### **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 3. Country report for Colombia** 

# **Contents**

	vledgements	
	riations and acronyms	
	ve summary	
	roduction	
2. Me	ethodology	3
2.1	Overall methodological approach	3
2.2	Data-collection methods and tools	
2.3	Evaluation matrix	4
2.4	Field visits	4
3. Ba	ckground and context of REBYC-II LAC in Colombia	5
3.1	Theory of change	6
4. Ev	aluation questions: key findings for Colombia	9
4.1	Relevance	9
4.2	Effectiveness	9
4.3	Stakeholder engagement	
4.4	Efficiency	
4.5	Factors affecting performance	
4.6	Sustainability	14
4.7	Women's participation	15
4.8	Co-financing	15
4.9	Environmental and social safeguards	16
4.10	Knowledge management	17
5. Co	nclusions and country-specific recommendations	19
5.1	Conclusions	19
5.2	Country-specific recommendations	20
6. Le	ssons learned	23
	1Ces	
	dix 1. Financial analysis	
	dix 2. Stakeholder Identification and analysis in Colombia	
	dix 3. List of documents consulted	
	dix 4. FAO-GEF evaluation criteria ratings table and scheme for Colombia	
Append	dix 5. Evaluation matrix with questions and sub-questions	51
Append	dix 6. Progress on achieving project objectives and outcomes as of 30 June 2021	56

# Figures and table

# Figures

Figure 1. Pilot sites for small-scale trawl fisheries in the Gulf of Salamanca and Iscuandé and large-scale fisheries in Buenaventura	5
Figure 2. Experimental sets with new types of fishing gear and materials in large-scale, deep-sea shrimp trawl fisheries	
Figure 3. REBYC II LAC theory of change	
Table	
Table 1. GEF rating table	xii

# **Acknowledgements**

We would like to thank all those who contributed to this evaluation, managed by Lavinia Monforte of the Office of Evaluation (OED) of the Food and Agriculture Organization of the United Nations (FAO). The evaluation team comprised evaluation team leader Sherry Heileman and three international independent subject-matter experts, Sergio Mattos from Brazil, Alejandro Espinoza from Mexico and Vladimir Puentes from Colombia. The evaluation team covered all aspects of the project in Brazil, Colombia, Costa Rica, Mexico, Surinam and Trinidad and Tobago.

The evaluation was made possible by the invaluable assistance, insight, knowledge, advice and comments of FAO personnel Maya Moure, Carlos Fuentevilla and Alejandro Florez.

It also benefited from the inputs of the national coordinator and personnel of the Marine and Coastal Research Institute "José Benito Vives de Andreis" (INVEMAR), as well as other stakeholders, including government officers, fisheries organizations, coastal communities, net makers and private-sector leaders. Their contributions were critical to the team's work and are deeply appreciated.

# **Abbreviations and acronyms**

AUNAP National Aquaculture and Fisheries Authority of Colombia

BRD Bycatch Reduction Device

EAFM Ecosystem Approach to Fisheries Management

FAO Food and Agriculture Organization of the United Nations

GEF Global Environment Facility

INVEMAR Marine and Coastal Research Institute "José Benito Vives de Andreis"

MTE Mid-term Evaluation

NGO Non-governmental organization

OED Office of Evaluation (FAO)

PIR Project Implementation Review

RFB Regional Fishery Body

REBYC-II LAC "Sustainable management of bycatch in Latin America and Caribbean trawl

fisheries" project

SWOT Strength, Weakness, Opportunity and Threat (analysis)

TAC Total Allowable Catch

UNEG United Nations Evaluation Group

# **Executive summary**

## Introduction

- This report presents a country study of Colombia as part of the terminal evaluation of the regional project on "Sustainable management of bycatch in Latin America and Caribbean trawl fisheries" (REBYC-II LAC project), GCP/RLA/201/GFF. REBYC-II LAC from FAO and GEF.
- 2. Colombia implemented the REBYC II LAC project at two pilot sites in the Colombian Caribbean (Gulf of Salamanca for small-scale fisheries and Cartagena-Gulf of Morrosquillo for large-scale fisheries) and two other sites in the Pacific Ocean (Santa Barbara de Iscuandé and Buenaventura Port), including a wide range of stakeholders. Implementation methods were broad ranging, therefore, and accomplished numerous project goals.
- 3. The main species targeted by large-scale trawling were *Litopenaeus schmitti* and *Farfantepenaeus notialis*, and by the small-scale trawling was *Xiphopenaeus kroyeri* in the Caribbean Sea; in the Pacific Ocean, main targeted species in large-scale deep-sea trawl fisheries were *Solenocera agassizii*, *Farfantepenaeus brevirostris* and *Farfantepenaeus californiensis*, while in the small-scale trawl fishery, main targeted species was *Xiphopenaeus kroyeri*.
- 4. The evaluation adhered to United Nations Evaluation Group norms and standards and to the OED Manual and methodological guidelines, adopting a consultative and transparent approach to stakeholders. It integrated GEF evaluation criteria (relevance, effectiveness, efficiency, including project implementation and execution, sustainability and factors affecting performance, among other things), including the GEF criteria using the qualification scheme (ratings) and a series of associated evaluation questions.
- 5. Data collection included mainly desk review information such as background reports and papers, annual workplans, budgets, annual project implementation review (PIRs) reports, country monitoring matrices, mid-term evaluation (MTE), technical reports, FAO reports, letters of agreements, among others. It also included semi-structured virtual interviews with the whole range of stakeholders that participated in the project, based on the evaluation matrix.
- 6. This document presents the findings of the FAO Office of Evaluation's (OED) assessment of project performance in Colombia, as well as lessons learned and recommendations for future, similar projects. These findings and recommendations also informed the overall recommendations of the regional project evaluation. No field visits were allowed due to the COVID-19 pandemic.

# **Main findings**

### Relevance

- 7. The project was highly relevant to the needs of Colombia's fishing sector. The EAFM and a comanagement system was implemented, and bycatch was addressed in the context of both sustainable fisheries and livelihood enhancement, in collaboration with different stakeholders.
- 8. Large- and small-scale trawl fisheries are socially and economically relevant in the Colombian Caribbean and Pacific Ocean. The project made possible the exchange of information and showed a participatory model fisheries management system, even for other fishing sector.
- 9. The project involved the development of fishery management plans, the creation of realistic regulation and implementation and an increase in the number of participatory institutional bodies

- for fisheries management. The shrimp fisheries are socioeconomically important as a source of employment, income and local livelihood.
- 10. Bycatch and discard management became relevant to current Colombian situation on bycatch regulations. The project offered key guidance and a framework to address bycatch issues and keep fisheries sustainable from different perspectives.

### **Effectiveness**

- 11. Results were achieved in full, and all stakeholders contributed to the achievement of environmental and development objectives.
- 12. The project was executed by the research institute INVEMAR and was co-led by fisheries authority AUNAP. This collaboration facilitated agreements among stakeholders and to strengthen the institutional arrangements.

### **Component 1**

- 13. The project compiled the legal framework for fisheries, including both large- and small-scale trawl fisheries. It delivered a National Plan to Reduce Bycatch and Discards, the National Committee for Bycatch Management, and agreement between large-scale trawl fishers and the small-scale fisherfolk, and other two resolutions are under development regarding technical issues of the new large-scale fishing gear and BRD regulation.
- 14. The project facilitated an agreement on technology transfer between Colombia (INVEMAR) and Costa Rica (INCOPESCA), strengthening the regional collaboration.
- 15. The project structure increased the potential for success, receiving acceptance and support for measures at national level; there are still work to do on small-scale fisheries, but it created a broader discussion on the conflicting regulation on small-scale trawl fisheries for which bycatch is still an issue.

### **Component 2**

- 16. Co-management arrangements were introduced for trawl fisheries, aligned with an EAFM scheme, a discard baseline was created and ways to reduce it in deep-sea shrimp trawl fisheries. In small-scale trawling operations, community awareness of bycatch and fisheries management, and enhancement of local capacity was achieved.
- 17. Fishing-gear prototypes and new BRDs were implemented for both large-scale deep-sea shrimp trawling and small-scale trawling. A participatory spatial-temporal agreement was reached in the Gulf of Tribugá, a robust monitoring system was implemented, a successful pre-assessment for Marine Stewardship Council (MSC) standard certification and fuel-consumption savings in large-scale deep-sea trawling were achieved.

# **Component 3**

- 18. Value chain of shrimp, bycatch and discards use, and trade were analyzed, including systemic vulnerabilities and the role of women. A business plan for a women's organization was developed to process trawling discards into food products.
- 19. Small-scale trawl fisheries have limited opportunities to diversify into other forms of fishing due to local conditions, although a tuna and Pacific bearded brotula fishery was presented as an alternative in the Gulf of Tribugá (Colombian Pacific). There are good chances to improve

sustainability in large-scale trawl fishery, reducing fuel consumption and CO2 emissions with a new fishing gear design.

# Stakeholder engagement

- 20. The identification of key stakeholders spanned the entire territory, including different backgrounds, from institutions to individuals. INVEMAR, AUNAP and national coordinators played a key role throughout the project.
- 21. Small-scale trawling in the Caribbean was strongly connected to Magdalena University's work there. In the Pacific Ocean, the work with World Wildlife Fund (WWF) Colombia, Conservation International Colombia, and Magdalena University. Large-scale trawling work was undertaken with vessel associations and vessel owners.

# **Efficiency and factors affecting performance**

22. Although there were some administrative issues, administrative flexibility and efforts allowed project activities to be carried out in a timely and efficient manner. Risks were managed, but pandemic limitations affected some processes.

# **Sustainability**

- 23. The project helped to issue new legislation (national plan of action Resolution 2587 of 2020; National Committee for Bycatch Management Resolutions No. 1970 of 2018 and No. 0035 of 2020; agreement between small- and large-scale trawl fisheries Resolution No. 2111 of 2017).
- 24. It was possible the get a new perspective and/or behavior among fishers, becoming interested and witnessing realistic and convenient options for sustainable fisheries management. Strong baseline results, participatory processes ensured successful long-lasting fishery agreements.

### Women's participation

25. The project contributed to women's participation and empowerment in trawling activities. Their lead in different levels of the trawling and trade sector facilitated agreements; a female-owned company was supported to produce value-added seafood products from trawl discards, developing a business plan.

### **Environmental and social safeguards**

26. Environmental concerns were addressed, such as bycatch reduction. Social issues were also addressed, especially in rural isolated pilot sites or facing indirect effects of recent bycatch legislation; stakeholders were encouraged to participate according to an EAFM. New bycatch and discard uses were introduced, where local people came to vessels for such catch. Results served as the basis for several concepts put forward by Congress and government institutions in relation to trawling and bycatch.

### **Knowledge management**

27. The project has documented all processes and organized them by letter of agreement. It produced papers, infographics, technical reports, peer-reviewed publications, etc.; Databases have been properly stored and shared with key stakeholders.

### **Conclusions**

**Conclusion 1.** The project made a significant contribution to better small- and large- scale trawling knowledge and management in the Colombian Caribbean and Pacific Ocean. Alternative solutions for sustainable management were realized in a participatory process, bringing a change in stakeholder attitudes and behavior. The project developed strong legal framework and an institutional framework for bycatch management and established a collaboration on technological transfer between countries.

**Conclusion 2.** EAFM and co-management system implementation achieved full inclusion and integration of stakeholders, giving the basis for agreements.

**Conclusion 3.** Bycatch reduction was achieved for deep-sea shrimp trawl fishing with new fishing gear design, local knowledge and a new BRD; the trawl fishery value chain, bycatch and discards was useful in looking for alternatives for bycatch and discard reduction and in implementing a business plan for discard use.

**Conclusion 4.** There are limited opportunities to switch from large- and small-scale trawl fisheries to other types of fishing, but there are good opportunities to make them more sustainable by reducing bycatch and regulating fishing practices.

**Conclusion 5.** The active and continuous participation of a wide range of stakeholders, the active participation of women, the coordinated work of INVEMAR and AUNAP, and the use fishing technologies to reduce fuel consumption and CO2 emissions enabled the project to overcome administrative issues and get Colombian fisheries moving towards sustainability.

- i. The participation of women was important to the entire project process. It featured strongly throughout, as several leaders, boat and fishing gears owners, among others, are women, taking an active role in the fisheries management process.
- ii. Although some administrative issues came up, these were resolved with INVEMAR finding ways to keep the project on track. AUNAP played a key supporting role, delivering a legal and institutional framework.

**Conclusion 6.** The targeted co-financing by national government and private institutions was achieved and even exceeded; Various publications, videos and reports issued acknowledge the project's success and can be used as basis for future initiatives to scale up a sustainable trawl fishery.

### Recommendations

**Recommendation 1.** To AUNAP, INVEMAR and other stakeholders – NGOs, academia and the private sector: Replicate the successful use of an EAFM and co-management approach in large- and small-scale fisheries subsectors.

**Recommendation 2.** To AUNAP and primary stakeholders: Develop and tailor fishing regulations to properly include and address trawl fishery needs and priorities.

**Recommendation 3.** To AUNAP and INVEMAR. Follow-up closely the approval of two regulations on fishing-gear specifications and BRD use, which are still pending.

**Recommendation 4.** To AUNAP, INVEMAR, trading authorities and related stakeholders: As new fishing gear is not produced in Colombia, it is important to acquire new materials for the new designs, so that large-scale trawlers can start to swap out their fishing equipment. The entire fleet should have the fishing equipment to get both fishery and environmental benefits and bring about long-term, and transformational change.

**Recommendation 5.** To AUNAP, INVEMAR, private-sector and related stakeholders: Ensure that vessels bring discards to port, so that women's associations (such as the "platoneras") can work on producing value-added products (such as sausages and burgers).

**Recommendation 6.** To FAO project coordinators, INVEMAR and implementing institutions: On potential future collaborations between Colombia and other countries or institutions, it is recommended the involvement of AUNAP, whose strengths complement those of INVEMAR.

**Recommendation 7.** To INVEMAR, AUNAP and related stakeholders: It is important to continue strengthening women's participation in fishery-related issues, both in future FAO initiatives and in those of other authorities in Colombia.

**Recommendation 8.** To FAO: Project designs need to consider effective administrative processes to make them easier and more efficient, and to avoid delays in implementation.

**Recommendation 9.** To INVEMAR and AUNAP: Gradually replicate the results of this project across the sector to build on the experience and lessons learned.

Table 1. GEF rating table

Criteria	MTE rating (June/2019)	Final evaluation rating – Colombia	Corresponding section of evaluation report justifying the rating
A. ASSESSMENT OF PROJE	CT RESULTS		Justifying the ruting
Overall quality of project outcomes	MS	HS	High quality of outcomes. The project reached and even exceeded country's expectations for the trawl fishery management and sustainability.
1.1. Relevance	S	HS	The project significantly contributed to develop and enhance trawl fishery activity in both large- and small-scale trawl fisheries, allowing to realize that the fishery may be sustainable.
1.2. Effectiveness	MS	HS	The Project achieved a highly satisfactory effectiveness in its general implementation and even achieved effectively a non-programmed target.
1.2.1. Delivery of outputs	S	HS	Delivery of outputs was achieved as expected An indicator of this is the achievement mark of 100 percent of fully expected outputs achieved.
<ol> <li>1.2.2. Attainment of outcomes and project objectives</li> </ol>	MS	HS	Attainment of all objectives/outcomes were achieved and even one unexpected outcome.
1.2.3. Likelihood of Impact (ROtl)	UA	HS	Excellent work between the national fisheries authority, AUNAP (government), the lead institution, INVEMAR, and participating stakeholders; legal and institutional framework was achieved, participatory experimental research was carried out with successful results on bycatch reduction, fuel consumption and CO <sub>2</sub> emissions' reduction, among others. This will keep results current and as baseline for future initiatives.
1.3. Efficiency	MS	S	Efficiency is satisfactory. Aspects such as coordination with stakeholders, administrative flexibility (INVEMAR) and coordinated work with fisheries authority are highly satisfactory. Some administrative issues generating delays were moderate.
B. PROJECT IMPLEMENTAT	ION AND EXECU	TION RATING	
<ol><li>Quality of project implementation</li></ol>	MS	HS	High quality of outcomes. The project reached and even exceeded country's expectations for the trawl fishery management and sustainability.
2.1. Project oversight	MS	HS	Project oversights not observed. Monitoring and reporting carried out accordingly and mostly in time for the project's implementation.
Quality of project execution	MS	HS	Quality of execution was excellent, despite some administrative issues.
3.2. Project management arrangements and delivery (PMU, financial management, etc)	MS	HS	Project management arrangements were highly satisfactory. Delivery has been achieved in a timely manner, although some delays were reported due to administrative issues (financial resources coming from abroad) and COVID-19 Pandemic.

Criteria	MTE rating (June/2019)	Final evaluation rating – Colombia	Corresponding section of evaluation report justifying the rating
3.3. Knowledge management and communication  C. PROCESSES AND FACTOR	U	HS	The project significantly contributed with the generation of knowledge regarding bycatch reduction, some peer-reviewed publications, reports and outreach and educative documents published Communication was highly achieved among stakeholders and through INVEMAR's web page.
	AFFECTING A		
4. Project design and readiness	MU	S	MTE did not report any shortcomings in the quality design. EAFM methodology and comanagement scheme was implemented for in the country.
<ol> <li>Project partnerships and stakeholder involvement</li> </ol>	HS	HS	Stakeholder involvement and partnerships were excellent during the project implementation.
6. Co-financing	S	HS	Co-financing in kind was achieved and even exceeded by 4.8 percent.
D. MONITORING AND EVA	LUATION (M&E)		
7. Overall quality of M&E	MS	S	
7.1. M&E Design	S	S	
7.2.M&E Plan Implementation (including financial and human resources)	MS	S	Monitoring and reporting have been carried out appropriately
E. SUSTAINABILITY OF PRO	OJECT OUTCOME	S	
8. Overall likelihood of risks to sustainability	ML	MU	Project outputs and participatory schemes makes most results sustainable in the long term.
8.1. Financial risk	ML	ML	There is always a probability that resources cannot be available to enforce the overall achievements of the project.
8.2. Socio-political risk	L	ML	Several outcomes require keeping the current political will, and there is always a political risk when government change.
8.3. Institutional risk	ML	ML	So far, the national fisheries authority has been stable since 2011, but with limited budget; There is always a risk to get changes with the change of government. However, INVEMAR's lead and institutional stability offers continuity in working with trawl fishery in the country.
8.4. Environmental risk	ML	ML	Socioeconomic and environmental risk are always present in a changing climate, that are out of the project management, and may affect the sustainability of successful results achieved.
Overall project rating	MS	HS	

# 1. Introduction

- 28. This report presents a country study of Colombia as part of the terminal evaluation of the regional project on "Sustainable management of bycatch in Latin America and Caribbean trawl fisheries" (REBYC-II LAC project), GCP/RLA/201/GFF. REBYC-II LAC is a joint initiative of the Food and Agriculture Organization of the United Nations (FAO) and the Global Environment Facility (GEF).
- 29. Colombia, one of the six countries participating in the project, implemented REBYC-II LAC activities in small-scale and industrial trawl fisheries at pilot sites in the Colombian Caribbean and Pacific Ocean. Project implementation involved a wide range of stakeholders, though more in the Pacific Ocean than the Caribbean, due to the situation in the field, logistics and/or administrative issues.
- 30. The overall context differed significantly from site to site. Implementation methods were broad ranging, therefore, and accomplished numerous project goals.
- 31. This document presents the findings of the FAO Office of Evaluation's (OED) assessment of project performance in Colombia, as well as lessons learned and recommendations for future, similar projects. These findings and recommendations also informed the overall recommendations of the regional project evaluation.

# 2. Methodology

# 2.1 Overall methodological approach

- 32. The evaluation adhered to United Nations Evaluation Group norms and standards, as well as the OED Manual and methodological guidelines and practices. It adopted a consultative and transparent approach to internal and external stakeholders throughout the evaluation process. The evaluation team based its findings on sound evidence, which it triangulated using the various methods presented in this report. The triangulation of evidence underpins its validity and analysis and supports the conclusions and recommendations of the terminal evaluation.
- 33. The evaluation methodology integrated GEF evaluation criteria (relevance, effectiveness, efficiency, including project implementation and execution, sustainability and factors affecting performance, among other things) and requirements to facilitate comparison with reports produced by the GEF and to contribute to the GEF programme selection process. The report, therefore, presents an assessment of each of the GEF criteria using the qualification scheme (ratings) and a series of associated evaluation questions. The ratings for the Colombia project component, though not mandatory, informed the overall ratings of the main evaluation report.
- 34. The evaluation was conducted in close consultation with the national project coordinator and his personnel. Primary and secondary information was collected using the data-collection methods described in Section 3.2. The combination of methods helped to garner feedback and to triangulate the information received, underpinning the validation and analysis of conclusions and recommendations.

### 2.2 Data-collection methods and tools

- 35. Primary and secondary data in response to the evaluation questions were collected using the following methods and sources:
  - i. **Desk review:** Document types reviewed included i) background reports and papers, such as the project design document and related country reports; ii) annual workplans and budgets, annual project implementation review (PIRs) reports, semi-annual project progress reports, country monitoring matrices and the mid-term evaluation (MTE) report; iii) technical reports produced by the project; iv) reports of FAO support missions; and v) letters of agreement and budgets (see Bibliography in the main evaluation report).
  - ii. **Semi-structured interviews:** In-person or remote<sup>1</sup> interviews (using protocols developed by the evaluation team) were conducted with key informants, including public- and private-sector stakeholders and participants at the regional, national and local levels. Efforts were made to ensure that a representative cross section of stakeholders was consulted. Special attention was paid to the adequate engagement of women, indigenous groups and disadvantaged groups.
  - iii. **Focus-group discussions** with project participants and stakeholders were held in person or remotely (using appropriate protocols) and included local communities involved in artisanal fisheries.

<sup>&</sup>lt;sup>1</sup> Using regular telephone and online platforms, such as Skype, Zoom, Google Meet and MS Teams.

- iv. **Direct observations** were made during field visits where possible (the COVID-19 pandemic called a halt to field visits).
- v. **Surveys** were conducted among key stakeholders not interviewed (online, or, in the case of local communities, with the assistance of national partners), based on the technical knowledge and experience of the evaluation team.

### 2.3 Evaluation matrix

36. The evaluation report is structured around key evaluation questions corresponding to the evaluation criteria. To answer the key questions, the evaluation team developed an evaluation matrix and referred to the larger regional project (see Appendix 8 of the regional evaluation report). It provides the evaluation questions, proposed indicators and main sources of information for each evaluation criterion. The key questions are broken down into sub-questions to capture specific features of project implementation at country level, taking into consideration specific features of the fisheries sector and project workplan. The evaluation matrix for Colombia is presented in Appendix 5.

### 2.4 Field visits

- 37. Decisions to make field visits during the investigation phase of the evaluation were based on consultations with the FAO focal point and national coordinators and on the COVID-19 situation in each country. In the case of Colombia, a field visit was initially planned to Buenaventura Port, home to key stakeholders in both large- and small-scale trawl fisheries.
- 38. This visit was not carried out, however, due to a surge in cases of COVID-19, which increased the risk involved. In addition, a national strike in Colombia during the time of the evaluation increased the security risk for all stakeholders involved. Semi-structured interviews (see Section 3.2) were used in the investigation phase instead.

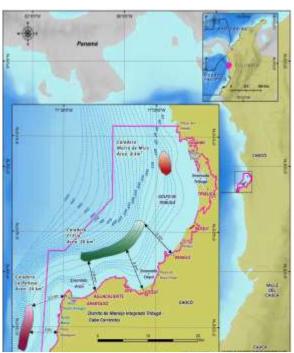
# 3. Background and context of REBYC-II LAC in Colombia

- 39. Colombia implemented the project at various pilot sites in the Colombian Caribbean Sea and Pacific Ocean, with the involvement of a wide range of stakeholders. These sites have different social, economic, environmental and institutional characteristics, from relatively isolated towns (also institutionally) connected only by sea to the rest of the country to well-developed mangrove and large river deltas, where local traditions and knowledge have been forged over generations, especially in the Pacific Ocean.
- 40. Project activities varied depending on the situation, logistics and/or administrative issues at the sites in question. On the Caribbean side, project activities focused on small-scale trawl fisheries in the Gulf of Salamanca and some elements of large-scale operations in the Gulf of Morrosquillo, with the remainder in the Port of Cartagena de Indias. On the Pacific side, the project undertook some small-scale trawl fishery activities in Santa Barbara de Iscuandé, but focused predominantly on large-scale, deep-sea trawling activities in and out of Buenaventura Port (Figure 1, Figure 2).

Figure 1. Pilot sites for small-scale trawl fisheries in the Gulf of Salamanca and Iscuandé and large-scale fisheries in Buenaventura

Figure 2. Experimental sets with new types of fishing gear and materials in large-scale, deep-sea shrimp trawl fisheries





Source: INVEMAR. Maps conform to UN. 2020. Map of Colombia.

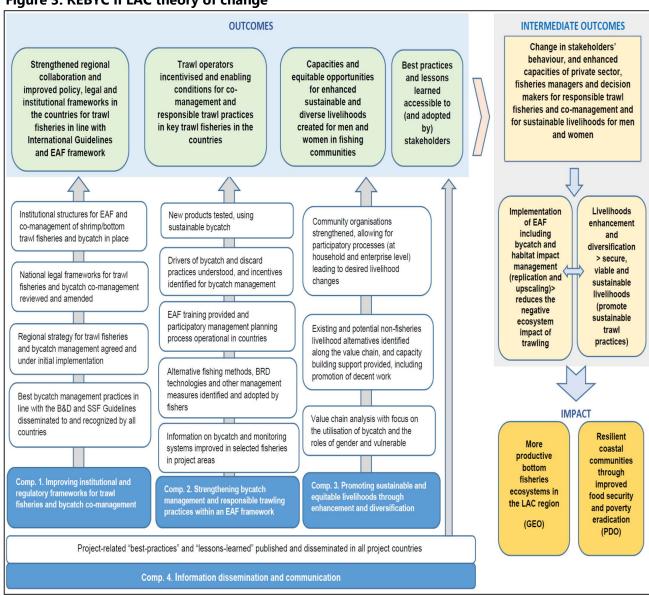
- 41. The main species targeted by large-scale trawling in the Colombia Caribbean were Litopenaeus schmitti and Farfantepenaeus notialis. The main small-scale species targeted was Xiphopenaeus kroyeri. On the Pacific side, the main species targeted in large-scale deep-sea trawl fisheries were Solenocera agassizii, Farfantepenaeusbrevirostris and Farfantepenaeus californiensis, while in the small-scale pilots, the primary target species was Xiphopenaeus kroyeri.
- 42. Regardless of desired outcome, most of the activities undertaken in Colombia were aligned with the Ecosystem Approach to Fisheries Management (EAFM) and took into account the particulars of the pilot sites and their socioeconomic, institutional and environmental complexities. Project operations benefited from institutional and political stability, including among key stakeholders

(non-governmental organizations and universities, for example) in the various regions, despite a change of government and the diversity of large- and small-scale fishery stakeholders.

# 3.1 Theory of change

- 43. The evaluation team developed a full theory of change for the regional report, which was also applied at country level, as illustrated in Figure 3. In the case of Colombia, the project aimed to reduce bycatch, introduce technical and management measures to control destructive fishing practices and apply the EAFM.
- 44. Component 1 aimed to establish the best possible and most suitable long-term governance frameworks for the country's fisheries environment. Component 2 aimed to strengthen bycatch management and responsible trawling practices, such as bycatch reduction devices (BRD) and other management measures, as much as possible under national conditions, particularly for large-scale deep-sea shrimp trawl fisheries. Component 3 promoted sustainable and equitable livelihoods through the enhancement of and diversification from trawling, which has a strong cultural dimension in Colombia. Component 4 dealt with progress monitoring, evaluation, information dissemination and communication, all of which have good potential for development.
- 45. The dissemination of lessons learned and good practices and the sharing of data and information will be crucial to the uptake, replication and upscaling of project results. Coupled with improved awareness in other areas of and countries in the region, this should promote broader and more sustained impact.
- 46. See the regional evaluation report for a more in-depth presentation of the project theory of change.

Figure 3. REBYC II LAC theory of change



Source: Evaluation team.

# 4. Evaluation questions: key findings for Colombia

### 4.1 Relevance

To what extent was the project relevant to national priorities and to GEF and FAO priorities, strategic objectives and programmes?

**Finding 1.** The project was highly relevant to the needs and priorities of Colombia's fishing sector. It also contributed to the pillars of FAO's Country Programming Framework (CPF). By implementing an EAFM and a co-management system potentially applicable to other fishery subsectors, by addressing bycatch in the context of both sustainable fisheries and livelihood enhancement, and by including and fostering collaboration by different stakeholders, it also helped to achieve GEF and FAO priorities and objectives (see regional evaluation report for more).

**Finding 2.** Both large- and small-scale trawl fisheries are socially and economically relevant in the Colombian Caribbean and Pacific Ocean (each with its own distinct features). The project enabled the exchange of information in the region and demonstrated a fisheries management system that could serve as a model for other fishing sectors and which was aligned with the country's goal of developing a participatory, sustainable fisheries sector.

- 47. The project made a significant contribution to Colombia's CPF and aligned with its priorities on nutrition, natural resources and social and technological innovation for sustainable agrifood systems. The National Authority for Aquaculture and Fisheries (AUNAP) was committed to and engaged in the project from the beginning, both at national and local level; the lead of the Marine and Coastal Research Institute "José Benito Vives de Andreis" (INVEMAR) and local stakeholders, therefore, made it possible for the project to address the country's fishery priorities. This involved the development of fishery management plans, the creation of realistic regulation and implementation and an increase in the number of participatory institutional bodies for fisheries management.
- 48. The project used the EAFM methodology and a co-management system to produce a model that could also be used in other fisheries sub-sectors (especially small-scale ones). It proved highly participatory, enabling the project team to work with a wide diversity of stakeholders and to achieve consensus on fishery management issues, encouraging greater commitment to effective enforcement from fishers.
- 49. The large- and small-scale shrimp fisheries targeted are socioeconomically important (as a species) as a source of employment, income and local livelihood. However, bycatch is not only socioeconomically important (in terms of food security, for instance), but it plays an important environmental role in trawling, especially in tropical areas where the biodiversity is high and catch rates are low. Therefore, bycatch (and discard) management became relevant to current Colombian debates and bycatch regulations (namely, the bycatch species catch ban). Here, the project offered key guidance and a framework to address bycatch issues and keep fisheries sustainable from a sectoral, environmental, institutional and traditional-cultural perspective.

### 4.2 Effectiveness

To what extent did the project contribute to the achievement of stated environmental and development objectives? Were the results achieved as expected or were there any unintended results?

**Finding 3.** The expected results were achieved in full. Large- and small-scale trawl fishers, government institutions and civil-society organizations contributed to the achievement of environmental and development objectives.

- 50. The project was executed by environmental research institute INVEMAR, which has a strong team working on fisheries issues. It was co-led by AUNAP, which enabled the strengthening of institutional and regulatory arrangements governing shrimp trawling. This key collaboration facilitated an agreement between small- and large-scale fishers on deep-sea shrimp fishing grounds, the creation of a National Committee for Bycatch Management, the development of a national plan of action to reduce deep-sea shrimp trawl fishery bycatch, and new legislation under development for new trawl excluder devices and the design of new technical trawling gear. Appendix 6 shows progress on achieving project objectives and outcomes to 30 June 2021.
- 51. Although the theory of change for the project was determined under the framework of the broader regional terminal evaluation, the evaluation team's review and analysis of the Colombian activities show the project to be aligned with the overall theory of change in terms of its intermediate outcomes, the final impact of the Global Environment Objectives and the project development objectives. It also resembles the results expected from the three components of the project and their corresponding outcomes.

# 4.2.1 Component 1

Improving institutional and regulatory frameworks for shrimp/bottom-trawl fisheries and co-management.

**Finding 4.** The project worked to compile a general overview of the legal framework for fisheries, including the current situation for both large- and small-scale trawl fisheries, with a National Plan to Reduce Bycatch and Discards (adopted by Resolution No. 2587 of 2020). It also delivered an institutional framework for bycatch, creating the National Committee for Bycatch Management (Resolution Nos. 1970 of 2018 and 0035 of 2020). The project team collaborated under a co-management framework with INVEMAR and AUNAP on the agreement between large-scale trawl fishers and the small-scale fisherfolk of the Gulf of Tribugá (adopted in Resolution No. 2111 of 2017). Another two resolutions are almost ready, one on the technical elements of new large-scale fishing gear and the other on BRDs.

**Finding 5.** The project facilitated a collaboration agreement on technology transfers between Colombia (INVEMAR) and Costa Rica (Instituto Costarricense de Pesca y Acuicultura, or INCOPESCA), illustrating the South–South cooperation the project fostered.

- 52. The way the work was structured between a research institution (INVEMAR), the country's fisheries authority (AUNAP), NGOs, fishers' associations and communities increased the projects potential for the success, receiving widespread acceptance and support for measures at national level. While there is still work to do on small-scale trawl fisheries in both the Colombian Caribbean and the Pacific, strong technical baselines were set and the social, economic and cultural classifications for participatory agreements were found to be feasible in pilot communities.
- 53. The project made a significant contribution to enhancing the legal and institutional framework surrounding trawl fisheries within in an EAFM scheme. Legislation issued by AUNAP will help enforce the management of trawl fisheries. Small-scale trawling is still carried out; it has been prohibited in the Pacific Ocean for a long time and needs to be reviewed, while in the Caribbean, it is not prohibited, but an agreement is in the works. The project created the opportunity to broaden the discussion on this old, conflicting regulation on small-scale trawl fisheries, for which bycatch is still an issue, giving a new perspective and enhancing knowledge with a view to sustainability. The National Committee for Bycatch Management will assist in managing bycatch reduction, not only for trawl fisheries, but for other types of fishing as well.

54. Regional collaboration was achieved in a letter of agreement between Colombia (INVEMAR) and Costa Rica (INCOPESCA). When it came to creating a robust regional strategy for trawl fisheries and bycatch management, the Colombian Caribbean side agreed to a regional body composed of regional fishery organizations within the framework of the United Nations Development Programme/GEF Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+) Project. Meetings have bolstered the exchanges of knowledge and experience, but there needs to be greater coordination to harmonize the basic bycatch reduction strategies for small- and large-scale trawl fisheries in all countries.

# 4.2.2 Component 2

Strengthening bycatch management and responsible trawling practices within an EAFM framework.

**Finding 6.** The project introduced co-management arrangements for responsible trawl fisheries at the pilot sites, in accordance with an EAFM scheme, and created a strong discard baseline. It suggested alternative ways to cut discards through discard use plans in Buenaventura Port and lowered discards in deep-sea shrimp trawl fisheries by more than 20 percent. In small-scale trawling operations, the reduction remains less than 20 percent, but the project did manage to heighten community awareness of bycatch and fisheries management, while also enhancing local capacity. The national plan for bycatch and discard reduction has been completed and adopted by AUNAP.

**Finding 7.** Fishing-gear prototypes with new BRDs were implemented on an experimental basis for both large-scale deep-sea shrimp trawling and small-scale trawling. A spatio-temporal agreement was reached on sustainable fisheries management, which included the closure of the Gulf of Tribugá to large-scale deep-sea shrimp trawling, a robust monitoring system for such fisheries, a deep-sea shrimp trawl fisheries pre-assessment for Marine Stewardship Council (MSC) standard certification and a participatory scheme (co-management) to build consensus on applying an EAFM.

**Finding 8.** The project active fuel-consumption savings in large-scale deep-sea trawling by introducing a new fishing gear design and materials – a clear incentive to change to responsible fishing.

- 55. The participatory management agreement in the Gulf of Tribugá is an outstanding achievement, as it is the first of its kind between large- and small-scale fishermen and is proving successful. Work with small-scale fishers continues, but significant achievements have been made at the pilot sites. The national plan for bycatch and discard reduction contains a host of management measures with suitable indicators that can be implemented across the country. This has been underpinned by the current trawl fisheries closure season and the establishment of total allowable catch limits every year for large-scale shrimp trawling.
- 56. The project further achieved bycatch reductions of up to 44 percent in deep-sea shrimp trawling, while a plan for alternative uses of the discard that trawlers bring to port has also been shown to work well. Under the framework of the Gulf of Tribugá agreement, small-scale fishermen agreed to get some of the bycatch and discards of large-scale vessels for their local communities during the large-scale trawler fishing season.
- 57. The technical design of the fishing gear was agreed through a participatory scheme, so that equipment experts and local fishermen with years of knowledge could agree on the best way to adjust the new designs for local environmental and fishery conditions. Post-agreement acceptance was largely positive on the back of robust debate on bycatch management and the implementation of new designs and BRDs, including an ecosystem approach.
- 58. Although the new types of fishing gear were widely accepted and are now being improved and tailored using traditional materials, availability at national level and the cost of the new netting is

still a challenge that needs to be addressed. Cultural adaptation to the new fishing gear and methods will depend very much on fisher processes and evidence of gains for fishers, resources and the environment.

### 4.2.3 Component 3

Promoting sustainable and equitable livelihoods through enhancement and diversification.

**Finding 9.** The project analysed the value chain of shrimp, bycatch and discards from capture to processing, including bycatch use, alternative discard use and processing, as well as the various steps involved in their trade, including systemic vulnerabilities and the role of women, with a view to enhancing the industry as whole. An innovative business plan was developed to build the capacity of a women's organization to process trawling discards into food products.

**Finding 10.** There is limited opportunity, due to local conditions, to diversify small-scale trawl fisheries (to other forms of fishing), but there are good opportunities to improve the sustainability of the industry<sup>2</sup> with better fishing gear and the implementation of participatory regulation. Large-scale deep-sea trawling saw a significant improvement.

**Finding 11.** A small-scale tuna and Pacific bearded brotula fisheries project conducted by INVEMAR and Conservation International Colombia in the Gulf of Tribugá was a national-level contribution and presented as an alternative to small-scale trawling in the Colombian Pacific. In the Caribbean, small-scale trawling alternatives were difficult to pinpoint, as the vagaries of this fishery in the area meant few other options were available.

- 59. Alternatives to small-scale trawling are limited and processes for this type of fishing are still being developed. Sectoral transformation will depend very much on local conditions, traditions and fishing communities' interest in changing and employing sustainable practices. However, the project managed to implement one new measure with a view to reducing fuel consumption and CO<sub>2</sub> emissions: lighter fishing gear, enabling vessels to trawl using less engine power and, thus, less fuel.
- 60. The conditions surrounding small-scale trawling in the Caribbean are different. There are two places (one was a pilot site) where the practice of fishing mainly involves adult men (Gulf of Salamanca), but with women owning the boats and running the shrimp trade and/or shrimp processing. There are good chances of enhancing practices here with better fishing gear and regulation under a co-management scheme. In the Pacific, there are another two places (one is a pilot site) where women actively participate in governance schemes and shrimp and/or fish processing and trade. There are few chances of diversification at the pilot sites, due to their heavy dependency on fisheries and low standard of living. However, small-scale trawling could lead the way in reducing bycatch, with a sustainable scheme that includes efforts to regulate fishing, the careful selection of fishing gear (mesh size), the avoidance of small- and large-scale trawling overlap and enhanced living conditions. It is a complex work in process.

# 4.3 Stakeholder engagement

61. As the project was developed in both the Colombian Caribbean and Pacific, the identification of key stakeholders spanned the entire territory and included government institutions, fishers' associations, NGOs and individuals directly involved in the project.

<sup>&</sup>lt;sup>2</sup> Including both large and small scale fisheries

- 62. A stakeholder analysis shows INVEMAR and AUNAP to have played a key role throughout the project, as national coordinators with responsibility for in-country activities.
- 63. The work on small-scale trawling in the Caribbean was undertaken in the first phase of the project and was strongly connected to Magdalena University's work there. Large-scale trawl fishers worked with small trawling vessels in the Caribbean to test experimental types of fishing net.
- 64. In the Pacific Ocean, the small-scale fisheries work took place in Santa Barbara de Iscuandé, with the help of the World Wildlife Fund (WWF) Colombia, Conservation International Colombia and Magdalena University. Large-scale trawling work was undertaken with vessel associations and vessel owners active in deep-sea trawling.

# 4.4 Efficiency

To what extent was the project implemented efficiently and cost effectively?

**Finding 12.** Some of FAO's administrative processes proved long, with funding delays and long periods between the signing of letters of agreement and the effective start of implementation. However, INVEMAR's administrative flexibility and FAO's efforts allowed project activities to be carried out in a timely manner. The project found logistical and administrative ways to work efficiently with large- and small-scale fishermen. It coordinated with them to use their vessels and equipment and performed experimental trials with new types of fishing gear, achieving cost-effective implementation. The project also worked with net makers, shrimp traders and women's groups, in an acknowledgement of their experience.

**Finding 13.** FAO Colombia did not have an administrative role in the project, but intermittently assigned a person to follow up on the project. Other institutions, such as the National Oceanic and Atmospheric Administration (NOAA), the Central America Fisheries and Aquaculture Organization (OSPESCA) and the Centre for Resource Management and Environmental Studies, took part in international workshops, but were not involved in project implementation.

**Finding 14.** The project was implemented efficiently, with FAO working with INVEMAR throughout. Administrative issues caused some delays in financial resources, the signing of letters of agreement and the effective start of activities. These were largely down to the time it took to approve products and the involvement of various FAO offices in the project execution process. However, those issues were managed, enabling the pilot projects involving other stakeholders to be carried out as planned. INVEMAR's administrative flexibility was important in maintaining the timeline of project activities and budgetary cost effectiveness.

- 65. Efficiency was achieved by working with INVEMAR, a research institution well experienced in fisheries, and the national fisheries authority, AUNAP, which lent continued support to project activities through the project implementation period. Implementation efficiency was achieved thanks to a progressive increase in the participation of vessel owners, fishers' associations, community councils, equipment manufacturers, vessel captains, crews and shrimp traders, who became increasingly interested in project results and supported activities with their knowledge.
- 66. Activities and budget were managed cost effectively, with normal activities accomplished on time and budget allocated to additional activities (such as the MSC pre-assessment).

# 4.5 Factors affecting performance

Was the project and monitoring and evaluation plan practical and sufficient? Did it operate according to the monitoring and evaluation plan? Was information gathered in a systematic manner, using appropriate

methodologies? Was the information from the monitoring and evaluation system appropriately used to make timely decisions and foster learning during project implementation?

**Finding 18.** The project was properly assessed in the MTE. The regional coordinator carried out visits and periodical meetings to follow up on activities.

**Finding 19.** The project benefited from a monitoring system that allowed the follow-up of project activities and adoption of corrective measure as necessary.

67. Monitoring activities included monthly meetings, national working groups, regional steering committee meetings and field visits by the regional coordinator. Information was gathered using INVEMAR databases; FAO was assigned space to upload project products. No major changes were made following the MTE and there were no specific recommendations for the country at that time.

# 4.6 Sustainability

What is the likelihood that the project results will remain useful or persist after the end of the project?

**Finding 15.** The project prompted Colombia to institute national trawl fishery legislation (national plan of action – Resolution 2587 of 2020; National Committee for Bycatch Management – Resolutions No. 1970 of 2018 and No. 0035 of 2020; agreement between small- and large-scale trawl fisheries – Resolution No. 2111 of 2017; resolutions to be issued on fishing gear and BRDs). Clear public-sector (AUNAP) engagement and continuous interest are a key factor for future sustainability, in addition to joint work with INVEMAR in the annual shrimp fishery assessments to establish Total Allowable Catch (TAC) for the species.

**Finding 16.** The project brought about a perspective and/or behavioural shift among fishers; they initially had doubts about the activities and processes, but eventually became interested, believing that the new fishing equipment and alternative methods were realistic and convenient options for both them and for sustainable fisheries management. Strong participation by women's associations played a major role in strengthening the process and contributed to the sustainability of results. These changes will ensure that the project remains current and serves as a baseline for continued development of Colombia's fisheries towards (fishing, environmental and institutional) sustainability.

**Finding 17.** Although a shift in political will (due to a post-election change in government) and any eventual change in policy on fisheries could be a risk to the sustainability of project results, the project established a strong baseline and results that can weather social and political risk. The participatory processes ensured strong consensual results that produced successful fishery agreements.

- 68. The legislation put in place on trawl fisheries during project implementation will remain after the project ends, suggesting that results will continue to be implemented once the project has ended. The National Management Plan for Bycatch and Discard Reduction should be one of the main guidelines for implementing trawl fisheries management. The fisheries authority has two resolutions left to issue, which will complete Colombia's first set of trawling regulations. The international pre-assessment of the country's large-scale deep-sea trawl fisheries that assesses them as eligible for MSC certification is another element suggesting the industry's sustainability. There are peer-reviewed publications (Cuervo-Sanchez et al., 2018; Marco et al., 2021) and other outreach/educational publications (Rueda et al., 2020; Garay-Tapias, 2020) that confirm the reliability of the results obtained and will act as a reference for future initiatives.
- 69. The broad participation of women, the interest generated in the process during the project and the results themselves will, without doubt, will contribute to the continuity of the fisheries management process. The project supported women's association in gaining a formal legal structure and build a business plan to work with bycatch and discards to manufacture value-

added products, such as fish sausages. Other processes, such as the implementation of an EAFM, Colombia's international cooperation with Costa Rica, efforts to reduce fuel consumption and CO<sub>2</sub> emissions, the highly participatory scheme and the alternatives explored for discard use, can help to sustain the results of the project and establish a baseline. Arrangements will need to be made to ensure that shrimp vessels hand over discards from both shallow and deep-sea trawling and that new fishing gear is gradually implemented across the entire fishing fleet.

# 4.7 Women's participation

To what extent did women participate in the design and implementation of the project?

**Finding 18.** The project contributed to women's participation and empowerment in trawling activities. Their lead in large-scale trawling associations, shrimp trade companies, small-scale fishery processes and in creating alternatives to trawling discards facilitated agreements such as those on trawling grounds and the closed season (for example, in the Gulf of Tribugá). The project also supported a female-owned company with a business to plan to produce value-added seafood products from trawl discards.

- 70. The trawling industry has changed over the years, with women playing an ever-greater role. Women have traditionally participated in the local shrimp processing and bycatch trade, but today, they own and run large-scale vessels and fishing operations, leading the shrimp trade on a national and international scale, heading up trade associations and running local markets that process trawling bycatch and discards. Women now lead national debates on bycatch issues across the industry (for example, on the shark bycatch ban).
- 71. Currently, women do not work on trawlers, but Colombia's two large-scale trawl fishery associations (ARPECOL and ASOASPERCOL³) are led by women, as are two shrimp trading companies. In the large-scale trawling industry, women tend to work in shrimp processing plants, while in small-scale trawl fisheries, women tend to be in charge of receiving the fish, processing and selling them. In the Caribbean, women own boats and fishing gear, hiring other women to process and trade the shrimp if needed. In the Pacific Ocean area, women tend to work in shrimp processing and trading and are actively involved in trawling governance processes.
- 72. This widespread participation of women in the fisheries industry was taken into account in designing and implementing the project in both the Caribbean and the Pacific Ocean, ensuring not just the equitable participation of women, but that they sometimes took the lead in workshops, debates and other project activities.
- 73. A women's association ("platoneras" usually trade fish, carrying the produce in big baskets on their heads) received training and an innovative business plan was developed to use trawling discards brought to port. The women transform discarded seafood into processed, value-added products (such as sausages and burgers), increasing the potential use of commercial bycatch and discards, converting them into food for human consumption.

# 4.8 Co-financing

To what extent did the expected co-financing materialize and how did any shortfall or greater-than-expected co-financing affect project results?

**Finding 19.** Co-financing contributions by national government institutions and the trawl fishery sector exceeded the pledged amount by USD 186 558 (4.8 percent). Co-financing contributions in kind were

<sup>&</sup>lt;sup>3</sup> Large-scale trawl fishery associations in the Colombian Pacific

made by all of the institutions and participants involved (AUNAP, INVEMAR, NGOs, academia and the private sector), underlining the high level of national ownership achieved. This allowed improvements to be made to project execution and produced additional, unexpected, positive results.

- 74. In Colombia, the project had a total budget of USD 800 000 over a five-year period. The executing institution (INVEMAR) received around USD 661 711 directly (as some letters of agreement were in United States dollars and others were in Colombian pesos). FAO managed the rest of the budget directly, buying equipment and materials such as fishing nets, and covering some of the travel expenses of regional staff.
- 75. FAO managed three letters of agreement between 2016 and 2021:
  - i. LOA/06/2016, from March 2016 to May 2017, for USD 121 500. There was one addendum due to a FAO-induced delay in purchasing fishing materials. The final technical and financial reports were delivered.
  - ii. LOA/018/2017, from August 2017 to August 2018, for USD 273 716. There were two FAO-led addenda, one for an additional product in all countries and the other to budget for that product. Final technical and financial reports were delivered.
  - iii. LOA/06/2019, from March 2019 to May 2021, for COP 906 080 000 (approx. USD 25 168). There were five addenda for FAO adjustments, the COVID-19 pandemic, and additional activities.
- 76. Appendix 1 shows the estimated co-financing contribution at the end of the project. As can be seen in Annex 6, co-financing was exceeded by in-kind contributions from INVEMAR and AUNAP in the form of staff, research activities, offices and laboratories and from the private sector in the form of vessel use, shrimp processing sites, docks, offices and other things. The private sector also offered their vessels, captains, crews, trading staff and workshop venues for experimental fishing activities and capacity building for fishery-related associations.

# 4.9 Environmental and social safeguards

To what extent where environmental and social concerns taken into consideration in the design and implementation of the project?

**Finding 20.** Environmental concerns were explicitly and clearly addressed in the project design. Indeed, the project's main goal was to promote more sustainable trawl fisheries by reducing bycatch and project activities targeted the sustainable management of trawl fisheries. Social issues, such as a lack of interest, the conditions in pilot areas (often isolated places with a low institutional presence, low living standards and a high dependency on fisheries for food security, also feeling the indirect effects of a recent bycatch ban on sharks and rays for both large- and small-scale marine fisheries) were addressed by encouraging appropriate stakeholder participation according to an EAFM. The project came up with alterative discard uses so that communities would not be negatively impacted. New bycatch and discard uses were also introduced in some areas, whereby local people came to vessels for such catch, significantly improving the relationship between large-scale fishery operations and local communities.

77. Workshops and meetings with stakeholders were conducted during the project design and implementation phases, using SWOT (strengths, weaknesses, opportunities and threats) analysis matrices. Environmental NGOs raised ecological concerns, amid congressional initiatives to ban trawl fisheries; these were addressed with project activities involving new fishing gear and BRDs and a participatory implementation structure for bycatch reduction to advance sustainable fishing

practices. The significant socioeconomic component of trawl fisheries was also highlighted, in relation to both small- and large-scale fishing. The project results served as the basis for several concepts put forward by Congress and government institutions in relation to trawling and bycatch.

# 4.10 Knowledge management

How is the project assessing, documenting and disseminating its results, lessons learned and experiences?

**Finding 21.** The project has documented all processes, workshops, fieldwork, research analyses, presentations and technical reports and organized them by letter of agreement.

**Finding 22.** The project has produced papers and digital documents, infographics, technical reports and peer-reviewed publications. Databases have been properly stored and shared with key stakeholders through the INVEMAR web page and by email dissemination. AUNAP has uploaded management documents in the case of regulations or institutional frameworks. Both the project and the evaluation team amassed lessons learned from project implementation.

- 78. The MTE of the project in Colombia showed a high level of national ownership and a high rate of achievement, though implementation could be complex. This evaluation observed similar trends noting, however, that pandemic issues had made it more difficult for the project to reach its goals. Work conducted at institutional level has shown positive results.
- 79. INVEMAR systematized all documents and products by letter of agreement and transferred its database to the SEPEC national fisheries statistics database. Links to the information confirm that all documents produced were compiled appropriately by topic and area (Appendix 3). Several publications have already been issued, including booklets, books, fisheries authority regulations and videos (see, for example, <a href="https://youtu.be/dzJYgeQ KrQ">https://youtu.be/dzJYgeQ KrQ</a>) and more information will soon be published. It will be uploaded to and stored on the fisheries information system website to ensure continued access to the project's products.

# 5. Conclusions and country-specific recommendations

## 5.1 Conclusions

**Conclusion 1.** The project made a significant contribution to better small- and large- scale trawling knowledge and management in the Colombian Caribbean and Pacific Ocean. Alternative solutions for the sustainable management of trawl fisheries were realized in a participatory process, bringing about a change in stakeholder attitudes and behaviour. The project facilitated the development of a strong legal framework for trawl fisheries and an institutional framework for bycatch management more generally and established a collaboration on technological transfer between countries.

**Conclusion 2.** The use of an EAFM and co-management system throughout the project demonstrated the importance of such approaches in achieving the full inclusion and integration of various stakeholders across the sector. This, in turn, was the basis on which stakeholders reached agreement.

**Conclusion 3.** Bycatch reduction was achieved for a significant percentage of deep-sea shrimp trawl fishing with new fishing gear designed by experts and local knowledge and the use of a BRD (square mesh). Th characterization of the trawl fishery value chain, bycatch and discards was useful in looking for alternatives for bycatch and discard reduction and in implementing a business plan for discard use.

**Conclusion 4.** There are limited opportunities to switch from large- and small-scale trawl fisheries to other types of fishing, but there are good opportunities to make them more sustainable by reducing bycatch and regulating fishing practices.

**Conclusion 5.** The active and continuous participation of a wide range of stakeholders (academia, NGOs, fishery associations, vessel crews, net makers and community councils, among others), the leadership and active participation of women, the coordination and work of INVEMAR (a stable research institution with experience in fisheries) and AUNAP (national fisheries authority) and the adaptation of fishing technologies to reduce fuel consumption and CO<sub>2</sub> emissions enabled the project to overcome administrative issues and get Colombian fisheries moving towards sustainability.

- i. The participation of women was important to the entire project process. It featured strongly throughout, as several leaders of large-scale trawl fishing operations in the private sector are women (fishery associations and shrimp trading companies). Women's participation was also important in small-scale trawling, as many women own boats and fishing gear, trade shrimp and bycatch, or take an active role in the fisheries management process.
- ii. Although some administrative issues came up during project implementation, these were resolved, with INVEMAR finding ways to keep the project on track. AUNAP played a key supporting role, delivering a legal and institutional framework for the fisheries industry.

**Conclusion 6.** The targeted co-financing by national government and private institutions was achieved and even exceeded, showing stakeholders' interest and ownership of both the implementation process and project results. The various publications, videos and reports issued acknowledge the project's success and can be used as basis for future initiatives to ensure and scale up the development of sustainable trawl fisheries in Colombia.

# 5.2 Country-specific recommendations

**Recommendation 1.** To AUNAP, INVEMAR and other stakeholders – NGOs, academia and the private sector: The evaluation team recommends replicating the successful use of an EAFM and co-management approach in large- and small-scale fisheries subsectors in Colombia.

### Suggestions:

- i. In the case of small-scale trawl fishing, it is better to work at local level, as every site has certain conditions particular to it. It is even more important to take into account lessons learned and to the work undertaken through other activities, as well as the agreements struck and consensus reached with local communities. Still, efforts should be made wherever possible to align indicators and objectives pertaining to activities on different sites. This will facilitate progress monitoring and allow the sector to capitalize on lessons learned.
- ii. It is important to capitalize on changes in stakeholder attitudes and behaviour in a participative way to build consensus on fishery management issues.

**Recommendation 2.** To AUNAP and primary stakeholders: The evaluation team recommends further developing and tailoring fishing regulations to properly include and address trawl fishery needs and priorities.

### Suggestions:

- i. AUNAP could review and adjust trawl fishery permits for large-scale shallow-water and deep-sea shrimp trawl fishing, if necessary, in tandem with other fishing permits for the same vessel. For small-scale trawl fisheries and even other shrimp fisheries (such as gillnet), participatory processes such as those used in this project may help to ensure enforcement of agreed management plans and measures.
- ii. Small-scale trawl fisheries require continued attention and efforts to achieve better bycatch reductions and consolidate fishery management plans.

**Recommendation 3.** To AUNAP and INVEMAR: The evaluation team recommends close follow-up of the approval of two regulations on fishing-gear specifications and BRD use, which are still pending.

# Suggestion:

i. It will be important to establish in national regulations the specifications for new trawl fishing gear and to require the use of square mesh BRDs by the fishing industry.

**Recommendation 4.** To AUNAP, INVEMAR, trading authorities and related stakeholders: As new fishing gear is unlikely to be produced in Colombia, it is important to acquire new materials that can be adapted to the new designs, so that large-scale trawlers can start to swap out their fishing equipment. The use of new fishing equipment, made from appropriate materials, by the entire authorized fleet will have both fishery and environmental benefits and bring about long-term, transformational change.

### Suggestion:

i. It will be important to advocate for government support and, if possible, for tariff reductions to make material imports more affordable.

**Recommendation 5.** To AUNAP, INVEMAR, private-sector and related stakeholders: The evaluation team recommends ensuring that vessels bring discards to port, so that women's associations (such as the "platoneras") can work on producing value-added products (such as sausages and burgers).

## Suggestion:

i. Regulations or agreements may be necessary to ensure the availability of discards from trawlers to make value-added products, as there is now a business model in place to develop this kind of product.

**Recommendation 6.** To FAO project coordinators, INVEMAR and implementing institutions: On potential future collaborations between Colombia and other countries or institutions, the evaluation team would recommend the involvement of AUNAP, whose strengths complement those of INVEMAR.

### Suggestion:

i. As AUNAP has complementary strengths to INVEMAR (a strong fisheries statistical monitoring system, fishery information software and experience in issuing trawl fishery regulation), the evaluation team believes the two should work as a team to exchange technology and experience and to transfer knowledge and experience to other countries in the region.

**Recommendation 7.** To INVEMAR, AUNAP and related stakeholders: It is important to continue strengthening women's participation in fishery-related issues, both in future FAO initiatives and in those of other authorities in Colombia.

**Recommendation 8.** To FAO: Project designs need to consider effective administrative processes to make them easier and more efficient (for example, the number of steps involved in approving products, the number of FAO offices involved, the interval between signing a letter of agreement and starting activities) and to avoid delays in implementation.

**Recommendation 9.** To INVEMAR and AUNAP: The evaluation team recommends gradually replicating the results of this project across the sector to build on the experience and lessons learned.

## 6. Lessons learned

**Lesson 1.** The institutional arrangement between INVEMAR and AUNAP enabled the project to be implemented efficiently. FAO capitalized on INVEMAR's strong technical capacity, administrative flexibility and commitment and AUNAP's commitment to continuing its technical and political support throughout the implementation period.

**Lesson 2.** The EAFM and co-management scheme on fisheries issues proved successful and adaptable, encouraging high participation. Both small- and large-scale fishers and other stakeholders gradually became more interested in the process, amending their views once they recognized the impacts of fisheries on resources and the environment, as well as the need for management change for their own sakes. Such procedures are a good approach to winning the confidence of all stakeholders, ensuring high ownership levels and building long-term consensus on fishery management issues.

**Lesson 3.** The development of a legal and institutional framework (in the case of Colombia, the National Committee for Bycatch Management, the bycatch management plan for Colombian trawl fisheries, and the Gulf of Tribugá agreement) is important for this kind of project. It significantly and demonstrably improved and strengthened trawling conditions in Colombia and enhanced knowledge of the fisheries sector (especially in small-scale trawl fishery).

**Lesson 4.** The COVID-19 pandemic created obstacles to project implementation, encouraging FAO and its partners to find new and innovative ways to accomplish the project's goals. These included virtual technology and digital processes and approvals, among other things. Adaptable project design and institutional and stakeholder flexibility will be important elements to consider in future projects.

**Lesson 5.** FAO can resolve administrative issues if it adjusts project logistics and financial aspects to simplify the approvals process and make financial resources available sooner. This will contribute to better project implementation, especially with regard to activities involving fisheries communities.

**Lesson 6.** Women's participation was very much a feature of project implementation, in both small- and large-scale fishery. The project acknowledged women's far-reaching roles in the trawl fishing industry, from shrimp processing and local bycatch trading to owning large vessels, running shrimp trading companies on a national or international scale and heading up trawl fishery associations.

#### References

**Cuervo-Sanchez, R., Maldonado, J.H. & Rueda, M.** 2018. Spillover from marine protected areas on the pacific coast in Colombia: A bioeconomic modelling approach for shrimp fisheries. *Marine Policy*, 88: 182–188.

Marco, J., Valderrama, D. & Rueda, M. 2021. Evaluating management reforms in a Colombian shrimp fishery using fisheries performance indicators. *Marine Policy*, 125: 104258.

**Rueda, M., Salas-Castro, S. & Girón, A.** 2020. Construcción participativa de acuerdos de pesca sostenible en la pesquería de arrastre de camarón en el Pacífico de Colombia. Proyecto REBYC-II LAC (Código FAO: GCP/RLA/201/GFF). General publications series, No. 114. Santa Marta, Colombia: INVEMAR.

**Garay-Tapias, A.** 2020. *Platoneras de Buenaventura: más allá de la tradición*. General publications series, No. 115. Santa Marta, Colombia: INVEMAR.

# **Appendix 1. Financial analysis**

## **Co-financing budget for the project in Colombia**

General co-financing sources (as for the final PIR)

Sources of co- financing <sup>[1]</sup>	Type of co- financing	Amount confirmed at CEO endorsement/ approval	Actual amount materialized as of 30 June 2021	
National government (AUNAP, INVEMAR)	Cash/In kind	USD 3 701 285	USD 4 298 072	
Private sector	In kind	USD 860 000	USD 910 000	
<u>,                                    </u>	TOTAL	USD 4 561 285	USD 5 208 072	

Detailed co-financing sources (source: Project coordinator)

Co- financing source	Component 1	Component 2	Component 3	Component 4	Total
AUNAP	USD 115 773	USD 3 276 012	USD 116 840		USD 3 508 625
ACODIARPE		USD 360 000	USD 400 000		USD 760 000
ASOARPESCOL		USD 50 000	USD 200 000		USD 250 000
INVEMAR	USD 524 205	USD 336 044	USD 570 925	USD 268 826	USD 1 700 000
	USD 639 978	USD 4 022 056	USD 1 287 765	USD 268 826	USD 6 218 62

# **Appendix 2. Stakeholder Identification and analysis in Colombia**

#### Stakeholder identification for the project in Colombia

Region	Scale of fisheries		Stakeholders
	Small-scale trawl fisheries (pilot site: Salamanca Gulf)	1. Fishermen	From Pueblo Viejo: Alvaro Henríquez Serrano Cesar Ariza Santiago Jorge Márquez Guerrero Julio González From Cienaga: Jorge Negrete, Néstor Urieles, Argelia del Prado, Roberto Escorcia, Wilson Bustamante
Colombian Caribbean		2. Processing shrimp sites (if any)	The fishermen themselves process the product
Colombian Cambbean		3. Shrimp traders	Fermina Serrano (Isla del Rosario)
		1.Vessel owners	James Alfonso Guillem y David Guillem (participaron en talleres de capacitación de redes prototipo)
	Industrial trawl fisheries (pilot site: Cartagena)	2. Shrimp Processing company	N/A
	(pilot site. Cartageria)	3. Shrimp traders	N/A
		4. Net makers	Edinson Correa (participaron en talleres de capacitación de redes prototipo)
Colombian Pacific Ocean	Small-scale trawl fisheries (pilot site: Iscuandé, Nariño)	Fishermen of Iscuandé and Northern Colombian     Pacific Ocean (Gulf of Tribugá)	José Kenedy Caicedo (President Consejo Comunitario Esfuerzo Pescador, Iscuandé)     Luis Perea – GICPA (Regional Management Area)

		2. Processing shrimp sites (if any)	The fishermen themselves process the product
		3. Shrimp traders	N/A
		1. Vessel owners of Buenaventura	Rafael Sepulveda, Pio León, Mauricio Revelo, Antonia Aguirre
	Industrial trawl fisheries (pilot site: DRMI Gulf	2. Fishing industry associations	Shirley Ardila (ASOARPESCOL) Judith Segura (ACODIARPE)
	of Tribugá - Cabo Corrientes) Base port:	3. Net makers	Carlos Rodriguez
	B/ventura	4. Shrimp processing company	Susana Rojas – MAQUILAS
		3. Shrimp traders	Shirley Ardila Susana Rojas – MAQUILAS
		Ministry of Agriculture and Rural Development	1. Sandra E. Muñoz – Division of Livestock, Fisheries and Aquaculture Chains
		Ministry of Environment and Sustainable     Development	Heinz Bent – Division of Marine, Coastal and Aquatic Affairs     Kelly Moreno – International Affairs Office.
Other stak	keholders	3. FAO Colombia	Martha L. De la Pava
		4. Fisheries Authority -AUNAP-	Nicolás del Castillo - General Director. Steering Committee member REBYC Colombia.     Raul Pardo - Division of Fisheries Management     Wilberto Angulo - Division of Inspection and Surveillance     Carlos Borda

5. INVEMAR (Research Institution), National Coordinator	1. Mario Rueda - Division of Value and Exploitation of Resources 2. Francisco Arias - General Director. Steering Committee member REBYC Colombia. 3. Fabian Escobar - Fishery Research 4. Angélica Herrera - Value Chain Economist 5. Andrea Garay - Livelihoods, business plans, marketing
5. Community Councils (if any)	José Kendey Caicedo - Esfuerzo Pescador Small-Scale Fishery Council Iscuandé     Henrry Mosquera - Riscales Small-Scale Fishery Council Nuquí
5. NGOs (if any)	Laura Jaramillo - Conservation Intl. Col.     Luis A. Zapata - WWF Col.
5. Academia (Universities) (if any)	Luis Duarte - Magdalena Univ.
6. Women fishing workers (platoneras de B/ventura)	Sandra Gómez - Frigoter
7. Sustainable fishing certification agency	Iván - Ocean Outcomes, USA

# **Appendix 3. List of documents consulted**

## Reports

N°	Component / project	Result	Product	Activity	Description	Year
1	1 Year 3	1.2	1.2.1	3	Acuerdo de pesca industrial Distrito de Manejo Integrado Golfo de Tribugá - Cabo Corrientes: Propuesta a ser concertada entre las partes: pescadores artesanales y pescadores industriales como usuarios del DRMI GT – CC	2015
2	1 Year 3	1.2	1.2.1	1	Recomendaciones jurídicas emanadas del proyecto REBYC-II LAC al proyecto de ley que reforma la Ley 13 de 1990, por la cual se dicta el Estatuto General de Acuicultura y Pesca	2017
3	REBYC-II LAC				Colombia: Gestión sostenible de la captura incidental de las pesquerías de arrastre en América Latina y el Caribe (REBYC-II LAC) Año 1 Informe Técnico Final	2017
4	REBYC-II LAC				Colombia: Gestión sostenible de la captura incidental de las pesquerías de arrastre en América Latina y el Caribe (REBYC-II LAC) Año 2 Informe Técnico Final	2018
5	2 Year 2	2.1	2.1.1 2.1.2	1, 2 2, 3	Evaluación de los monitoreos con las tecnologías y dispositivos seleccionados de las pesquerías de arrastre artesanal e industrial en Colombia con la reducción de 10% incidentales en por lo menos 2 sitios pilotos	2018

N°	Component / project	Result	Product	Activity	Description	Year
6	1 Year 3	1.2	1.2.1	2	Reconocimiento participativo del impacto ecológico y de medidas de reducción de la pesca acompañante de camarón por los pescadores artesanales en el Golfo de Salamanca, Caribe de Colombia: Aporte para el Plan Nacional de Gestión de las Capturas Incidentales de la Pesca de Arrastre de Camarón	2019
7	1 Year 3	1.2	1.2.1	2	Grado de aceptación por parte de los pescadores artesanales en el Golfo de Salamanca de las medidas de manejo evaluadas participativamente para la pesca de arrastre de camarón: Aporte para el Plan Nacional de Gestión de las Capturas Incidentales de la Pesca de Arrastre de Camarón	2019
8	2 Year 3	2.2	2.2.2	1	Plan de negocios Frigoter	2020
9	3 Year 3	3.1	3.1.1	1	Cadena de valor de la pesca artesanal del camarón de aguas someras en el Pacífico colombiano con enfoque de captura incidental, roles de género y grupos vulnerables	2020
10	3 Year 3	3.1	3.1.2	1	Cambio de artes irreglamentarias en la pesca artesanal de camarón de aguas someras en la Comunidad de Cuerval, Consejo Comunitario Esfuerzo Pescador, municipio de Santa Barbara de Iscuandé - Nariño Colombia	2020
11	FAO Platoneras				Estrategias para el Fortalecimiento de la Actividad de las Platoneras del Distrito de Buenaventura Informe Técnico Final	2020
12	2 Year 3	2.1	2.1.1	2	Evaluación de monitoreos con las tecnologías y dispositivos seleccionados de las pesquerías de arrastre artesanal e industrial en Colombia	2021

N°	Component / project	Result	Product	Activity	Description	Year
13	2 Year 3	2.1	2.1.1	4	Pesquería de camarón de aguas profundas del Distrito Regional de Manejo Integrado Golfo de Tribugá-Cabo Corrientes (DRMI GT-CC), Pacífico Norte, Colombia. Reporte de preevaluación MSC	2021
14	2 Year 3	2.2	2.2.1	1	Incentivos para la implementación de tecnología de pesca sostenible en la pesquería de arrastre de camarón del Pacífico colombiano	2021
15	3 Year 3	3.1	3.1.2	1	Plan de negocios formulado para evaluar la sensibilización sobre los cambios tecnológicos para la pesca de arrastre	2021
16	REBYC-II LAC				Colombia: Gestión sostenible de la captura incidental de las pesquerías de arrastre en América Latina y el Caribe (REBYC-II LAC) Año 3 Informe Técnico Final	2021

## **Project publications**

N°	Component / project	Result	Product	Activity	Title	Required citation	Year
1	1 Year 3	1.1	1.1.1	4	Plan de gestión de las capturas incidentales y los descartes en la pesquería de arrastre de camarón en Colombia	Escobar, F.; M. Rueda; L. Jaramillo; D. Bustos-Montes; D. Rubio-Lancheros y R. Pardo. 2020. Plan de gestión de las capturas incidentales y los descartes en la pesquería de arrastre de camarón en Colombia. Proyecto REBYC-II LAC (Código FAO: GCP/RLA/201/GFF). Serie de publicaciones generales del INVEMAR No. 113, Santa Marta. 92 p.	2020
2	1 Year 3	1.2	1.2.1	3	Construcción participativa de acuerdos de pesca sostenible en la pesquería de arrastre de camarón en el Pacífico de Colombia	Rueda, M.; J. Viaña; S. Salas; A. Girón; D. Rubio-Lancheros; D. Bustos-Montes y F. Escobar-Toledo. 2020. Construcción participativa de acuerdos de pesca sostenible en la pesquería de arrastre de camarón en el Pacífico de Colombia. Proyecto REBYC-II LAC (Código FAO: GCP/RLA/201/GFF). Serie de publicaciones generales del INVEMAR No. 114, Santa Marta. 32 p.	2020
3	FAO Platoneras				Platoneras de Buenaventura: más allá de la tradición	Garay-Tapias, A. 2020. Platoneras de Buenaventura: más allá de la tradición. Serie de Publicaciones Generales N° 115. INVEMAR. Santa Marta, Colombia. 20 p.	2020

N°	Component / project	Result	Product	Activity	Title	Required citation	Year
4	2 Year 2	2.2	2.2.1	1	Evaluación y manejo de los recursos merluza y atún en el Chocó norte del Pacífico colombiano: un análisis basado en datos limitados	Rodríguez, A., F. Escobar, J. Caldas, N. Martínez, G. Angulo y M. Rueda. 2020. Evaluación y manejo de los recursos merluza y atún en el Chocó norte del Pacífico colombiano: un análisis basado en datos limitados. Serie de publicaciones generales del INVEMAR No. 112, Santa Marta, 39 pág.	2020
5	FAO Platoneras				La importancia de la labor femenina en la pesca y su acceso a servicios de protección social: El caso de las platoneras de Buenaventura, Colombia	Garay-Tapias, A. 2020. La importancia de la labor femenina en la pesca y su acceso a servicios de protección social: El caso de las platoneras de Buenaventura, Colombia. 8 p.	2020
6	REBYC-II LAC				Triple bottom line assessment for the historically underperforming Colombian queen conch fishery	Marco, J., D. Valderrama, & M. Rueda. 2021. Triple bottom line assessment for the historically underperforming Colombian queen conch fishery. Marine Policy. 125.  [Https://.doi.org/10.1016/j.marpol.2020.104257]Https://.doi.org/10.1016/j.marpol.2020.104257.	2021

#### Appendix 3. List of documents consulted

N°	Component / project	Result	Product	Activity	Title	Required citation	Year
7	REBYC-II LAC				Evaluating management reforms in a Colombian shrimp fishery using fishery performance indicators	Marco, J., D. Valderrama, & M. Rueda. 2021. Evaluating management reforms in a Colombian shrimp fishery using fishery performance indicators. Marine Policy. 125. [Https://.doi.org/10.1016/j.marpol.2020.104258]  Https://.doi.org/10.1016/j.marpol.2020.104258.	2021
8	REBYC-II LAC				Towards sustainable fisheries in the Colombian Pacific coast: economic performance of a new shrimp trawl net	Herera-Gonzélez, A., M. Rueda., M. Torres, K. Guillen, F. Escobar-Toledo. (En prensa). Towards sustainable fisheries in the Colombian Pacific coast: economic performance of a new shrimp trawl net. Pan-American Journal of Aquatic Sciences.	In press

## Legislation

N°	Component / project	Result	Product	Activity	Regulation	Title	Year
1	REBYC-II LAC				ACUERDO CONCEJO DIRECTIVO NÚMERO 011 DE 18 DE DICIEMBRE DE 2014	"Por medio del cual se declara el Distrito Regional de Manejo Integrado Golfo de Tribugá - Cabo Corrientes" en el municipio de Nuquí - Departamento del Chocó, y se adoptan otras determinaciones	2014
2	REBYC-II LAC				RESOLUCIÓN NÚMERO 1889 DE 01 DE NOVIEMBRE DE 2016	"Por la cual se establece la veda para el Camarón de Aguas Someras y Profundas en el Océano Pacífico colombiano, como medida de ordenamiento y se adoptan medidas de control y vigilancia para el cumplimiento de la misma"	2016
3	1 Year 3	1.2	1.2.1	2	RESOLUCIÓN NÚMERO 2111 DE 04 DE OCTUBRE DE 2017	"Por la cual se adopta el acuerdo espacio temporal para la pesca de Camarón de Aguas Profundas -CAP-, implementado en el marco del proceso de Ordenación Pesquera del Distrito Regional de Manejo Integrado Golfo de Tribugá - Cabo Corrientes (DRMI — GTCC), municipio de Nuquí, departamento del Chocó"	2017
4	1 Year 2	1.2	1.2.1	1	AUTO DE APERTURA NÚMERO 001 DE 14 DE MARZO DE 2017	"Por el cual se da incio al proceso de Ordenación Pesquera del Distrito Regional de Manejo Integrado (DRMI) Golfo de Tribugá - Cabo Corrientes"	2017
5	1 Year 3	1.2	1.2.2	1	RESOLUCIÓN NÚMERO 1970 DE 16 DE AGOSTO DE 2018	"Por la cual se crea y reglamenta el Comité Nacional de Cogestión para las Capturas Incidentales en Colombia"	2018
6	REBYC-II LAC				RESOLUCIÓN NÚMERO 954 DE 23 DE ABRIL DE 2018	"Por medio de la cual se autoriza el inicio de la temporada de pesca de Camarón de Aguas Profundas (CAP) durante la vigencia 2018, en el Distrito Regional de Manejo Integrado Golfo de Tribugá - Cabo Corrientes (DRMI — GTCC), municipio de Nuquí, departamento del Chocó"	2018
7	REBYC-II LAC				RESOLUCIÓN NÚMERO 970 DE 17 DE MAYO DE 2019	"Por medio de la cual se autoriza el inicio de la temporada de pesca de Camarón de Aguas Profundas (CAP) durante la vigencia 2019, en el DRMI Golfo de Tribugá - Cabo Corrientes (DRM/ - GTCC), municipio de Nuquí: departamento del Chocó"	2019

#### Appendix 3. List of documents consulted

N°	Component / project	Result	Product	Activity	Regulation	Title	Year
8	1 Year 3	1.1	1.1.1	3	RESOLUCIÓN NÚMERO 2587 DE 23 DE DICIEMBRE DE 2020	"Por la cual se adopta el Plan de Gestión de las Capturas Incidentales y los Descartes en la Pesquería de Arrastre de Camarón en Colombia"	2020
9	1 Year 3	1.2	1.2.2	1	RESOLUCIÓN NÚMERO 035 DE 10 DE ENERO DE 2020	"Por la cual se modifican los artículos tercero y quinto la Resolución No. 1970 de 2018 "Por la cual se crea y reglamenta el Comité Nacional de Cogestión para las Capturas Incidentales en Colombia"	2020
10	2 Year 3	2.1	2.1.2	1	RESOLUCIÓN NÚMERO 230 DE 30 DE SEPTIEMBRE DE 2020	"Por la cual se establecen las cuotas globales de pesca de algunas especies bajo aprovechamiento para el Year 2021"	2020
11	REBYC-II LAC				RESOLUCIÓN NÚMERO 0837 DE 11 DE MAYO DE 2020	"Por medio de la cual se autoriza el inicio de la temporada de pesca de Camarón de Aguas Profundas (CAP) durante la vigencia 2020, en el Distrito Regional de Manejo Integrado Golfo de Tribugá - Cabo Corrientes (DRMI – GTCC), municipio de Nuquí, departamento del Chocó"	2020
12	2 Year 3	2.1	2.1.2	2	Borrador de Resolución en revisión	"Por la cual se establecen las especificaciones de las redes de arrastre en la pesquería de arrastre industrial de camarón en Colombia"	2021
13	2 Year 3	2.1	2.1.2	2	Borrador de Resolución en revisión	"Por la cual se establece el uso del dispositivo excluidor de peces denominado ventana de malla cuadrada en la pesquería de arrastre industrial de camarón en Colombia"	2021

#### **Project videos**

N	Component / project	Result	Product	Activity	Title	Link	Year
1	REBYC-II LAC				"Pesca de Arrastre de Camarón Responsable y Sostenible - Parte I"	https://www.youtube.com/watch?v=vYHIARDEp4Y	2018
2	REBYC-II LAC				"Pesca de Arrastre de Camarón Responsable y Sostenible - Parte II"	https://www.youtube.com/watch?v=mOts_wTlqhY	2018
3	FAO Platoneras				"I Encuentro de Platoneras de Buenaventura 2020"	https://www.youtube.com/watch?v=L_SaFW3UIPA	2020
4	FAO Platoneras				Mención en Noticiero del Medio Día: Jueves 10 de diciembre	https://www.youtube.com/watch?v=CGJILjMaAco	2020
5	FAO Platoneras				Mención en Noticiero del Medio Día: Viernes 11 de diciembre	https://www.youtube.com/watch?v=SHXuMaitvl8	2020
6	4 Year 3	4.1	4.1.1	2	"Colombia: Hacia la gestión sostenible de la pesca de arrastre de camarón y sus capturas incidentales"	https://youtu.be/dRJSmjZAKWE	2021
7	4 Year 3	4.1	4.1.1	2	"Las platoneras y el uso del descarte Proyecto REBYC-II LAC"	https://invemarsantamarta- my.sharepoint.com/:f:/g/personal/soporte invemar org co/ EndpVCP f8ZNgYd3QLphd4EBeOoMhoUF7xUMT4FojsDkDw	2021
8	4 Year 3	4.1	4.1.1	2	"Mejoras tecnológicas de redes de arrastre Proyecto REBYC-II LAC"	https://invemarsantamarta- my.sharepoint.com/:f:/g/personal/soporte invemar org co/ ElyyapOug IKiYc-i7r69mEBzOTIoBtNXNb3C3n7Cfa7nQ	2021
9	4 Year 3	4.1	4.1.1	2	"Importancia socio-económica de la pesca de arrastre Proyecto REBYC-II LAC"	https://invemarsantamarta- my.sharepoint.com/:f:/g/personal/soporte invemar org co/ EkfwiFX8DgdGjT0HUYpY4awBiv39zSzO26qgzQqPZ2a8Cg	2021
1	4 Year 3	4.1	4.1.1	2	"El acuerdo de pesca proyecto REBYC-II LAC"	https://invemarsantamarta- my.sharepoint.com/:f:/g/personal/soporte_invemar_org_co/ EotZcOTrKPJPklRs6yBRfgEBn1xluAdNslxQf6nqnp0tyw	2021

#### **Communications, statements and notes**

N°	Project	Medium	Title	Link	Date
1	REBYC-II LAC	INVEMAR website	En el marco del proyecto GEF-FAO sobre gestión sostenible de la pesca de arrastre de camarón, culminó con éxito el taller sobre tecnologías de pesca responsable en el pacífico y caribe colombiano	https://cutt.ly/ZmSfdTM	13/09/2016
2	REBYC-II LAC	INVEMAR website	Gestión sostenible de la captura incidental en la pesca de arrastre de América Latina y el Caribe	https://cutt.ly/dmSfuPd	7/02/2017
3	REBYC-II LAC	INVEMAR website	Culminaron con éxito los talleres de construcción y calibración de redes de arrastre como alternativa tecnológica para la reducción de la captura incidental en las pesquerías de camarón en Colombia	https://cutt.ly/BmSfq1P	27/11/2017
4	REBYC-II LAC	INVEMAR website	Socialización de avances y resultados en la cuarta reunión de Grupo Nacional de Trabajo del proyecto REBYC - II LAC en Colombia	https://cutt.ly/tmSdNEJ	7/03/2018
5	REBYC-II LAC	INVEMAR website	INVEMAR realiza inducción a investigadores pesqueros para la implementación del Enfoque Ecosistémico en el Manejo de la Pesca	https://cutt.ly/fmSd3zA	7/03/2018
6	REBYC-II LAC	INVEMAR website	Proyecto REBYC - II LAC en Colombia atiende visita de seguimiento de la Coordinación Regional FAO	https://cutt.ly/ymSdLFi	21/05/2018
7	REBYC-II LAC	INVEMAR website	Socialización: "Resultados del proyecto REBYC-II - LAC en el Pacífico Colombiano"	https://cutt.ly/TmSdE3z	29/08/2018
8	REBYC-II LAC	INVEMAR website	Taller "capacitación a autoridades ambientales y pesqueras en manejo pesquero basado en Enfoque Ecosistémico: Avances del proyecto REBYC-II - LAC en Colombia"	https://cutt.ly/YmSdSLJ	29/08/2018

N°	Project	Medium	Title	Link	Date
9	REBYC-II LAC	INVEMAR website	Taller construcción del Plan de Manejo Artesanal de la Pesca de Camarón en el Caribe, bajo Enfoque Ecosistémico (EEMP) REBYC-II LAC en Colombia	https://cutt.ly/jmSdh8p	4/09/2018
10	REBYC-II LAC	FAO website	Reunión del Comité Directivo del REBYC-II LAC en Colombia	http://www.fao.org/in-action/rebyc- 2/61924/detail/es/c/1184831/	11/03/2019
11	REBYC-II LAC	INVEMAR website	Socialización de resultados del proyecto REBYC-II LAC en el Pacífico de Colombia	https://cutt.ly/0mSduUQ	23/10/2019
12	REBYC-II LAC	INVEMAR website	Diseño de la cadena de valor del camarón en sitio piloto de pesca artesanal en el Pacífico Colombiano	https://cutt.ly/HmSs6uo	24/10/2019
13	REBYC-II LAC	INVEMAR website	El proyecto REBYC-II LAC, su organización Pez & Pez e INVEMAR fomentan prácticas responsables en comunidades pesqueras del Pacífico Colombiano	https://cutt.ly/bmSs2jN	13/12/2019
14	FAO Platoneras	INVEMAR website	INVEMAR y FAO: unidos por el empoderamiento de las "platoneras"	https://cutt.ly/vmSsZqr	10/02/2020
15	FAO Platoneras	INVEMAR website	Cuando la vida cabe en un platón	https://cutt.ly/MmSsOEk	17/03/2020
16	FAO Platoneras	INVEMAR Facebook page	Aunque la situación de salud pública nos ha tenido concentrados en otros temas, les compartimos una nueva crónica sobre una mujer cuyo oficio le aporta a la ciencia. Ella es Antonia Gamboa, mujer orgullosamente platonera	https://www.facebook.com/invemar.org.co/photos/14100763 59174793	26/03/2020
17	REBYC-II LAC	FAO website	Análisis de la Cadena de Valor de la Pesquería Industrial de Arrastre de Camarón en el Pacífico de Colombia	http://www.fao.org/in-action/rebyc- 2/61924/detail/es/c/1278045/	28/05/2020
18	REBYC-II LAC	FAO website	Colombia y Costa Rica firman acuerdo de colaboración para la trasferencia tecnológica y de conocimiento en el manejo de sus recursos pesqueros	http://www.fao.org/in-action/rebyc- 2/61924/detail/es/c/1294303/	18/06/2020

N°	Project	Medium	Title	Link	Date
19	REBYC-II LAC	INVEMAR website	INVEMAR también se capacita en valoración de indicadores del estándar MSC	https://cutt.ly/UmSsc2y	18/06/2020
20	REBYC-II LAC	INVEMAR website	Talleres virtuales: Una experiencia de certificación de pesquerías MSC de la flota camaronera en el Pacífico Mexicano	https://cutt.ly/YmSsQ4J	18/06/2020
21	REBYC-II LAC	INVEMAR website	Colombia y Costa Rica firman acuerdo de colaboración para la trasferencia tecnológica y de conocimiento en el manejo de sus recursos pesqueros	https://cutt.ly/MmSshld	25/06/2020
22	REBYC-II LAC	INVEMAR Facebook page	Lanzamiento del libro "Evaluación y manejo de los recursos merluza y atún en el Chocó norte del Pacífico colombiano: un análisis basado en datos limitados"	https://www.facebook.com/invemar.org.co/photos/15721040 49638689	6/10/2020
23	REBYC-II LAC	INVEMAR Twitter account	Acompáñanos este viernes 9 de octubre en el lanzamiento del libro sobre la evaluación y manejo de los recursos merluza y atún en el Chocó	https://twitter.com/invemarcolombia/status/1313629962688 229376?s=20	6/10/2020
24	REBYC-II LAC	INVEMAR Instagram account	Este viernes 9 de Octubre estaremos de Lanzamiento! Sí! Queremos que todos ustedes conozcan, de voz de sus autores el libro "Evaluación y manejo de los recursos merluza y atún en el Chocó norte del Pacífico colombiano" una publicación del #INVEMAR @conservationorg #blueactionfund	https://www.instagram.com/p/CGBXiSwJJgd/?utm_source=ig _web_copy_link	6/10/2020
25	REBYC-II LAC	INVEMAR Facebook page	En el marco de las actividades de la Feria del Libro de la Universidad del Magdalena, el INVEMAR se ha sumado con el lanzamiento de una de sus publicaciones generales: Evaluación y Manejo de los recursos merluza y atún en el Chocó norte del Pacífico colombiano: un análisis basado en datos limitados. Este libro fue realizado con el aporte de Conservación Internacional y Blue Action Fund	https://www.facebook.com/183758978473210/videos/78204 7932362394	9/10/2020

N°	Project	Medium	Title	Link	Date
26	REBYC-II LAC	INVEMAR Facebook page	Así se vivió el Lanzamiento del Libro "Evaluación y manejo de los recursos merluza y atún en el Chocó norte del Pacífico colombiano"	https://www.facebook.com/invemar.org.co/photos/15786652 95649231	14/10/2020
27	REBYC-II LAC	INVEMAR Twitter account	Así se vivió el Lanzamiento del Libro "Evaluación y manejo de los recursos merluza y atún en el Chocó norte del Pacífico colombiano	https://twitter.com/invemarcolombia/status/1316519726663 819271?s=20	14/10/2020
28	REBYC-II LAC	INVEMAR Facebook page	El pasado 14 de octubre, FAO, INVEMAR y la AUNAP realizaron el taller virtual sobre optimización del camarón en la pesca de arrastre de acuerdo a los estándares de compra internacional	https://www.facebook.com/invemar.org.co/photos/15804863 28800461	16/10/2020
29	REBYC-II LAC	INVEMAR website	Optimizando la calidad e inocuidad del camarón de la pesca de arrastre: Una mirada desde los estándares de compra internacional	https://cutt.ly/VmSsoIC	16/10/2020
30	REBYC-II LAC	INVEMAR website	INVEMAR y la Fundación WWB, fortalecen las capacidades de planificación financiera de las mujeres del Pacífico colombiano	https://cutt.ly/OmSa6so	20/10/2020
31	REBYC-II LAC	INVEMAR Twitter account	#INVEMAR y la @FundacionWWBCol se unieron en el marco del proyecto #REBYCIILAC para fortalecer las capacidades de planificación financiera de 17 mujeres del Pacífico colombiano.	https://twitter.com/invemarcolombia/status/1319019843056 816129?s=20	21/10/2020
32	REBYC-II LAC	INVEMAR Facebook page	INVEMAR y la Fundación WWB Colombia se unieron en el marco del proyecto #REBYCIILAC para fortalecer las capacidades de planificación financiera de 17 mujeres del Pacífico colombiano.	https://www.facebook.com/invemar.org.co/photos/15853060 34985157	21/10/2020
33	REBYC-II LAC	INVEMAR Facebook page	¿Sabías que los cambios en el diseño de redes de arrastre industrial de camarón en el Pacífico colombiano, redujeron hasta un 44% del descarte y un 24% de consumo de combustible?	https://www.facebook.com/invemar.org.co/photos/16238473 57797691	5/12/2020

N°	Project	Medium	Title	Link	Date
34	REBYC-II LAC	INVEMAR Twitter account	¿#SabíasQue Los cambios en el diseño de redes de arrastre industrial de camarón en el #PacíficoColombiano, redujeron hasta un 44% del descarte y un 24% de consumo de combustible?	https://twitter.com/invemarcolombia/status/1335208974669 459459?s=20	5/12/2020
35	REBYC-II LAC	INVEMAR Instagram account	¿#SabíasQue Los cambios en el diseño de redes de arrastre industrial de camarón en el Pacífico colombiano, redujeron hasta un 44% del descarte y un 24% de consumo de combustible?	https://www.instagram.com/p/Clas6tCp_b1/?utm_source=ig_web_copy_link	5/12/2020
36	REBYC-II LAC	INVEMAR Facebook page	¿Sabes qué es La "changa" es un arte de pesca activo, que consiste en una red de arrastre pequeña usada para la captura del camarón?	https://www.facebook.com/invemar.org.co/photos/16255582 44293269	7/12/2020
37	REBYC-II LAC	INVEMAR Facebook page	El "Plan de gestión de las capturas incidentales y los descartes en la pesquería de arrastre de camarón en Colombia" producto del proyecto REBYC-II LAC ¡ya está disponible para consulta y descarga!	https://www.facebook.com/invemar.org.co/photos/16265104 70864713	8/12/2020
38	REBYC-II LAC	INVEMAR Twitter account	El "Plan de gestión de las capturas incidentales y los descartes en la pesquería de arrastre de camarón en Colombia" producto del proyecto #REBYC_LAC_II ¡ya está disponible!	https://twitter.com/invemarcolombia/status/1336444018880 897024?s=20	8/12/2020
39	FAO Platoneras	INVEMAR Instagram account	¡Les tenemos una invitación muy especial! Este viernes 11 de diciembre a partir de las 9:30 am, se realizará el PRIMER ENCUENTRO DE PLATONERAS DE BUENAVENTURA. Un espacio perfecto para conocer más de cerca la importancia de esta labor, y su aporte a la economía, la cultura y la gastronomía local.	https://www.instagram.com/p/CII- ypfAUUv/?utm_source=ig_web_copy_link	9/12/2020

N°	Project	Medium	Title	Link	Date
40	FAO Platoneras	INVEMAR Facebook page	Este viernes 11 de diciembre a partir de las 9:30 am, los invitamos a conectarse a través de nuestro #FBLive y el #YouTubeLive de Conectados Colombia al Primer Encuentro de Platoneras de Buenaventura donde conocerán más de esta importante labor y su aporte a la economía local, gastronomía y cultura en el #Pacífico colombiano. ¡Los Esperamos!	https://www.facebook.com/183758978473210/videos/36877 21274653162	9/12/2020
41	FAO Platoneras	INVEMAR Facebook page	Primer encuentro de Platoneras de Buenaventura 2020	https://www.facebook.com/183758978473210/videos/41486 5539894359	11/12/2020
42	FAO Platoneras	INVEMAR Facebook page	Uno de los #Logros2020 con el proyecto #FaoPlatoneras FAO e #INVEMAR, fue el reconocimiento a la labor de las Platoneras en la economía de la región, dando a conocer los productos que comercializan y transforman	https://www.facebook.com/invemar.org.co/photos/16411766 46064762	28/12/2020
43	FAO Platoneras	INVEMAR Twitter account	Uno de los #Logros2020 con el proyecto #FaoPlatoneras de @FAO_Colombia e #INVEMAR, fue la institucionalización del 11 de diciembre como el #DiaDeLasPlatoneras	https://twitter.com/invemarcolombia/status/1343639159672 606720?s=20	28/12/2020
44	REBYC-II LAC	INVEMAR Twitter account	#AEstaHora Maya Moure, coordinadora regional del proyecto #REBYCIILAC, presenta esta iniciativa de la que #INVEMAR es parte junto a instituciones de otros 5 países. Un evento @theGEF Latinoamérica donde se resaltan casos que integran la biodiversidad en sistemas productivos	https://twitter.com/invemarcolombia/status/1354849234365 898753?s=20	28/01/2021
45	REBYC-II LAC	INVEMAR Facebook page	Del 1 al 5 de febrero, INVEMAR participó en la edición #34 del comité mundial de pesca de FAO (COFI) y en él se resaltaron los logros obtenidos en el proyecto REBYC-II LAC	https://www.facebook.com/invemar.org.co/photos/16708874 59760347	8/02/2021
46	REBYC-II LAC	INVEMAR Twitter account	Del 1 al 5 de febrero, INVEMAR participó en la edición #34 del comité mundial de pesca de @FAO_Colombia (COFI) y en él se resaltaron los logros obtenidos en el proyecto REBYC-II LAC	https://twitter.com/invemarcolombia/status/1358914787476 914177?s=20	8/02/2021

N°	Project	Medium	Title	Link	Date
47	REBYC-II LAC	INVEMAR Instagram account	#OjoAlDato Del 1 al 5 de febrero, INVEMAR participó en la edición #34 del comité mundial de pesca de @fao (COFI) y en él se resaltaron los logros obtenidos en el proyecto REBYC-II LAC	https://www.instagram.com/p/CLDIWd6JWH0/?utm_source=i g_web_copy_link	8/02/2021
48	FAO Platoneras	INVEMAR Instagram account	En el marco del #DiaInternacionalDeLaMujer te invitamos a leer la publicación "Platoneras de Buenaventura: más allá de la tradición" mujeres que realizan una labor tradicional y que son claves dentro de la actividad pesquera, la economía local y la nutrición en Buenaventura	https://www.instagram.com/p/CMKuCToAmFm/?utm_source =ig_web_copy_link	8/03/2021
49	FAO Platoneras	INVEMAR Twitter account	En el #DiaInternacionalDeLaMujer te invitamos a leer "Platoneras de Buenaventura: más allá de la tradición" mujeres que realizan una labor tradicional y que son claves dentro de la actividad pesquera, la economía local y la nutrición en Buenaventura	https://twitter.com/invemarcolombia/status/1368991802905 223180?s=20	8/03/2021
50	REBYC-II LAC	FAO website	Concluye de manera exitosa el proceso de transferencia tecnológica entre INVEMAR e INCOPESCA	http://www.fao.org/in-action/rebyc- 2/61924/detail/es/c/1398889/	11/05/2021
51	REBYC-II LAC	INVEMAR Facebook page	En el proyecto #REBYC_II_LAC de #INVEMAR, GEF y FAO en espYearl más de 80 personas entre funcionarios, pescadores artesanales y otros, fueron capacitados en la aplicación del Enfoque Ecosistémico a la Pesca	https://www.facebook.com/invemar.org.co/photos/17474381 95438606	26/05/2021
52	REBYC-II LAC	INVEMAR Facebook page	En el proyecto #REBYC_II_LAC de #INVEMAR GEF y FAO en espYearl se logró la reducción del consumo de combustible que representa un ahorro anual cercano a los \$50 millones de pesos por barco, unido a una reducción significativa de emisiones de CO <sub>2</sub>	https://www.facebook.com/183758978473210/videos/28760 6476409661	26/05/2021
53	REBYC-II LAC	INVEMAR Twitter account	En el proyecto #REBYC_II_LAC de #INVEMAR @theGEF y @FAO_Colombia más de 80 personas entre funcionarios, pescadores artesanales Fish y otros, fueron capacitados en la aplicación del Enfoque Ecosistémico a la Pesca	https://twitter.com/invemarcolombia/status/1397629298555 691009?s=20	26/05/2021

N°	Project	Medium	Title	Link	Date
54	REBYC-II LAC	INVEMAR Twitter account	En el proyecto #REBYC_II_LAC de #INVEMAR @theGEF y @FAO_Colombia se logró la reducción del consumo de combustible que representa un ahorro anual cercano a los \$50 millones de pesos por barco, unido a una reducción significativa de emisiones de CO <sub>2</sub>	https://twitter.com/invemarcolombia/status/1397648701955 379202?s=20	26/05/2021
55	REBYC-II LAC	INVEMAR Instagram account	En el proyecto #REBYC_II_LAC de #INVEMAR @gef_global_environment y @fao más de 80 personas entre funcionarios, pescadores artesanales y otros, fueron capacitados en la aplicación del Enfoque Ecosistémico a la Pesca	https://www.instagram.com/p/CPWOAjopnYa/?utm_source=i g_web_copy_link	26/05/2021
56	REBYC-II LAC	INVEMAR Facebook page	En el marco del proyecto #REBYC_II_LAC se generaron acuerdos de pesca entre los pescadores industriales y los pescadores artesanales que permitieron definir el co-manejo del territorio	https://www.facebook.com/183758978473210/videos/82121 8935477410	2/06/2021
57	REBYC-II LAC	INVEMAR Facebook page	Con el proyecto #REBYC_II_LAC de #INVEMAR se apoyó la creación de "Frigoter" un empresa de mujeres que se dedican a la transformación del descarte de la pesca industrial de camarón y la producción y comercialización de productos en Buenaventura, Valle del Cauca y a nivel nacional	https://www.facebook.com/183758978473210/videos/51304 0259743345	2/06/2021
58	REBYC-II LAC	INVEMAR Twitter account	El proyecto #REBYC_II_LAC de #INVEMAR apoyó la creación de "Frigoter" un empresa de mujeres que se dedican a la transformación del descarte de la pesca industrial de camarón y la producción y comercialización de productos en Buenaventura, Valle del Cauca y a nivel nacional	https://twitter.com/invemarcolombia/status/1400134260812 615685?s=20	2/06/2021
59	REBYC-II LAC	INVEMAR Twitter account	En el marco del proyecto #REBYC_II_LAC se generaron acuerdos de pesca entre los pescadores industriales y los pescadores artesanales que permitieron definir el co-manejo del territorio	https://twitter.com/invemarcolombia/status/1400212235755 085830?s=20	2/06/2021

N°	Project	Medium	Title	Link	Date
60	REBYC-II LAC	INVEMAR Instagram account	Con el proyecto #REBYC_II_LAC de #INVEMAR se apoyó la creación de "Frigoter" un empresa de mujeres que se dedican a la transformación del descarte de la pesca industrial de camarón y la producción y comercialización de productos en Buenaventura, Valle del Cauca y a nivel nacional	https://www.instagram.com/tv/CPoAkyYpjOe/?utm_source=ig _web_copy_link	2/06/2021
61	REBYC-II LAC	INVEMAR Facebook page	Presentación de resultados del proyecto "Gestión sostenible de la captura incidental de las pesquerías de arrastre de América Latina y el Caribe REBYC-II LAC"	https://www.facebook.com/183758978473210/videos/92846 2154676908	3/06/2021
62	REBYC-II LAC	INVEMAR Twitter account	#AEstaHora damos inicio al evento de presentación de resultados del proyecto: "Gestión sostenible de la captura incidental de las pesquerías de arrastre de América Latina y el Caribe" #REBYC_II_LAC	https://twitter.com/invemarcolombia/status/1400438450646 564867?s=20	3/06/2021
63	REBYC-II LAC	INVEMAR Twitter account	El uso de un enfoque participativo y adaptativo despertó el interés y la conciencia de los pescadores artesanales e industriales para reconocer el impacto causado y la necesidad de un cambio en el manejo - Mario Rueda de #INVEMAR	https://twitter.com/invemarcolombia/status/1400454209460 314116?s=20	3/06/2021
64	REBYC-II LAC	INVEMAR Twitter account	Ha sido muy importante para el proyecto, el contar con la sabiduría tradicional que viene de las comunidades y entender que tenemos un espacio que compartir y si nos organizamos a través del conocimiento científico podemos mejorar nuestras condiciones de vida, Dr. Francisco Arias	https://twitter.com/invemarcolombia/status/1400493599901 589510?s=20	3/06/2021
65	REBYC-II LAC	INVEMAR Twitter account	El enfoque participativo y la toma de decisiones informadas por parte de la @AUNAPColombia en espacios con las comunidades, ha permitido entender que los procesos se deben dinamizar y ser adaptativos a través de un marco normativo o legal desde la autoridad de pesca, Raúl Pardo	https://twitter.com/invemarcolombia/status/1400493784618 635265?s=20	3/06/2021

#### Terminal evaluation of GCP/RLA/201/GFF – Annex 3. Country report for Colombia

N°	Project	Medium	Title	Link	Date
66	REBYC-II LAC	INVEMAR Twitter account	"Para mi este proyecto ha sido una mejora en la reducción del descarte, acuerdos de instituciones y una pesca más sostenible generando empleo a los habitantes de la región, que suelen trabajar en la informalidad" Sandra Gómez representante del proyecto de platoneras Frigoter	https://twitter.com/invemarcolombia/status/1400493839165 669380?s=20	3/06/2021

# Appendix 4. FAO-GEF evaluation criteria ratings table and scheme for Colombia

For overall implementation, monitoring and evaluation, the GEF six-point-scale system ratings are: Highly Satisfactory (HS), Satisfactory (S), Marginally Satisfactory (MS), Marginally Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU) and Unable to Assess (UA). For sustainability, the ratings are: Likely (L), Moderately Likely (ML), Moderately Unlikely (MU), Unlikely (U), and Unable to Assess (UA).

Criteria	MTE rating (June/2019)	Final evaluation rating – Colombia	Corresponding section of evaluation report justifying the rating
A. ASSESSMENT OF PR	ROJECT RESULTS		
Overall quality of project outcomes	MS	HS	High quality of outcomes. The project reached and even exceeded country's expectations for the trawl fishery management and sustainability.
1.1. Relevance	S	HS	The project significantly contributed to develop and enhance trawl fishery activity in both large- and small-scale trawl fisheries, allowing to realize that the fishery may be sustainable.
1.2. Effectiveness	MS	HS	The Project achieved a highly satisfactory effectiveness in its general implementation and even achieved effectively a non-programmed target.
1.2.1. Delivery of outputs	S	HS	Delivery of outputs was achieved as expected. An indicator of this is the achievement mark of 100 percent of fully expected outputs achieved.
1.2.2. Attainment of outcomes and project objectives	MS	HS	Attainment of all objectives/outcomes were achieved and even one unexpected outcome.
1.2.3. Likelihood of Impact (ROtl)	UA	HS	Excellent work between the national fisheries authority, AUNAP (government), the lead institution, INVEMAR, and participating stakeholders; legal and institutional framework was achieved, participatory experimental research was carried out with successful results on bycatch reduction, fuel consumption and CO <sub>2</sub> emissions' reduction, among others. This will keep results current and as baseline for future initiatives.
1.3. Efficiency	MS	S	Efficiency is satisfactory. Aspects such as coordination with stakeholders, administrative flexibility (INVEMAR) and coordinated work with fisheries authority are highly satisfactory. Some administrative issues generating delays were moderate.
B. PROJECT IMPLEMEN	NTATION AND EX	KECUTION RATING	
2. Quality of project implementation	MS	HS	High quality of outcomes. The project reached and even exceeded country's expectations for the trawl fishery management and sustainability.
2.1. Project oversight	MS	HS	Project oversights not observed. Monitoring and reporting carried out accordingly and mostly in time for the project's implementation.
3. Quality of project execution	MS	HS	Quality of execution was excellent, despite some administrative issues.
3.2. Project management arrangements and delivery	MS	HS	Project management arrangements were highly satisfactory. Delivery has been achieved in a timely manner, although some delays were reported due

Criteria	MTE rating	Final evaluation	Corresponding section of evaluation report
Criteria	(June/2019)	rating – Colombia	justifying the rating
(DMII financial			to administrative issues (financial resources
(PMU, financial			,
management, etc)			coming from abroad) and COVID-19 Pandemic.
3.3. Knowledge			The project significantly contributed with the
management and			generation of knowledge regarding bycatch
communication	11	LIC	reduction, some peer-reviewed publications,
	U	HS	reports and outreach and educative documents
			published Communication was highly achieved
			among stakeholders and through INVEMAR's web
C. PROCESSES AND FA	ACTORS AFFECTIV	 NG ATTAINMENT OF I	page.
	ACTORS AFFECTI	NG ATTAINMENT OF I	
			MTE did not report any shortcomings in the
and readiness	MU	S	quality design. EAFM methodology and co-
			management scheme was implemented for in the
F. During			country.
5. Project			Ctalcab ald an invaluance and an and an article and an
partnerships and	HS	HS	Stakeholder involvement and partnerships were
stakeholder 			excellent during the project implementation.
involvement			
6. Co-financing	S	HS	Co-financing in kind was achieved and even
D. MONITODING AND		AO.E. DATING	exceeded by 4.8 percent.
D. MONITORING AND	EVALUATION (N	/I&E) KATING	T
<ol><li>Overall quality of M&amp;E</li></ol>	MS	S	
	6	6	-
7.1. M&E Design	S	S	- Namitarias and reporting have been accused and
7.2.M&E Plan			Monitoring and reporting have been carried out
Implementation			appropriately
(including	MS	S	
financial and			
human resources)		01456	
E. SUSTAINABILITY O	F PROJECT OUTC	OMES	T
8. Overall likelihood			Project outputs and participatory schemes makes
of risks to	ML	MU	most results sustainable in the long term.
sustainability			-
8.1. Financial risk			There is always a probability that resources cannot
	ML	ML	be available to enforce the overall achievements of
0000 1 101			the project.
8.2. Sociopolitical risk			Several outcomes require keeping the current
	L	ML	political will, and there is always a political risk
	1		when government change.
8.3. Institutional risk			So far, the national fisheries authority has been
			stable since 2011, but with limited budget; There is
	ML	ML	always a risk to get changes with the change of
			government. However, INVEMAR's lead and
			institutional stability offers continuity in working
			with trawl fishery in the country.
8.4. Environmental			Socioeconomic and environmental risk are always
risk	ML	ML	present in a changing climate, that are out of the
	IVIL	IVIL	project management, and may affect the
			sustainability of successful results achieved.
Overall project	MS	HS	
rating	IVIS	113	

# **Appendix 5. Evaluation matrix with questions and sub-questions**

Evaluation questions	Sub-questions/indicators	Comments	Methods/informants
1. Relevance			
<b>Question 1.1:</b> Has there been any change in the relevance of the project since the MTE, such as new national policies, plans or programmes that affect the relevance of the project objectives and goals?	Is there any changes in the bycatch national plan since MTE? Are there any changes in the country logframes and workplans? If so, how do these affect the achievement of project objectives and goals	Is this currently applied?	Desk review, Virtual meeting with National coordinator- INVEMAR, Fisheries Authority - AUNAP
<b>Question 1.2:</b> Were the project outcomes congruent with the GEF focal International Waters, countries priorities and FAO CPF?			Desk review, Virtual meeting with National coordinator- INVEMAR, Fisheries Authority - AUNAP; FAO national staff or focal point
<b>Question 1.3:</b> Was the project design appropriate for delivering the expected outcomes? (Review starts from what assessed	1. How the monitoring worked with the prototype fishing gear? Is the design of the country logframe and activities appropriate to achieve the expected results?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP; FAO national staff
at MT)	2. Was the analysis of information appropriate of the performance of prototype fishing gear, BRDs and fishing closures? Are the prototype, BRDs and fishing closures adequate to achieve the expected results? If not, why not? What improvements are needed (examples)		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP
2. Effectiveness			
Question 2.1:To what extent have the project contributed to the achievement of stated environmental and development objectives?			Desk review, Virtual meeting with National coordinator, AUNAP, Industrial fishermen, small-scale fishermen.
Question 2.2: Were intended results achieved as expected and were there any unintended results?			Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, Industrial fishermen, small-scale fishermen.
Question 2.2: <b>Component 1:</b> What results has the project achieved in contributing to improved institutional and regulatory frameworks for shrimp/bottom trawl fisheries and its effective co-management?	Besides the Bycatch National Plan, is there any other regulation in place?     What other achievements got the project in the country?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP
(institutional/policy support – contribution analysis)	2. Can co-management work in this kind of fisheries? What has the project or country put in place to ensure that it can work?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, Presential meetings in the field if possible or virtual meetings with stakeholders in focus-group discussions, direct observation, if possible, technical knowledge of the evaluation team.

Evaluation questions	Sub-questions/indicators	Comments	Methods/informants
Question 2.3: <b>Component 2:</b> What results has the project achieved in strengthening bycatch management and responsible trawling practices within an EAFM framework?	1. Any particular results achieved to strengthen the bycatch management and responsible trawling practices? By how much has bycatch been reduced in the experimental fishing, how many boats have installed the gear, etc. Will these practices be sustained after project ends? How is the quality of the key technical project outputs (e.g., technical reports), design of the fishing trials?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, Presential meetings at field if possible or virtual meetings with stakeholders in focus-group discussions, direct observation if possible
Question 2.4: <b>Component 3:</b> What results has the project achieved in promoting sustainable and equitable livelihoods through enhancement and diversification?	How many people have had or expected to have their livelihoods improved because of the project? Has stakeholders' income increased? By what percentage? Are the livelihoods sustainable?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, Presential meetings at field if possible or virtual meetings with stakeholders in focus-group discussions, direct observation if possible
Question 2.5: <b>Component 3:</b> To what extent can the attainment of results be attributed to the GEF-funded component?	Are the observed achievements and results due to the project or to other projects, programmes and initiatives? What would be the situation without the project support?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, Presential meetings at field if possible or virtual meetings with stakeholders in focus-group discussions, direct observation if possible
3. Efficiency			
Question 3.1:(implementation) To what extent did FAO deliver on project identification, concept preparation, appraisal, preparation, approval and start-up, oversight and supervision?	How was FAO's performance and support to the country teams?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)
Question 3.2:(implementation) How well risks were identified and managed?	Were there any major risks identified in the country and what actions were taken to manage or mitigate them, and were they successful. If not, what was the impact on the project?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)
Question 3.3:( <b>execution</b> ) To what extent did FAO and its co-executing partners effectively discharge its role and responsibilities related to the management and administration of the project?	How FAO national offices and national executing agencies- were there any major issues and how were they addressed?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)
Question 3.3:To what extent has the project been implemented efficiently, cost effectively, and management been able to adapt to any changing conditions to improve the efficiency of project implementation?			Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)

Evaluation questions	Sub-questions/indicators	Comments	Methods/informants
Question 3.4: Was the project cost-effective? How does the project cost/time versus output/outcomes equation compare with that of similar projects?			Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)
4. Sustainability			
Question 4.1:What is the likelihood that the project results will continue to be useful or will remain even after the end of the project?	What are the major necessary requirements for sustaining results and are these in place? If not, how will this affect sustainability and what actions need to be taken and by who?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)
Question 4.2: What process has the project generated or supported that ensure sustainability?		At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)
Question 4.3: What are the key risks which may affect the sustainability of the project benefits?	what are these risks and how are they being managed?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions)
5. Factors affecting performance			
Monitoring and evaluation: Question 5.1: (M&E design) Was the M&E plan practical and sufficient?	Was the national M & E plan adequate and practical?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
Question 5.2: <b>(M&amp;E implementation)</b> Did the M&E system operate as per the M&E plan?		At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
Question 5.3: Was information gathered in a systematic manner, using appropriate methodologies?		At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
Question 5.4: Was the information from the M&E system appropriately used to make timely decisions and foster learning during project implementation?	Did the national coordinator and FAO adequately monitor project implementation and use the results in decision-making to address any problems?  Were recommendations of the MTE implemented and how did this affect the project? E.g., were there any improvements?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)

Evaluation questions	Sub-questions/indicators	Comments	Methods/informants
Stakeholder engagement: Question 5.4: To what extent were other actors, such as civil society, indigenous population or local communities and private sector involved in project design or implementation, and what was the effect on the project results?		At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
6. Environmental and social safeguards			
Question 6.1: To what extent where environmental and social concerns taken into consideration in the design and implementation of the project?	Were there any social and environmental concerns that are relevant to the project and were these adequately considered in project design and implementation?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, FAO staff in charge, local communities (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
7. Gender			
Question 7.1: To what extent were gender considerations taken into account in designing and implementing the project?	In which part of the fisheries process and the execution of the project were most important the gender approach? Were adequate attempts made by the project to engage with women, youth, indigenous communities, etc. and how were they engaged?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, local communities, (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
Question 7.2: Was the project implemented in a manner that ensures gender equitable participation and benefits as well as women empowerment?	How did they benefit from the project, how many of them? were they satisfied with their role and benefits? were they placed at any disadvantage because of the project? How will reducing bycatch affect women and vulnerable and dependent communities?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
8. Co-financing			
Question 8.1: To what extent did the expected co-financing materialize, and how shortfall in co-financing, or materialization of greater-than-expected co-financing affected project results?	Did the country contribute all their pledged cofinance? If not, what percentage?		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, (presential or virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
9. Progress on impact			
Question 9.1: To what extent may the progress towards long-term impact be attributed to the project?	What would the situation be on the longer term without the project?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, key stakeholders ( virtual meetings, focus-group discussions, technical knowledge of the evaluation team)

Appendix 5. Evaluation matrix with questions and sub-questions

Evaluation questions	Sub-questions/indicators	Comments	Methods/informants
Question 9.2: Was there any evidence of environmental stress reduction and environmental status change, or any change in policy/legal/regulatory framework?	Is the reduction in bycatch likely to cause an improvement in the environment or ecosystem? Is this already evident (what indicators are used?)	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, key stakeholders ( virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
Question 9.3: Are there any barriers or other risks that may prevent future progress towards long-term impact?	Once the project ends, will sustainable trawling practices etc. be upscaled (e.g., other boats and areas) and continued? What are the barriers and risks that can prevent this from happening and how can these be addressed? Is the government putting any measures in place?	At industrial and small- scale trawl fisheries	Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, key stakeholders (virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
10. Knowledge management			
Question 10.1: How is the project assessing, documenting and sharing its results, lessons learned and experiences?	1. How was the sharing of results? To whom? What mechanisms are used to share results, etc, are these appropriate for the target audience, are all key target audiences being reached or have access to the materials? are further efforts needed?  2. How was documented and shared the lessons learned?, To whom? Has the project produced documents on lessons learned and experiences (e.g., GEF experience notes)		Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, key stakeholders (virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
11. Additionality			
Question 11.1: <b>(coherence)</b> What is the coherence between the programme and its child projects theories of change, indicators and expected/achieved results?			Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, key stakeholders (virtual meetings, focus-group discussions, technical knowledge of the evaluation team)
Question 11.2: <b>(added value)</b> What is the added value of bringing the different interventions together under one programme (or over the same level of investment made through comparable alternatives)?			Desk review, Virtual meeting with National coordinator, Fisheries Authority - AUNAP, key stakeholders (virtual meetings, focus-group discussions, technical knowledge of the evaluation team)

# Appendix 6. Progress on achieving project objectives and outcomes as of 30 June 2021

objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
Objective(s): The Latin American and The Development	d Caribbean (LAC) region thr	e of the project is to reduce to ough implementation of an Estrengthen resilience of coasy and poverty eradication.  a) Regional fishery bodies (RFBs) in the region include OSPESCA, CRFM and WECAFC, of which the latter includes all project countries. The RFBs have recorded successes in having	AFM, including bycatch and	nabitat impact management		
management.		regional declarations accepted by the countries in the region and collaborate on regional fisheries issues, including shrimp and groundfish management (CRFM/WECAFC/IFREMER Working Group on shrimp and groundfish of the North Brazil Guianas Shelf exists)	promoting the implementation of the regional bycatch/discards strategy (output 1.1.2), including collaboration beyond the initial working group membership.	promoting the implementation of the regional bycatch/discards strategy (output 1.1.2), including collaboration beyond the initial working group membership.	approved the regional strategy draft, which is undergoing consultations. An EAFM framework for shrimp trawl fisheries developed. A regional EAFM training workshop took place on 1 December 2017, with national workshops taking place in 2018–2020.	

Proiect

<sup>4</sup> This is taken from the approved results framework of the project. Please add cells when required in order to use one cell for each indicator and one rating for each indicator.

<sup>5</sup> Some indicators may not identify mid-term targets at the design stage (refer to approved results framework) therefore this column should only be filled when relevant.

<sup>6</sup> Use GEF Secretariat required six-point scale system: Highly Satisfactory (HS), Satisfactory (S), Marginally Satisfactory (MS), Marginally Unsatisfactory (MU), Unsatisfactory (U), and Highly Unsatisfactory (HU).

Four technical workshops? that strengthened regional collaboration on fishing technology to reduce bycatch. bycatch utilization to reduce discards and increase value and data collection and information gathering. Project countries and partners are actively collaborating on these issues through project activities and bilaterally due to networks created by the project. An example is the hands-on training provided by NOAA at its Marine Lab in Mississippi, United States of America, and the South Colombia and Costa Rica successfully finalized a technology exchange that will improve the science and management of fisheries in Costa Rica.	Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
También Colombia ha contribuido a la						workshops <sup>7</sup> that strengthened regional collaboration on fishing technology to reduce bycatch, bycatch utilization to reduce discards and increase value and data collection and information gathering. Project countries and partners are actively collaborating on these issues through project activities and bilaterally due to networks created by the project. An example is the hands-on training provided by NOAA at its Marine Lab in Mississippi, United States of America, and the South Colombia and Costa Rica successfully finalized a technology exchange that will improve the science and management of fisheries in Costa Rica. También Colombia ha	

<sup>&</sup>lt;sup>7</sup> REBYC-II LAC Regional Workshop on Sustainable Utilization of Bycatch in Latin America and Caribbean Trawl Fisheries, Merida, Mexico 28-30 April 2016; REBYC-II LAC Regional Workshop on Data Collection and Monitoring, Governador Celso Ramos, Brazil 8-10 June 2016; REBYC-II LAC Regional Workshop on Bycatch Reduction Technologies and Best Practices, Santa Marta, Colombia 13-16 February 2017; REBYC-II LAC Regional EAF Training Workhop, San Jose Costa Rica, December 2017.

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					estrategia regional mediante experiencias internas de potencial aplicación como los acuerdos de pesca que evidencian procesos de cogestión exitosos, cambios en la estructura institucional con la creación del Comité Nacional de Capturas Incidentales y el Plan nacional de gestión adoptado por la AUNAP.	
	b) Best practices shared through regional bodies (yes or no)	See above	N/A	b) Best practices/approaches for bycatch co-management identified by the project are shared through OSPESCA CRFM and WECAFC established mechanisms	A project website (http://www.fao.org/in- action/rebyc- 2/forum/en/) exists to share information across the region and among partners. The website is now the depository for all work, lessons and knowledge created by the project. The website contains a discussion forum to increase engagement and a calendar to inform the public on upcoming activities.  At the regional level, the project has carried out four regional technical workshops (Bycatch	HS

escription of ndicator(s) <sup>4</sup>	Baseline level	Mid-term target⁵	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
				Utilization, Data Collection and Gathering, Fisheries Technology, EAFM Training), four work planning and monitoring workshops as well as two peer-peer fishing technology trainings hosted by NOAA of the US and a Colombia- Costa Rica knowledge exchanged. The trainings have received follow-up in all six project countries, including both meetings and national capacity-building workshops. Particularly successful have been EAFM trainings with stakeholders in Brazil, Colombia and Costa Rica. An online Q+A forum on the project website also helped stakeholders request support directly from experts on BRDs and utilization.  Yes. Colombia published in the project workspace the results of good practices such as: i) results of successful fishing experiments	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					showing reductions in	
					industrial discards (up to	
					35 percent) and fuel	
					consumption (up to	
					24 percent); ii) industrial	
					and artisanal fishing	
					agreements applying the	
					EEMP endorsed by	
					AUNAP; iii) analysis of	
					the regulatory	
					framework with	
					recommendations to	
					close gaps; iv) shrimp	
					population assessment	
					studies; v) trawling value	
					chain analysis;	
					vi) business plans to	
					enable changes in	
					fishing practices and the	
					use of discards with	
					women's enterprises;	
					and vii) pre-assessment	
					against the MSC	
					standard of the Pacific	
					deep sea shrimp fishery	
					with a score of 86/100.	
					All the results have been	
					published and presented	
					in international	
					conferences (GCFI 2018,	
					IWC9 2018 and ICES	
					meeting 2019) and in	
					internal publications in	
					agreement with FAO	
					(Management Plan and	
					Fisheries Agreement	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					Booklet). Between INVEMAR (Colombia) and INCOPESCA (Costa Rica), an exchange of experiences and training was carried out on information collection systems and stock assessment methods.	
Outcome 1.2: Improved legal and institutional frameworks in the project countries for shrimp/bottom trawl fisheries and bycatch comanagement (within the EAFM management framework).	a) Number of countries with draft legislation to include bycatch and comanagement.	The legal and institutional frameworks in the project countries tend not to include sufficient provisions for bycatch management, comanagement (including rights-based approaches) and EAFM.	N/A	a) At least 3 project countries have their legal and institutional frameworks revised (or draft legislation in the process of being approved) as necessary for implementation of co-management and EAFM plans developed under Component 2.	a) Colombia incorporated bycatch recommendations into the new draft fisheries law. It also established national bycatch committee, National comanagement plan of bycatch adopted by AUNAP, and three fishing management agreements.  As a result of the review of the legal framework for bycatch management in Colombia, socialized recommendations were made to the interested parties, which were accepted via official letter by the Ministry of Agriculture and Rural Development, to be included in the new Colombian Fisheries Law, currently under review.	HS

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					Brazil reviewed its legal and institutional frameworks on trawl fishing. The initiative requires one last consultative meeting with stakeholders before the government reviews and approves.  Suriname included bycatch management measures in draft fisheries bill that the Minister is currently reviewing prior to submitting to parliament. The Minister of Agriculture of Trinidad and Tobago introduced a new Trinidad and Tobago Fisheries to Congress that includes trawl, and bycatch management issues.	
					Trinidad and Tobago submitted a drafted regulation to Minister that establishes 4 and 2 month closed season for industrial and Costa Rica drafted and submitted two new shrimp fisheries laws to the National Assembly, which	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					rejected one and submitted the other to Supreme Court for review. Costa Rica submitted a draft Law on Small-Scale Fisheries to the National Assembly, where REBYC-II LAC also played a role. Mexico submitted technical documents to revise fishing closed season. A draft technical document with suggested regulatory measures is available but requires information from last gear trial, which is paused due to COVID-19.	
	b) Number of countries with revised regulations to include bycatch and co-management		b) N/A	b) Three countries with revised regulations to include bycatch and comanagement.	b) Costa Rica revised and published regulations concerning minimum size of bycatch species and spatial distribution rules for trawling practices. Both rules are now law. The national assembly approved an amendment to the current fishing law that includes bycatch issues in Costa Rica, but the Supreme Court is reviewing it prior to a	HS

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					final vote. Costa Rica	
					also submitted a Law on	
					Small-Scale Fisheries,	
					where REBYC-II LAC also	
					played a role. Costa Rica	
					also created a new	
					structure for Barra del	
					Colorado, including a	
					plan and a co-	
					management system.	
					Colombia officially	
					published 5 resolutions	
					based on a co-	
					management approach	
					and that include	
					management measures	
					(spatio-temporal fishing	
					closures, a national	
					bycatch management	
					committee, shrimp	
					fishing quotas, fishing	
					agreement between	
					artisanal and industrial	
					fishers to reduce trawl	
					fishing impacts as well	
					as conflicts among users.	
					Colombia proposed	
					recommendations to	
					strengthen fisheries	
					institutional structures,	
					including the need to	
					incorporate co-	
					management practices	
					across the sector.	
					Colombia also drafted	
					an amendment to the	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					National Fisheries Law to include bycatch, comanagement and EAFM, which is under Congress review.	
					Currently there is a draft resolution from AUNAP to introduce changes in trawl fishing technology based on prototype nets and BRDs successfully tested in the project in Colombia.	
Outcome 2.1: Selected key shrimp/bottom trawl fisheries in the region are successfully co- managed within an EAFM framework (including bycatch/discards considerations).	a) Number of countries with co-management arrangements in place	Bycatch is generally not managed. Only limited knowledge on incidence and volumes of bycatch and discards exists, although it is acknowledged that resources are wasted in this way (the discard baseline will be established for project pilot fisheries in project year 1).  The SAP of the CLME project includes a dedicated strategy (No 6) aiming to "Implement EBM/EAFM in the Guianas-Brazil continental shelf with special	a) Six countries with co- management arrangements in place	a) Co-management arrangements created/supported and operational in all six project countries	a) All project countries established comanagement arrangements in the project pilot sites. Costa Rica and Suriname increased participation of fisher organizations in decision-making process through capacity-building workshops focused on comanagement and conflict resolution. These included EAFM workshops, conflict resolution workshops, national/local dialogue processes and training courses on building capacity of organizations to participate in policy	S

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
		reference to shrimp and groundfish fishery".			processes. Colombia has 14 co-management agreements: three overarching fishing agreements in three pilot sites and 11 agreements on the use of trawl nets with BRDs for industrial fishers. Comanagement arrangements in place include spatio-temporal fishing closures, fishing quotes, regulation of fishing effort, extensive use and testing of prototype trawl nets and BRDs.	
	b) Percentage reduction in discard rates.	Baseline for discard levels included in expanded catch composition surveys available with RPCU.	b) Discard rate reduced by 5 percent in project pilot sites	b) Discard rates have been reduced by at least 20 percent measured through BRD reductions, utilization reductions and reductions from management measures (ex. spatio-temporal measures) in project pilot sites.	Based on 5 fishing experiments to test artisanal an industrial prototype trawl nets and BRDs (square mesh) in 4 pilot sites, Colombia achieved > 20 percent of discard reduction (up to 35 percent), including in some pilot sites reductions of spatiotemporal fishing closures. Catch composition baselines were established in Colombia based on board fishing monitoring (observer programme)	S

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					linked to the data-collection system (SIPEIN). Colombia updated biological data-collection systems of 13 years, for the shrimp fishery in place and integrated them into national fisheries statistics systems (SEPEC). Colombian prototype gears already transferred to industry, who are using them.  Mexico completed a two gear testing trips with positive results, but a defining third trip is delayed due to COVID- 19. BRD use spreading across Brazil. Costa Rica closed the trawl fishery, eliminating its bycatch in the process.	
	Shrimp/bottom trawl fisheries management plans (in project pilot sites), taking the Bycatch and Discard Guidelines into consideration, are under implementation.		Five management plans are prepared and agreed.	At least five shrimp/bottom trawl fisheries management plans (in project pilot sites), taking the B&D Guidelines into consideration, are under implementation.	In Mexico, the Consultative Committee responsible for implementing the Gulf of Mexico Pink Shrimp Management Plan is established and has a workplan. Suriname updated the seabob management plan to include B&D	HS

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					considerations and align	
					with MSC standards. It is	
					developing an updated	
					national fisheries	
					management plan due	
					in early 2021. The	
					Anhatomirim pilot site in	
					Brazil has a	
					Management Plan in	
					place and operating. It is	
					adaptive so includes	
					changes from REBYC	
					gear trials. Brazil national	
					management plan	
					development process	
					almost complete. One	
					final meeting required	
					prior to approval from	
					shrimp management	
					committees. During	
					EAFM training course	
					mentioned above, a	
					cadre of trainers was	
					trained, and Costa Rica,	
					Colombia Mexico and	
					Brazil built capacity of	
					stakeholders and	
					government officials to	
					apply EAFM through a	
					series of national	
					workshops. Colombia	
					published a bycatch	
					management plan	
					through an EAFM	
					approach and are under	
					implementation by the	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					fisheries authority (AUNAP resolution). In Brazil, the training led increased participation in the project with every Coastal State in the country now trying to apply EAFM in shrimp fisheries. Barra del Colorado Fishery Management Plan in Costa Rica is under implementation. Trinidad and Tobago draft management plan updated with results from REBYC results but is not approved and not implemented.	
Outcome 2.2 Promotion of responsible practices by trawl operators through incentives.	a) # of pilot sites with incentive packages formulated, tested, evaluated and results disseminated	a) Incentives are not actively used as a management strategy and there is no or limited information on potential positive incentives.	a) One pilot site.	a) Trawl operators/fishers in at least 2 project pilot sites benefit from at least one type of positive incentive in relation to changes in trawl fisheries bycatch management (e.g., reduced fuel or labour costs, and/or market-based incentives such as price premiums or niche markets).	a) In Colombia, Suriname, Brazil and Trinidad and Tobago, gear tests show positive reduction of bycatch with acceptable shrimp losses. Artisanal fishers in Brazil are actively participating and at least in one case have already changed fishing practices due to the demonstrated reduction in time spent classifying catch and improved quality of the product. Colombia provided	HS

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					industrial trawlers with	
					proof of 24 percent fuel	
					reduction with prototype	
					net and an incentives	
					package that includes	
					net specifications and a	
					business plan to	
					introduce the new nets.	
					Colombia completed	
					evaluation of <i>Brotula</i>	
					and tuna resources as	
					potential alternatives for	
					artisanal fisheries.	
					Colombia has a business	
					plan developed with	
					women's groups to use	
					bycatch from industrial	
					trawlers with promising	
					outlook. The probability	
					of certification of the	
					deep-sea shrimp trawl	
					fishery in the Colombian	
					Pacific as a sustainable	
					fishery, was evidenced	
					through its pre-	
					assessment under the	
					standard of the MSC.	
					Colombia completed a	
					feasibility study for	
					Brotula and tuna	
					resources to diversify	
					artisanal fishers away	
					from trawling. For Costa	
					Rica, the project is	
					providing the only	
					avenue through which	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					trawl operators have the potential to renew their licences, which are no longer active. It also provides fishing licences to one women's small-scale fishery and provided the Barra del Colorado community with legal certainty on their fishery. MSC recertified Suriname seabob fishery with 3 annual surveillance audits. BRD/TED reduction practices adopted by seabob fleet. Adoption by finfish trawlers is pending a few final workshops/trainings.	
					Mexico developed two products from bycatch and trained food technicians to elaborate it. It still requires certification but provides an opportunity for trawlers to add value to sustainable bycatch. Mexico also demonstrated that with BRDs impact on small-scale fishers from trawlers is minimal, incentivizing trawlers to	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					change practices to reduce conflicts with other fishers. Trinidad and Tobago has VAT and duty concessions on BRD purchases/materials.	
Outcome 3.1  Capacities and opportunities for enhanced sustainable and diverse livelihoods created and gender equality promoted.	a) # of pilot sites with reports identifying new income generating opportunities for men and women through the value chain. b) Fisherfolk associations/cooperatives are in place and operating	Fishers and fish workers are generally not equipped (education, skills, training) to take advantage of existing or alternative livelihoods or diversification options.  The lack of livelihood alternatives increases the pressure on the resources, but fishers tend not to see the need to stop fishing but could potentially consider 'alternative' activities as additional sources of income.  The CLME SAP identifies a need to "develop and implement initiatives for sustainably enhancing livelihoods by identifying and building capacity for diversification, viable alternative sources of decent work/improved incomes and creating	a) One pilot site b) Twelve associations/cooperatives	New income generating opportunities for men and women through the value chain adding value to sustainable bycatch products and other alternatives explored and generating local benefits in at least 3 project pilot sites (the indicators and targets for local benefits (increased income for how many people – gender disaggregated - and work opportunities) will be set in the case of each pilot site in project year one with local participating stakeholders).	Colombia completed two value chain analyses (artisanal and industrial), with emphasis on the role of women; and three business plans to make viable the changes in technologies towards sustainable fishing and for the use of discards through women fishing workers (platoneras). Fishermen received training in the processing of fish products, quality control, financial and organizational aspects for the creation of enterprises.  Costa Rica shows extensive advances for this outcome, particularly through the implementation of the SSF Guidelines and the	S

Appendix 6. Progress on achieving project objectives and outcomes as of 30 June 2021

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
		added value for current catches".  Gender is not considered in Shrimp/bottom trawl fisheries management planning. Gender segregated data on trawl fisheries are generally not available.			Tenure Guidelines <sup>8</sup> . The network of Responsible Fishing Areas in Costa Rica was strengthened and now represents 12 small-scale fishing communities in key policy processes. Fisher and fish workers formally established two associations in Barra del Colorado and three in Puntarenas. They received training on legal, financial and organizational matters. One organization created a strategic development plan to enhance its impact. Studies on gender in the value chain and vulnerable groups have been completed. A national women fisher's forum drafted an action plan for women in fisheries. Five microprojects to enhance livelihoods have been supported with good returns on investment. In	

<sup>&</sup>lt;sup>8</sup> FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (<a href="http://www.fao.org/documents/card/en/c/l4356EN">http://www.fao.org/documents/card/en/c/l4356EN</a>); and FAO Voluntary Guidelines for the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (<a href="http://www.fao.org/3/a-i2801e.pdf">http://www.fao.org/3/a-i2801e.pdf</a>)

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					partnership with other projects, REBYC-II LAC supported one woman's cooperative whose members collected shellfish without a licence. The women developed a management plan for their fishery and obtained a fishing licence for all their members thus regularizing their activity and leading to secure access and incomes. SWOT analysis on alternative livelihoods for women shrimp peelers completed and government ministries are supporting various alternatives (ex. Vegetable farms)  Trinidad and Tobago-Value chain study and gender study complete with recommendations for further investment and training.	
					Suriname- Completed studies bycatch supply chain and role of women in industrial trawl fishing value chain. A mentoring	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					and strengthening programme for fisherfolk organizations has been completed. Five local small-scale fisher cooperatives are now officially established, and trainings and mentoring were provided to three of these. An overarching national fisherfolk organization is also established. These items are a major step towards co-management. A fish silage pilot project using bycatch and discards is paused due to COVID-19. Role of value chain, women and socioeconomic impacts in Brazil understood, but outcome will be difficult to achieve.  Mexico building capacity of young food technicians to enter fishing sector and provide increased incomes with new products derived from bycatch/discards.	
					Given time, financial and prioritization constraints	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					as well as fisher reticence to change their activities, it is unlikely the project can deliver established alternative livelihoods in trawl communities. However, information, transparency and analysis of value chain actors may help future support in this area.	
Outcome 4.1  Project implementation based on results-based management and application of project findings and lessons learned in future operations.	Achievement of project outcomes as defined by the project matrix	N/A	Project results matrix exists with baseline information and outcome and output indicators and targets.	Project outcomes are achieved, disseminated and sustained.  Regional Coordinator will establish a coordinators task force to serve as mechanism to create a strong REBYC-II LAC team. It will be a venue to exchange project results and lessons learned among countries during the project implementation.	Project remains on target to deliver most of its outputs and achieve outcome target as established in monitoring framework. Project task forces and working groups are running effectively. Project website and other means of social media communication are up and running to disseminate information and lessons learned but require strengthening. Long-term sustainability of project results depends on the impacts of COVID-19 on government institutions and fisheries stakeholders	S

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					Colombia has presented	
					the PRPs and PIRs with	
					progress to date in 2021	
					and is currently	
					attending the final	
					evaluation of the project.	
					Colombia strengthened	
					the strategy of	
					dissemination of results	
					through the constant	
					updating of the	
					sharepoint and news	
					release through	
					INVEMAR's social	
					networks. Two scientific	
					articles were published,	
					a book on the bycatch	
					management plan, a handbook on fishing	
					agreements and three	
					infographics. These	
					publications are being	
					delivered to the fishing	
					sector, government	
					entities, academia and	
					NGOs, as well as being	
					available in a digital	
					version on the INVEMAR	
					website. Results were	
					also presented to the	
					Caribbean community at	
					the 2018 GCFI. Finally,	
					many socialization	
					workshops were held	
					with the project	
					stakeholders and	

Project objective and outcomes	Description of indicator(s) <sup>4</sup>	Baseline level	Mid-term target <sup>5</sup>	End-of-project target	Level on 30 June 2021	Progress rating <sup>6</sup>
					recently five videos were produced to be disseminated on social networks and platforms that are easily accessible to fishermen and women. community in general.	

Office of Evaluation evaluation@fao.org www.fao.org/evaluation

Food and Agriculture Organization of the United Nations Rome, Italy

