3 were almost completed.
36. At the beginning of the project, the FAO administrative processes involved in issuing the letter of agreement and funding transfer to INAPESCA (FAO's main partner) were quite long, causing delays. Difficulties with administrative and financial issues (for example, technical barriers to trade and various national standards) were resolved through regional administrative adjustments, most notably, incorporating FAO's national offices in Mexico into the project's administration team. Other administrative issues related to domestic bureaucracy (such as local invoicing and trademark registration) and a lack of local specialized service providers were resolved through effective communication.
37. Project implementation adapted successfully to changing Mexican public policy (due to changes in state authorities, for instance). Partnering with institutional stakeholders on the ground was efficiently addressed by the national working group. Thanks to this inter-institutional collaboration, local, regional and national institutions lent technical capacity support. INAPESCA and academic institutions (such as EPOMEX, CETMAR and Marista University) carried out technical studies, while the National Programme on the Use of Tuna, the Protection of Dolphins and Other Related Protected Aquatic Species (FIDEMAR) was responsible for training. The institutional arrangements, whereby INAPESCA led on execution with the support of the National Commission for Fisheries and Aquaculture (CONAPESCA), were highly successful. Despite this fruitful collaboration, however, the proposed normative project reviews (for example, of the closed period for shrimp fishing in the Gulf of Mexico, the technology transfer and the mandatory use of BRD) were delayed due to a reshuffle of the officials responsible for fishery matters.
38. Only one Component 2 target was not achieved (see Figure 2). This related to the prototype net used by the large-scale fishing fleet at the pilot site with the goal of reducing bycatch by 20 percent. The results of the first three cruise reports did not meet project objectives. According to the technical expert's report (February 2019), the number of completed hauls per modification proved too low, while the experimental variations between them was so high that little confidence could be placed in the results. This prompted the technical expert to declare the results of all three cruises "preliminary". The key issue hampering the achievement of project targets was a disagreement among vessel crews and technicians on fishing locations and the gear to be tested. To overcome these issues, a fourth cruise was conducted, providing payment to captain and crew. This approach gave INAPESCA complete control over the design of the experiment, including fishing location, the gear used and replicates per treatment. The results of the last testing trip were a success, providing technical evidence, but in the stakeholders' opinion, the overall experiment was insufficient to promote the adoption of the net prototype.
39. The adverse situation created by the COVID-19 pandemic in Mexico caused the delay or cancellation of meetings and workshops, resulting in a rescheduling of project closure. COVID-19 negatively affected the final project activities, particularly those associated with components 1 and 3. Meetings on potential changes in national laws and regulations were postponed and consultative management committee sessions were affected by limited stakeholder access to online technology. The installation of infrastructure, maintenance and administrative processes related to the use of discards and bycatch in value-added products suffered delays due to a lack of spare parts and the temporary closure of government offices. In addition, the training of fishers and their families was not completed due to COVID-19, lowering women's participation in the project. A third equipment testing trip was also delayed due to COVID-19.

40. Overall, the quality of project implementation and adaptive management was highly satisfactory, while the overall quality of M&E was satisfactory (Appendix 2).

Figure 2. Progress on achieving project targets (December 2020)



Source: Project's Monitoring Matrix.

3.4 Sustainability

What is the likelihood of the project results continuing to be useful or remaining after the end of the project?

Finding 13. The project's EAF capacity building, including the establishment of the consultative management committees and their collaborative work, will be essential to pursuing the longer-term, sustainable management objectives of Mexico's pink shrimp management plan.

Finding 14. The continuity of project outputs could prove challenging, according to interviewees, as the government budget does not typically cover such items and some of the planned adjustments to legal frameworks have not materialized as yet. However, solid capacity and participatory processes can prolong project results.

41. Mexico already had a solid institutional framework to support the sustainable management of the shrimp trawling fleet. The collaborative work of the national working group and consultative management committee established during the project will be essential to pursuing the long-term, sustainable objectives of the pink shrimp management plan. The project developed actions to improve capacity building (for example, EAF courses for employees of state authorities and shipowners and training for onboard observers, food technicians and teachers at vocational and technical schools) and stakeholder engagement, sharing the results among social actors (for example, seafood tasting sessions) and through the dissemination of advances and findings. Involving the academic sector will also be crucial to developing new instruments of public policies, such as those oriented to attending informational, legal and administrative gaps in shrimp/bottom-trawl fisheries management in Mexico.
42. The interviewees cited potential complications threatening the continuity of research activities not commonly covered by government budgets (Appendix 5), such as gear testing trips and the

onboard observers programme. Fishing-net adaptation is a major concern because of declining government capacity to develop new fishing technologies. Thus, although INAPESCA wants to continue investigating and facilitating the use of new gear and shipowners are being encouraged to continue testing alternatives, it is necessary to look to other institutional capacities to overcome governmental economic limitations. Fisher engagement and ecosystem proposals from the academy will be vital to ensuring the adoption of bycatch reduction devices (BRDs).

43. Another challenge is ensuring the continuity of the information collection system through the onboard observer programme, which is essential for monitoring bycatch and potential future eco-certification processes. Although the stakeholders are enthusiastic about the onboard observer programme, it would appear hard to maintain without continued governmental funding. INAPESCA suggested that onboard observer data gathering was likely to continue thanks to government financing after the project ends. However, this bycatch data-collection system is likely to be limited to the investigation cruises undertaken during the closed period for shrimp fishing.
44. Overall sustainability is moderately likely (Appendix 2).

3.5 Factors affecting performance

3.5.1 Monitoring and evaluation (M&E design)

Was the M&E plan practical and sufficient? Did the M&E system operate per the M&E plan? Was information gathered in a systematic manner, using appropriate methodologies? Was the information from the M&E system appropriately used to make timely decisions and foster learning during project implementation?

Finding 15. The project carried out almost everything to which it committed. Decisions were taken in a complex environment to correct adverse situations with regard to finance, social involvement and the dissemination of advances and findings.

45. M&E results were effectively used for adaptative management to improve project performance. It is important to emphasize that the last part of the project was implemented in an adverse environment. To overcome the negative situation caused by the COVID-19 crisis, the project adjusted its stated outputs without compromising the achievement of its general objectives, for example, by conducting an unscheduled fourth gear testing trip (component 2/output 2.1.2).
46. The MTE found that project-level monitoring and reporting had been carried out appropriately and in a timely way, for the most part, supporting project implementation. At national level, the MTE recommended fostering concrete actions that would have made the project more sustainable. The project tried to align to them as agreed in the Management Response.
47. The MTE also recommended that the project coordination and country-level partners generate knowledge management products to reach stakeholders at different levels. During the final period of the project, this crucial part of the social engagement processes began to increase the number of meetings with social actors and to systematically disseminate advances and findings, mainly through the project's web page.

3.5.2 Stakeholder engagement

To what extent were other actors, such as civil-society organizations, indigenous populations or local communities and the private sector, involved in project design or implementation and what was the effect on the project's results?

Finding 16. The national working group and the co-management consultative management committee were key to involving local social actors, as well as to resolving the challenges that came with administrative changes in the state and federal governments.

Finding 17. Stakeholder engagement and collaboration in the Gulf of Mexico were complicated by the complex environmental and socioeconomic situation of the shrimp/bottom-trawl sector (the status of the shrimp stock, governmental subsidies and COVID-19, for instance).

48. The regional project opened up the possibility of accessing and exchanging information and knowledge among participants. Shipowners in the Altamar shrimp production system in the state of Campeche were enthusiastic to learn about fishing techniques in other Latin American countries. National and state authorities and academics also had the opportunity to share knowledge, perceptions and perspectives with colleagues from other sectors. The participation of various stakeholders and non-state actors was encouraged right from the project design stage in the national working group. Later, they became part of the consultative management committees that gave the project continuity and resolved many of the challenges arising from administrative changes at state and federal level. This collaboration was effective because it met with regular frequency. Project progress was discussed in meetings and workshops, with results and problem-solving decisions disseminated immediately afterwards.

49. Participation was successful among most of the social actors. However, stakeholder engagement is currently complicated by the adverse environmental and socioeconomic situation in Mexico's shrimp/bottom-trawl fisheries. This is partly down to a decline in shrimp stock fishing and a reduction in fishery subsidy programmes and partly due to COVID-19, which has limited access to international markets. Shipowners had expected the project to focus solely on fishing-net adaptations for the introduction of BRDs, or even on new restrictions, such as the obligatory use of the BRDs. This perception remained, despite all of the seminars, workshops and meetings with the committee to explain all the aspects of the project. Some local actors seemed disappointed that their suggestions and opinions were not included in the cruise reports. More comprehensive social involvement will take time, as the shipowners and fishers are not entirely convinced and are reluctant to implement new standards.

50. Overall, the quality of stakeholder engagement was satisfactory (Appendix 2).

3.5.3 Gender issues

To what extent were gender considerations incorporated into the design and implementation of the project? Was the project implemented in a manner that ensured gender-equitable participation and benefits, as well as women's empowerment?

Finding 18. The participation of women in processing bycatch was low, as the COVID-19 pandemic stopped project activities targeting women.

51. Supplying bycatch-related products was designed to increase the inclusion of women in the processing of bycatch and women participated in some workshops on using bycatch to produce high-quality food. However, these processes were halted by the COVID-19 pandemic and its restrictions on mobility and meetings.

4. Conclusions and country-specific recommendations

4.1 Conclusions and lessons learned

Conclusion 1. The project's participatory and ecosystem approach is of pivotal importance for the long-term sustainable development of shrimp/bottom-trawl fisheries in Mexico, especially as stakeholder engagement remains a major challenge in the Bay of Campeche.

52. The project positively influenced the current Mexican government's view on the sustainable management of shrimp/bottom-trawl fisheries (**Relevance/Findings 1-3**). It now clearly aims to mitigate the environmental impacts of the sector and improve the wellbeing of fishing communities. For instance, the EAF monitoring of the local shrimp/bottom-trawler fleet could help provide evidence of sustainable management, just as it showed the effects of the recent embargo by the United States of America on Mexican shrimp.
53. The project is part of complex political, economic and cultural processes, but its results are part of a new way of engaging social actors in key decisions about fisheries management in Mexico (**Stakeholder engagement/Finding 16-17**). The pink shrimp consultative management committee showed the viability and potential of fostering co-managerial approaches (**Effectiveness/Finding 4**). Thus, this first assessment of Campeche shrimp fleet bycatch and its socioeconomic importance, social indicators, uses, income and benefits provided stakeholders and government with a robust understanding of the fishing sector and the roles and issues faced by women, in particular.
54. The bottom-up participatory approach the project promoted was key to proving the importance of collaboration as a fundamental element of adapting to political change and improving governance processes. In this sense, the national working group and pink shrimp consultative management committee in Campeche set up by the project have created a roadmap for the implementation of other fisheries co-management plans in Mexico. Project management, focused on building a participatory process for all stakeholders, was also crucial.
55. The project achieved most of its goals in Mexico but, above all, it sparked the current government's views on the sustainable development of shrimp/bottom-trawl fisheries by mitigating their environmental impacts and improving the wellbeing of fishers and their families. The project's capacity-building elements enabled the consolidation of existing tools (such as the consultative management committee and onboard observers programme) and new EAF ones (such as value-added products and the spatio-temporal baseline) (**Effectiveness/Findings 5-10**). An important achievement of the project is the bycatch data-collection system designed by INAPESCA.
56. The project was efficiently implemented and co-financing was successful, surpassing expectations from federal and state government institutions, academia, the trawl fisheries sector and a CSO.

Conclusion 2. Effective dialogue is crucial to promoting stakeholder engagement to reduce the negative ecosystem impact and achieve more sustainable shrimp/bottom-trawl fisheries in the Bay of Campeche. Implementing fishing-net adaptations with a view to introducing BRDs remains a key medium-term challenge that should be followed up with consensus-building by the Mexican authorities, the fishing sector and academic institutions.

57. The technological innovation study offered the fisheries sector the opportunity to reduce its operating costs, scale back its habitat impact and improve its catch size through intrinsic knock-on effects on fish health (**Effectiveness/Finding 5**). However, more time, dialogue and pilots are

needed before the new measures will be accepted by shrimp/bottom trawlers (**Sustainability/Findings 13-14**). Shipowners are constantly modifying their gear and testing their own prototypes (Márquez-Narváez, 2021). Therefore, to successfully implement the BRD, it will be necessary to embark on another phase of study that tests BRDs in commercial fishing conditions along with other types of equipment. For instance, INAPESCA is currently implementing a technology transfer phase testing BRDs using commercial fishing trips. This shipowner proposal chimes with that of the MTE on the need to include other shrimp-catching gear in order to estimate sustainable carrying capacity. For instance, the installation of fisheye bycatch excluders could be an immediate and low-cost technical change to the shrimp trawl nets of the Gulf of Mexico. Government institutions should forge alliances with academic institutions that have technological experts with a view to future studies and capacity goals.

Conclusion 3. Improving bycatch use to reduce discards may be feasible, as suitable technology and protocols have been developed and the products that are likely to see the highest market demand and prices have been identified.

58. Value-added bycatch products can bring about a substantial improvement in fishing community livelihoods and regional food security, increasing the availability of high-quality food and generating jobs, particularly for women in the value chain (**Effectiveness/Finding 7**). The project identified those shipowners already innovating in the shrimp/bottom-trawl fisheries sector in Mexico in an attempt to access new markets (such as e-markets for fish products), which may, therefore, be interested in implementing the project's food-processing technology and protocols.

4.2 Country-specific recommendations

Recommendation 1. To INAPESCA, CONAPESCA and the private sector): Improve legal and institutional frameworks (**Conclusion 1/Finding 2**). The possibility of assigning appropriate economic and technical incentives to private sector should be shortly explored (for example, training, voluntary adoption and the donation of Spectra® nets). Regulations on fisheries management should be updated in the medium term to include fishing-net adaptations for the introduction of BRDs and the bycatch species (such as finfish) that shipowners can use to produce value-added products. Another normative suggestion to consider in the medium term is the inclusion of new restricted areas (such as the mouths of coastal lagoons).

Recommendation 2. To INAPESCA, CONAPESCA and the private sector): Monitor bycatch and improve surveillance (**Conclusion 1/Finding 10**). It is essential to identify changes in the bycatch on a regular basis, consolidating and optimizing long-term planning strategies, such as integrating a comprehensive EAF baseline using the ecological, socioeconomic and spatio-temporal indicators that emerged from the project. A monitoring strategy will be key to persuading stakeholders to participate in any eco-certification process in the medium term. The onboard observer programme could take place every two or three years on commercial fishing trips to minimize expense. The adaptation of fishers and fish workers along the trawl fisheries value chain to new capture technologies could take several years, so governmental enforcement programmes should consider a phased approach with intermediate goals. INAPESCA should also systematically monitor the use of fishing zones and resources by different fleets, and future projects could involve small-scale fisheries to evaluate and address their bycatch reduction.

Recommendation 3. To INAPESCA, state governments, the private sector and academia): Encourage the sustainable use of bycatch (**Conclusions 2-3**). Thanks to the project, academic centres and institutes have already identified priority research themes (such as good onboard handling practices) that provide valuable information to stakeholders. Similarly, the evaluation team would recommend securing financing to continue research into the potential commercial use of the most abundant bycatch species, such as *Synodus foetens* (the inshore lizardfish). Again, greater consideration should be given to improving the

level of fisher buy-in to managing bycatch using new technologies. For example, the publication of food-processing guides (such as a guide to obtaining fish meat from the *Synodontidae* (lizardfish) and *Lutjanidae* (snapper) families through industrial processes) will be crucial to developing a technological and knowledge transfer strategy. It is also essential to give continuity to the CETMAR students who could use their training to establish family businesses in the food industry, despite their adverse economic situation.

Recommendation 4. To FAO for future similar projects, INAPESCA and other partners): Develop EAF management research lines (**Conclusions 1-3**). To meet emerging needs in shrimp/bottom-trawl fisheries, it would be useful to strengthen alliances with academic institutions and to take advantage of their strengths and expertise in different subjects. Suggested research lines are:

- i. social vulnerability, analysing women's crucial role in the Campeche shrimp fishing industry and the challenge of attracting young crew to local fisheries
- ii. the economic profitability of the shrimp/bottom-trawl fishing fleet
- iii. eco-certification to maintain access to the international market
- iv. the development of technological systems for locating and removing lost fishing gear from the sea

Recommendation 5. To FAO sub-regional and regional offices): FAO should foster the participation of its Country Offices in harmonizing financing, administrative and operational mechanisms to create more efficient regional projects (**Finding 11**). The participation of FAO Mexico should be encouraged to step up the efficiency of financing, administrative and operational mechanisms in project implementation and to harmonize administrative issues on the various levels at which it operates. Future projects could also benefit from better-defined roles for the various decision-making participants.

Recommendation 6. To the FAO Sub-regional Office for the Caribbean, relevant Country Offices and GEF project formulators): The project's EAF approach and methodology were successful and may be adopted for future regional initiatives (**Finding 11,15**). However, the approach should be promoted to the private sector right from the project formulation stage and include continuous communication to demonstrate the benefits and usefulness of EAF, report on progress and discuss potential actions. Suggestions to encourage stakeholder engagement include:

- i. streamlining project design based on initial assessments
- ii. implementing courses during the shrimp ban to facilitate the fisher participation
- iii. designing a dissemination strategy from the outset that ensures greater awareness among stakeholders.

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Appendix 1. People interviewed

Last name	First name	Organization	Role
Aguilar Ramirez	Daniel	INAPESCA	Federal government
Benítez	Eduardo	REBYC-II LAC – Contact	FAO project staff
Ceballos Fuentes	César	Sistema-Producto Camarón de Altamar del estado de Campeche A.C.	Ship owner
Cevallos Fuentes	Laureano	Sistema-Producto Camarón de Altamar del estado de Campeche A.C.	Ship owner
Chávez Amparan	Ramón	INAPESCA	Federal government
de Jesús Dosal Cruz	José	CONAPESCA	Federal government
Ehuan Moo	Jorge Luis	Barco experimental	Captain
Fuentevilla Finny	Carlos	REBYC-II LAC – Project coordination	FAO project staff
González Espinola	Sergio	Sistema-Producto Camarón de Altamar del estado de Campeche A.C.	Ship owner
Hernández Flores	Álvaro	Marista University	Academy
Ituarte	Alicia	REBYC-II LAC – Contact	FAO project staff
Márquez	Jordy	Sistema-Producto Camarón de Altamar del estado de Campeche A.C.	Ship owner
Moure Peña	Maya	REBYC-II LAC – Regional coordination	FAO project staff
Palomo Duarte	Ana María	CONAPESCA	Federal government
Pensamiento Villarauz	Saúl	INAPESCA – CRIAP Lerma/Former Planning Director of the Fisheries Secretariat of the State Government of Campeche	Federal government
Quiroga Brahms	Cecilia	REBYC-II LAC – Mexico – National coordination	FAO project staff
Ramos Miranda	Julia	EPOMEX	Academy
Rojas González	Ramón Isaac	INAPESCA/Former CRIAP – Lerma, Campeche	Federal government
Ruíz Herrera	Rafael	Sistema-Producto Camarón de Altamar del estado de Campeche A.C.	Ship owner
Sabas Flores Díaz de León	Ana Teresa	CETMAR	Academy
Sierra Mena	Pedro	CONAPESCA	Federal government
Wakida Kusunoki	Armando	INAPESCA – CRIAP Yucapelten, Yucatán	Federal government

Appendix 2. GEF ratings

To facilitate comparison with routine GEF reporting and to contribute to the GEF programme learning process (IWLear), the evaluation rated the success of the project on the GEF six-point scale system: Highly Satisfactory (HS), Satisfactory (S), Marginally Satisfactory (MS), Marginally Unsatisfactory (MU), Unsatisfactory (U) and Highly Unsatisfactory (HU). The MTE ratings for all REBYC-II LAC projects are provided by way of comparison and act as a measure of the change in performance since the MTE in June 2019.

FAO–GEF rating scheme	Rating	Summary comments ⁶
1) RELEVANCE		
Overall relevance of the project	HS	The project positively influenced the sustainable management of the trawl fisheries in Mexico
2) EFFECTIVENESS		
Overall assessment of project results	HS	Key achievements for the trawl fleet management in the Sonda de Campeche
Outcome 1.1	HS	Consultive committees established
Outcome 1.2	HS	National Working Group established
Outcome 2.1	MS	The project successfully tested the prototype gear, but no ship is currently using the new net. Capacities to implement EAF approach in Campeche
Outcome 2.2	HS	Technological package generated
Outcome 3.1	HS	Improved knowledge about the local social aspects related to bycatch and the technological development of value-added products
Outcome 4.1	HS	Enhanced awareness through a comprehensive dissemination strategy
3) EFFICIENCY, PROJECT IMPLEMENTATION & EXECUTION		
Overall quality of project implementation and adaptive management (implementing agency)	HS	Implementation successfully adapted to most of changing conditions, but COVID-19 emergence caused
Quality of execution (executing agencies)	HS	The project management, oriented to build a participatory process with all involved stakeholders was successful
Efficiency (including cost effectiveness and timeliness)	HS	Implemented efficiently considering the administrative, political, and pandemic challenges. Co-Financing was performed successfully and exceeded
4) SUSTAINABILITY		
Overall sustainability	ML	The continuity of the project's specific outputs will be challenging, but solid capacities and participatory processes can keep project's results
5) FACTORS AFFECTING PERFORMANCE (M&E and stakeholder engagement)		
Overall quality of stakeholder engagement	S	Partnering with stakeholders was efficiently addressed through the National Working Group, but there was low participation of women processing bycatch

⁶ Include hyperlink to relevant sections in the report

FAO–GEF rating scheme	Rating	Summary comments ⁶
Overall quality of M&E	S	(for each component of quality see below summary comments)
M&E design at project start-up	MS	At the beginning, administrative processes and funding transfers were quite long causing delays. The dissemination strategy started too late in the project life
M&E plan implementation	HS	Implementation of monitoring was proactive, and difficulties were resolved

Appendix 3. List of documents consulted

Project design and administrative documents

- i. Project design document
- ii. Country Reports prepared for the project design
- iii. Letters of agreement between FAO and project countries

Project outputs

- i. Socioeconomic studies
- ii. Technical reports (such as trawl surveys, studies on biodiversity)
- iii. Species identification guide for shrimp-trawl fisheries in the Bay of Campeche (*Guía de identificación de especies en la pesquería de arrastre de camarón en la sonda de campeche*)

Project M&E documents

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Appendix 4. Stakeholder questionnaire

SUSTAINABLE MANAGEMENT OF BYCATCH IN LATIN AMERICA AND CARIBBEAN TRAWL FISHERIES (REBYC-II LAC)

FINAL PROJECT EVALUATION

Stakeholder questionnaire – Reference, advisory and learning groups

The FAO Office of Evaluation (OED) is conducting the final evaluation of the REBYC-II LAC project from February -July 2021. The evaluation will assess if the project has achieved its objectives, the sustainability of the results and impacts on the longer term, identify lessons learned and provide recommendations for follow-up actions. It is important to obtain the views of stakeholders and project participants, which is the purpose of this brief questionnaire.

You may choose to remain ANONYMOUS. However, if you give your name, it will NOT be used in the evaluation report to link you with any statements you have made.

Please complete Part 1 and respond to the questions in Part 2 as relevant and return the completed questionnaire to the end of April/2021.

Thank you for your kind cooperation.

PART 1

NAME (OPTIONAL):

Occupation: Organization:

Your role and length of time in the project:

Fishing port/community (if applicable):

GO TO PART 2

PART 2

	Questions	Yes	No	Don't know	Comments
1.	Do you think bycatch management is important? Why?				
2.	Are the project design and activities adequate to support sustainable bycatch management?				
3.	Has the project changed your views about trawl bycatch?				
4.	In your opinion, what are the 3 most important achievements of the project?				
5.	Will the BRDs improve or reduce catches of target species, livelihoods and income?				
6.	Not considering the implications of the COVID-19 disease, what have been the main problems encountered in the execution of the project? Describe the most important ones.				
7.	Will the achievements make a difference on the longer term? If not, what more is needed?				
8.	Do you think the BRDs and other actions to reduce bycatch will be widely accepted by the trawl industry? Why?				
9.	Do you feel part of the project? Why?				
10.	Do you envisage the involvement of women and fishers in project activities satisfactory? If not, what do you think was the main reason(s)?				
11.	What are the lessons learned (positive or negative) from the project? Describe the most important ones.				
12.	What are your recommendations for future work considering objectives and outcomes?				
13.	Any other comments?				

Appendix 5. Answers to the stakeholder questionnaire

Appendix Table 1. The answers to stakeholder questionnaire

		Interviewer	A	B	C	D	E	F	G	H	Total
Relevance	1. Importance of the topic		1	1	1	1	1	1	1	1	8
	2. Design adequate		1	1	1	1		1	1	-1	5
Effectiveness	3. Enhancing awareness		1	-1	1	1	1		1	1	5
	4. Key achievements		1	1	1	1	1	1	1	1	8
	5. BRDs implementation		1	1	1	-1			1	-1	2
Efficiency	6. Execution of the project		1			1			1		3
Sustainability	7. Long-term achievements		1		1	1	1	1	1	1	7
	8. BRDs social acceptance		-1		-1	-1			1	-1	-3
Stakeholder engagement	9. Personal involvement		1		1	1		1	1	1	6
	10. Social involvement (General)		1		1	-1		1	-1	1	2
Knowledge	11. Lessons learned		1			1	1				3
	12. Recommendations		1		-1	1	1		1		3
	13. Others		1		-1	1	1		1		3

Yes=1; No=-1; No answer=0

Appendix 6. Co-financing

The project was co-financed successfully and INAPESCA exceeded expectations. Other co-financing contributions were made both in cash and in kind by federal and state government institutions, academia, the trawl fisheries sector and one CSO.

Co-funding was leveraged at far higher levels than expected. The government (INAPESCA) exceeded its final cash and in-kind contributions by USD 15 716 and USD 628 456, respectively. The total realized budget from all nine financing sources (USD 4 525 509) was USD 943 509 higher than forecast. Most of the co-funding was in kind (see Appendix Table 2).

Appendix Table 2. Co-financing realized as of June 2021 (USD)

Sources of co-financing ⁷	Co-financer	Type of co-financing	Amount confirmed by CEO endorsement/ approval	Actual amount realized as of 30 June 2021	Actual amount realized at mid-term or closure (as confirmed by the evaluation team)	Expected total disbursement by project end
National Government	INAPESCA, Mexico	Cash	407 000	422 716	368 551	422,716
		In kind	3 175 000	3 803 456	3 323 858	3,803,456
National Government	CONAPESCA, Mexico	Cash	–	26 335	17 214	26,335
State Government	Campeche State Government	Cash	–	24 779	8 159	24,779
University	EPOMEX/ Mexico	Cash	–	45 982	33 803	45,982
		In kind	–	17 851	12 520	17,851
Technical Institute	ITBOCA/Mexico	In kind	–	12 356	11 205	12,356
Private Sector	CANAINPESCA/CSP Camaron- Mexico	Cash	–	57 110	34 533	57,110
CSO	FIDEMAR-Mexico	Cash	–	46 888	172 569	57,110
Technical Institute	CETMAR-Lerma	Cash	–	43 167	–	43,167
University	Marist University of Mérida	Cash	–	14 647	7 387	14,647
TOTAL			3 582 000	4 515 287	3 989 799	4 525 509

⁷ Sources of co-financing may include: bilateral aid agencies, foundations, GEF agencies, local government, national government, CSOs, other multilateral agencies, the private sector and beneficiaries, among others.

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