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Evaluation of Piloting of an ecosystem-based approach to living aquatic resources management in Uruguay (GCP/URU/030/GFF)

Final Report

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Acknowledgements

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Composition of the EE

Evaluation team

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FAO's Office of Evaluation

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Acronyms

AIS		Automatic Identification System
ANII	Agencia Nacional de Investigation e Innovation	National Research and Innovation Agency
AWP/B		Annual Work Plan and Budget
DINAMA	Dirección Nacional de Medio Ambiente	National Environmental Authority
DINARA	Dirección Nacional de Recursos Acuáticos	National Aquatic Resource Authority
EAF		Ecosystem Approach to Fisheries
EFM		Ecosystem-based Fishery Management
EFMFU		Ecosystem-based Fishery Management Functional Units
ET		Evaluation Team
FAO		Food and Agriculture Organization of the United Nations
FPA		Fishery Protected Area
GEF		Global Environmental Facility
GEO		Global Environmental Objective
GIS		Geographic Information System
GOU		Government of Uruguay
LTU		Lead Technical Unit
M&E		Monitoring and Evaluation
MGAP	Ministerio de Ganadería, Agricultura y Pesca	Ministry of Livestock, Agriculture and Fishery
MIDES	Ministerio de Desarrollo Social	Ministry of Social Development
MSP		Medium Size Project
MVOTMA	Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente	Ministry of Housing, Space Planning and Environment
NAFDMP		National Artisanal Fisheries Development and Management Plan
NFMP		National Fisheries Modernization Programme
OED		FAO's Office of Evaluation
PAC		Programme Advisory Committee
PDO		Project Development Objectives
PIR		Project Implementation Review
PMU		Project Management Unit
PNN	Prefectura Nacional Naval	National Coastguard
PPR		Project Progress Report
RFC		Regional Fishery Councils
RU		Republic of Uruguay
SAP		Strategic Action Plan
SNAP	Sistema Nacional de Áreas Protegidas	National Protected Area System
TOR		Terms of Reference
TURF		Territorial User Rights
UDELAR	Universidad de la República	University of the Republic
UNDP		United Nations Development Programme
UNEP		United Nations Environmental Programme
UTF		Unilateral Trust Funds

Executive Summary

ES1. This report outlines the main outcomes, conclusions, recommendations and lessons learned from the evaluation of the project "Piloting of an ecosystem-based approach to living aquatic resources management in Uruguay" (GCP/URU/030/GFF). This project was executed by the National Aquatic Resource Authority (DINARA), funded mainly by the Global Environmental Facility (GEF), and co-funded by the National and Local Governments, and other private and public institutions in Uruguay. The Food and Agriculture Organization of the United Nations (FAO) administered the project and provided technical backstopping. The project's original time-frame was 3 years, its commencement date was April, 1, 2010 and its original termination date was March 31, 2013, having been extended to March 31, 2014.

ES2. Total budget approved for the three project years was USD 3,73 millions, of which the Global Environmental Facility (GEF) contributed with USD 1 million (including USD 50,000 granted for project design). It is therefore a Medium Size Project (MSP) according to GEF's classification.

ES3. The project goal was to transform the utilization of Uruguay's fisheries resources into sustainable production systems through the integration of ecosystem-related principles and concepts into national legal and planning frameworks that, in turn, would contribute to a reduction in the loss of biodiversity and an increase in social well-being.

ES4. The project had three components: i) Developing and implementing a National Strategy based on an ecosystem approach to fisheries (EAF), site plans and fishery protected areas; ii) Developing policies, strengthening institutional capacity and increasing public awareness; and (iii) Project management, monitoring and evaluation, and knowledge dissemination.

ES5. Four pilot sites were selected through the identification of sensitive areas with ecological, social and economic value and a status of conservation suggesting a high priority for the implementation of fishery management areas and biodiversity conservation as well as for the development of Ecosystem-based Fishery Management schemes.

ES6. This evaluation had the following purposes: (i) To allow the interested parties to have an independent assessment of the project contribution to the sustainable development of the fishery sector in Uruguay; (ii) To make recommendations and identify lessons learned for the future implementation of this or other projects by FAO as well as by the Uruguayan Government; and (iii) To analyse the extent of project's sustainability and adoption of outcomes and outputs.

ES7. The methodology used for the evaluation was essentially qualitative, conducted in agreement with FAO's and GEF's guidelines and procedures, taking into consideration requirements of independence, credibility, applicability, transparency, free dissemination and compliance with ethical principles while attempting to determine whether or not the project was relevant, effective, efficient and sustainable. Assessment of information was the most important element in obtaining, validating and analysing evidence in order to arrive at sound conclusions and recommendations.

Analysis by evaluation criteria

Relevance

ES8. The project is consistent with the needs of the country to adequately manage its fisheries and encompasses the willingness of society to preserve the fishery resources through a considerable improvement in the legal framework. Is is also consistent with the new Fishery Act passed in Uruguay (Act 19,175) which explicitly supports management processes under an ecosystem approach. On the other hand, it has potential for providing valuable inputs to other GEF projects to be implemented and to the development of the SNAP where the fishery component is of great relevance and it is necessary to introduce ecosystem criteria to preserve fishery resources.

ES9. The project is strongly interconnected with the National Fisheries Modernization Programme as it provides inputs to promote: restructuring and modernization of DINARA's institutional structure; implementation of a sound aquatic resource management system; reduction of incidental and by-catch, diversification of fish production; as well as redefinition of the artisanal fisheries subsector, including implementation of a new management institutional structure.

ES10. The project directly addresses several country's weaknesses such as inefficient fishery management and surveillance regulations which pay little attention to the needs of the artisanal sector and are scarcely able to solve conflicts or address socio-economic aspects.

Efficiency and effectiveness

ES11. The project was efficient in making use of most available human resources with genuine interest in participating, even though DINARA's staff involvement could have been more effective. Collaboration of other related government bodies, even in social aspects, should be highlighted as well as the participation of local organizations.

ES12. The project was highly effective in its implementation given that in a very short time-frame it managed to put in place a co-management process through the creation of fishery councils endorsed by DINARA.

ES13. Activities conducted throughout the project contributed to train human resources at several specialization levels and allowed for the development of several graduate and postgraduate theses aimed at developing capacities to deal with the Ecosystem Approach to Fisheries and leading to both national and international scientific publications.

Project sustainability

ES14. Overall sustainability of the project is believed to depend on its own capabilities but also on different externalities associated to execution processes with their own time requirements. One such case is the regulatory framework for the new Fisheries Act, another one is DINARA´s capacity to engage additional staff.

ES15. Financial sustainability may be enhanced with funding from the Fishery and Aquaculture Facility provided for in Act 19,175 and with funds to cover research expenses granted by ANII, as well as with contributions from local governments in infrastructure.

ES16. Technical sustainability may be jeopardized in the short term due to insufficient human resources with DINARA to ensure, on their own, project continuity.

ES17. Environmental sustainability may be, on the one hand, favoured by the significant progress made in the delineation of reserve areas with managed resources, the identification of areas where territorial user rights could be applied and the protection

(closed areas) of critical habitats for the life cycle of target species. On the other hand, it is undermined by threats to the biological resources and to certain coastal habitats which may be at risk due to oceanographic externalities, climate change. hydrotechnical works, and overfishing.

ES18. Political and institutional sustainability is strengthened by the recent approval of the new Fishery Act which promotes creation of a Fishery Consulting Committee and Regional Artisanal Fishery Councils.

Impacts and catalytic role

ES19. The project marks a shift of paradigm in the management concept of Uruguayan artisanal fisheries by attempting to replace conventional management focussed exclusively on target stocks, scarce participation of fishery-related stakeholders in decision making and lack of an holistic approach which incorporates biodiversity and environmental conservation, with an ecosystem approach that takes into consideration these and other aspects.

ES20. The project has a remarkable capacity of generating impact in the short term, as it has increased public awareness, improved technical skills and developed human resources, and has also influenced mass media and local stakeholders.

ES21. The project has impact on resource conservation and management strategies in marine and coastal areas, which will be useful for areas that are still without protection.

ES22. The project has a significant impact on science by validating EAF as a management tool. It shows it is possible to apply ecosystem-based management on different types of artisanal fisheries and under different situations but that it should be based on reliable information and on the use of the latest assessment methodologies that may pertain to the spectrum of ecology, sociology, biology, oceanography, limnology, etc.

ES23. The project has built a platform, yet preliminary due to its pilot nature, which turned out to be effective for the involvement of different sectors with interest in the development of a co-management experimental model, and it has a high potential to be replicated elsewhere in the country given the legal support provided by the new Fishery Act.

Recommendations

Recommendation 1 to FAO and the Government:

Strengthen synergies especially between DINARA and other organizations such as DINAMA, PNN, Local Governments, NGOs.

Recommendation 2 to FAO and the Government:

Promote creation by DINARA of regional delegations for a better implementation, surveillance and monitoring of management plans, a higher visibility of the State institutional presence and also to encourage a closer relationship with the fishing communities.

Recommendation 3 to FAO and the Government:

Involve all stakeholder at all levels and strengthen and promote synergies and collaboration mechanisms between them so as to ensure the accomplishment of co-management as the basic strategy to move forward towards a full ecosystem-based fishery management in Uruguay. This implies strengthening the operation of fishery councils and trying to meet expectations of the different stakeholders involved in them; inserting recreational fisheries particularly in coastal areas as a key element in fishery management considering they fish for resources shared with artisanal fisheries, there are territorial conflicts and they are subject to different control and legal measures; promoting inclusion of the industrial fishery sector with the purpose of extending the basis and scope of ecosystem management to large-scale fisheries; and incorporating productive sectors with activities that directly impact on the quality of the aquatic environment.

Recommendation 4 to FAO and the Government:

Design in the short term a strategy based on identifying economic instruments and mechanisms and required human resources (expert in fisheries aspects as well as in social, oceanographic, economic and postharvest technological and other issues) so that DINARA may ensure an adequate sustainablility of project outcomes.

Recommendation 5 to FAO and the Government:

Promote concepts of good fishing practices and encourage their application in those communities where there are signs of excessive fishing intensity or even overfishing, unauthorized catch (species, sizes), lack of knowledge of specific regulations (closed seasons and areas) or use of non-selective or unauthorized fishing gears.

Recommendation 6 to FAO and the Government:

Promote training in fishery product processing techniques, value added and marketing strategies with the purpose of generating feasible alternative technologies thus promoting a more rational resource use, a reduction in fishing intensity and an increase in economic benefits for the artisanal sector.

Recommendation 7 to FAO and the Government:

Actively promote the concept and benefits of allocating TURFs in certain areas as an effective means of eliminating overfishing, controlling fishing intensity , increasing economic benefits, protecting critical habitats, reducing conflicts and improving user awareness of the benefits of having jurisdiction and decision-making capacity over the resources they exploit.

Recommendation 8 to FAO and the Government:

Improve biological and fishery knowledge in those aspects that were not adequately covered by the project but which are required to adjust management plans and make progress towards consolidation of EAF. In particular, it is recommended that the use of fishers ecological knowledge be promoted and valued in order to increase information at the local level.

Recommendation 9 to FAO and the Government:

Ensure involvement and participation of women as primary stakeholders in coastal areas and enhance visibility of their role and relevance. In order to achieve this, it is important that participation of women in fishery councils be encouraged, specially by DINARA.

1. Introduction

1. This report outlines conclusions, recommendations and lessons learned from the evaluation of the project **"Piloting of an ecosystem-based approach to living aquatic resources management in Uruguay" (GCP/URU/030/GFF).** This project was executed by the National Aquatic Resource Authority (DINARA), funded mainly by the Global Environmental Facility (GEF), and co-funded by the National and Local Governments and other private and public institutions in Uruguay, and administered by the Food and Agriculture Organization of the United Nations (FAO). The project's original time-frame was 3 years, its commencement date was April, 1, 2010 and its original termination date was March 31, 2013, having been extended to March 31, 2014.

2. Total budget approved for the three project years was USD 3,73 millions, of which the Global Environmental Facility (GEF) contributed with USD 1 million (including USD 50,000 granted for project design). It is therefore a Medium Size Project (MSP) according to GEF's classification.

1.1. *Background and objectives of the evaluation*

3. This evaluation has three main purposes:

- To allow the interested parties to have an independent assessment of the project contribution to the sustainable development of the fishery sector in Uruguay.
- To make recommendations and identify lessons learned for the future implementation of this or other projects by FAO as well as by the Uruguayan Government.
- To analyse the extent of the project's sustainability and adoption of outcomes and outputs.

4. The main objective of the evaluation, as established in its terms of reference (see Annex 1) and following the Global Environment Facility Evaluation Office guidelines (2008), as main source of reference, was to assess the project's level of success through the verification of accomplished outcomes, their present impact, and their contribution to the implementation of an ecosystem-based approach to artisanal fishery management in Uruguay. Also, the evaluation attempted to determine which strategies have been applied to develop/strengthen individual and institutional capacities of the different stakeholders involved. Finally, the probabilities for project continuity are analysed based on interviews with participants, lessons learned are pointed out and recommendations are made which could be applicable for the development of similar projects in other areas of the region.

5. Project performance was assessed through verification of outputs, outcomes and impacts in order to reflect their effectiveness and efficiency in the medium term. Attention was also paid to the fact that outcomes resulted in institutional, environmental and social changes and to whether indicators used were specific, measurable, attainable, relevant, and restricted in time ("SMART"). Within this framework an attempt was made to analyse project achievements in terms of:

- Its actual contribution to the production of changes in Uruguayan artisanal fisheries management under an Ecosystem Approach to Fisheries (EAF).
- Changes in the perception of the diverse stakeholders regarding the benefits and possibilities of taking part in and adopting an EAF.
- The level of contribution to the development of local and institutional capacities to implement an EAF with the purpose of preserving fisheries resources at sustainable levels while improving living standards of related fisher communities.
- Commitment, engagement and identification of main project stakeholders.
- Strategies and mechanisms adopted by the project to fulfil stated objectives.
- Long-term sustainability of the project and its capacity to design, plan and implement the required interventions to restore and/or maintain artisanal fisheries through the promotion of responsible fishing practices and the conservation of the ecological integrity of fishing grounds and adjacent areas.

6. The Evaluation Team (ET) composed of Graciela Pereira and Claudio Baigún considered the project from its conception and design to its present and potential outcomes. The evaluation includes recommendations based on successful project lessons or else to overcome or fill remaining gaps for a higher effectiveness and efficiency at the time of replicating initiatives. Thus, the evaluation provides a series of lessons learned and a feedback for administrators and the funding agencies.

7. More specifically, the evaluation allowed to:
- Analyse project execution effectiveness, efficiency and timeliness;
- Analyse effectiveness of execution and association mechanisms between the different stakeholders;
- Identify specific issues which demand attention and corrective actions;
- Identify lessons learned on project design, operation and management;
- Identify lessons learned from the technical achievements.

8. The evaluation is expected to provide inputs to the interested parties that may be useful to formulate strategies and programmes aimed at ensuring the continuity of the ecosystem approach to fisheries management initiated by this project. Specifically, the evaluation intends to provide evidence to national authorities regarding the feasibility of the new management scheme tested at the 4 project pilot sites to persist upon project termination, of the necessary conditions to be in place, and of replicating it on other artisanal fisheries of the country, in line with what is set forth in the new Fishery Act.

1.2. ***Evaluation Approach and Methodology***

General remarks

9. The evaluation methodology was essentially qualitative, conducted in agreement with FAO's and GEF's guidelines and procedures, taking into consideration requirements of independence, credibility, applicability, transparency, free dissemination and compliance with ethical principles while attempting to determine whether or not the project is relevant, effective, efficient and sustainable.

10. Triangulation of information was the most important element in obtaining, validating and analysing evidence in order to arrive at sound conclusions and recommendations.

Evaluation outline

11. The evaluation process took place between the end of February 2014 and mid May 2014 and consisted of several activities which are summarized in Table 1.

Table 1: Main activities conducted in the evaluation phases

PHASES OF THE EVALUATION MISSION	15/12-19/2	19/2-9/3	10/3-24/3	25/3-4/4	3/4-31/4
I. Initial phase • TORs preparation • Selection of the Evaluation Team					
II. Preparation phase • Information received • Formal contacts with OED and OT staff (Briefing) • Preliminary agenda received					
III. Evaluation mission: information gathering and preliminary evaluation • Adjustments to agenda • Field mission and site and fisheries visits • Contacts with project staff, stakeholders and fishers • Closing meeting with project staff, DINARA and FAO					
IV. Preliminary closing • Detailed information analysis and interpretation of results • Writing and submitting draft of Final Report					
V. Final Closing • Comments received • Final Report submitted					

12. **Phases I and II were preparatory phases.** The first one ended with the production of the evaluation terms of reference (see Annex I) and the identification of consultants that would form part of an independent team. The second one was a phase of document review by the evaluation team (ET) and logistical coordination by OED for the preparation of the field mission.

13. **Phase III** corresponded to the evaluation mission in Uruguay by the ET. During this phase, key stakeholders were interviewed both at Montevideo and at the project´s influence areas during the pilot site visits. Whenever possible a specific survey was conducted to collect information on fishers perception of different aspects of the project trying to obtain individual responses (Annex 9).

14. An in-depth review of internal project documents was conducted. These included minutes of the Project Advisory Committee (PAC) and Project Management Unit (PMU) meetings, annual revisions by FAO Representation and OTL staff involved in the project and conveyed in reports (PIR), progress reports (PPR) resulting from monitoring by the

project coordination and different audiovisual and dissemination materials.

15. An attempt was made to understand the project evolution through the opinion of the project team and the appreciation of participating organisms by means of:

- Review of Letters of Agreement with other institutions and reports conveying results achieved.
- Review of expected outputs such as handbooks, field guidelines, specific documents, etc.

16. This phase was completed with the preparation of a power point with the main findings of the evaluation ("Debriefing") which was presented to OED staff, FAO Technical Officers, FAO delegates in Uruguay and the project team.

17. **Phase IV** consisted of the analysis of information obtained during the mission and the preparation of a draft report. **Phase V** consisted of the revision of relevant comments provided by project stakeholders and their incorporation into the Final Report.

Evaluation documents

18. The evaluation provides information based on credible, reliable and useful evidence derived from the project. Findings were triangulated through application of ´multiple evidence lines´ through the use of several evaluation tools and compilation of information from different interested parties and at different management levels. In this evaluation the following tools were used:

- *Review of documents*: The ET carried out an in-depth review of documents (Annex 4).
- *Evaluation matrix:* A matrix was prepared based on the evaluation terms of reference and on the project logical framework. Such matrix provided general guidelines for the evaluation and was used as reference for interviewing people and revising project documents (Annex 9).
- *Partially-structured interviews:* Several stakeholders were interviewed (Annex 5), with the evaluation team ensuring the necessary confidentiality.
- *Direct observation:* During field visits observations made by the project team, the ET itself and by different stakeholders were recorded.
- *Focal groups:* Meetings were held with project beneficiaries in order to find out their perception on echieved outcomes and their sustainability.

19. Assessment of project outcomes and outputs was based on evaluation criteria established by the United Nations Evaluation Group (UNEG): relevance, efficiency, effectiveness, impact and sustainability.

2. Context of the Project

2.1. Identification of problems associated to artisanal fisheries management

20. The project was built upon the awareness of the need to reduce increasing conflicts and lack of sustainability of Uruguayan artisanal fisheries and their effects on communities that depend on fishing, an activity that may not be easily replaced by alternative ones.

21. The Uruguayan economy depends to a large extent on natural resources, thus it is essential to preserve and manage biodiversity and ensure sustainability of said resources. Uruguay signed the Convention of Biological Diversity (CBD) during the Rio Summit in 1992 and ratified it by law (Act 16,408) in 1993. That is, what is set forth in the CDB has become a National Provision, Uruguay is therefore a Member Country of said international agreement. Within this framework, the National Protected Area System (SNAP) and its enforcement Act (17,234) constitute a priority national policy with regards to biodiversity preservation.

22. The Department of Rocha's coastal zone is of particular interest and has historically been the focus of attention for the Uruguayan government, as it has promoted national and international legal provisions which enabled the creation of Ramsar and UNESCO-MAB Biosphere Reserve sites. This area has been designated a National Monument (Decree 266 996).

23. In response to problems discovered with ensuring the sustainability of artisanal fisheries and the perception of the increasing threat posed to resources, the Uruguayan Government with support by FAO and the participation of the main stakeholders has formulated a sustainable development policy for the national aquacultural sector. This allowed the determination of the structural adjustments that were required in the institutional and legal frameworks, the definition of objectives for several thematic components, and the identification of strategic actions and the agents responsible for their implementation.

24. The fishery sector development strategy in Uruguay consists of five components, one of them being artisanal fisheries, that are as follows:

a) Responsible management of aquatic resources,
b) Maintain and/or improve health and quality of fishery and aquaculture products,
c) Improve artisanal fisheries management and contribute to the enhancement of fishers' social and economic conditions,
d) Promote aquaculture development at the national level, and
e) Have a share in the exploitation of fishery resources in international waters.

25. Uruguay's artisanal fishery is an activity with high social and economic impact largely exceeding that of the industrial fishery. It is recognized that artisanal fisheries needed to be placed in an important position in relation to other sub-sectors of the national fishery system and that there was a need to develop, within the framework of a new fishery act, a specific legislation that could serve to address existing issues related to an activity of high complexity and diverse fishery, social, cultural and economic situations, and that it required a specific management approach.

26. As foundation for the required adjustments and changes, the need was recognized to make progress towards an improvement of the legal framework in force, namely Act 13,833 (Sea Resources Act), as it was insufficient to address issues related to marine artisanal fisheries and inappropriate to take into consideration inland fisheries and to achieve a restructuring of DINARA, as the authority responsible for promoting sustainable use of fishery resources in the long term.

27. Thus, issues related to the exploitation of fishery resources lead in 2007 to the implementation of a National Fisheries Modernization Programme (NFMP) administered by FAO through a Unilateral Trust Fund (UTF). The Fisheries Management in Uruguay project (UTF/URU/025/URU) financed with government funds and administered by FAO had as its main objective to contribute to the sustainable development of fisheries and aquaculture in Uruguay through:

i) Re- dimensioning and modernization of DINARA's institutional structure;
ii) Training of the productive sector so as to ensure good quality and excellent hygienic and sanitary conditions of Uruguayan fishery products, as well as modernization in working safety aspects;
iii) Implementation of a sound aquatic resource management system based on the development and application of updated fisheries and scientific methodologies, as well as the use of more efficient fishing techniques to reduce discards and diversify landings;
iv) Reorganization of artisanal fisheries including implementing a new institutional management structure; and
v) Development of aquaculture as an productive alternative.

28. By the end of 2009 and with the purpose of strengthening certain aspects contemplated in such project, a project, funded mainly by GEF, co-funded by Uruguay's National and Local Governments, entitled "Piloting of an ecosystem-based approach to living aquatic resources management in Uruguay" was approved. The goal of the project was to transform the utilization of Uruguay's fisheries resources into sustainable production systems through the integration of ecosystem-related principles and concepts into national legal and planning frameworks that, in turn, would contribute to a reduction in the loss of biodiversity and an increase in social well-being.

29. The project was structured on three components essentially oriented to: i) Developing and implementing a National Strategy based on an ecosystem approach to fisheries management (EAF), site plans and fishery protected areas; ii) Developing policies, strengthening institutional capacities and increasing public awareness; and (iii) Project management, monitoring and evaluation, as well as knowledge dissemination. The project operated at three coastal pilot sites distributed between Montevideo and Chuy (boundary with Brazil) and at an inland site located on a freshwater reservoir.

30. This project was executed by DINARA, funded mainly by GEF and co-funded by the Uruguayan Government. FAO had a central role in administering and supervising the efficient and effective use of GEF resources, in overseeing and monitoring progress and eventual risks and contribute to their mitigation, and in providing technical advice to ensure quality of project outputs and outcomes. The project is based on recommendations of and is fully in line with relevant conclusions of the World Summit on Sustainable Development and is also consistent with FAO's Code of Conduct for Responsible Fisheries (1995). Specifically, the project closely follows FAO's technical guidelines on the ecosystem approach to fisheries (EAF) (FAO, 2003) which calls for a precautionary approach, ecosystem approach, considerations on biodiversity, social well-being and equity. In addtion, the project is consistent with FAO's International Action Plans oriented to marine resources preservation and management and to the reduction of incidental catch.

31. The project design has taken into account the perceptions of the society and the State on the environmental deterioration that affects the Uruguayan marine coastal area and part of its inland waters in detriment of resources that sustain the quality of life of artisanal fishery related stakeholders. In the case of marine coastal fisheries, the need to plan and manage the territory occupied by fishers' communities taking into consideration social, economic and environmental aspects became evident. According to previous diagnosis, management measures implemented so far (minimum sizes and certain restrictions in the number of fishing boats) would not have sufficed to reverse the deteriorated situation of the artisanal fishery. Addressing management from a single-species approach was recognized to have been one of the main drawbacks since fishing fleets operate upon multiple resources which are exploited either incidentally or directly and have experienced drastic variations in their fishing capacity throughout time.

2.2. Management framework

32. Uruguayan fisheries management approach may be regarded as a conventional one with little interaction between the artisanal sector and the Competent Authority, marked by an increase in conflicts between the artisanal and industrial sectors which has accelerated during the last years. Moreover, fisheries management has faced constraints due to scarcely updated scientific information, lack of long-term management plans which effectively incorporate biodiversity conservation, poor commitment for a sustainable use and preservation of resources and little participation and knowledge of society on the management of these initiatives. The prevailing management approach based on stocks rather than on the ecosystem has favoured a high level of incidental catch and has put other valuable resources for society at risk.

33. DINARA is the institution responsible for the management of the country's fishery resources and its mandate includes establishing a national policy, assessing fish stocks, and imposing spatial and temporal regulations to the fisheries (such as protected and closed areas and/or seasons). This entity also has administrative tasks and fishing control and surveillance functions, and has historically been characterized by strongly centralized and top-down fishery management. In this context, the Government has recognized that DINARA needs to modify its strategy and planning in order to meet the following criteria:

- Develop a fishery policy that may be sustainable in the long term;
- Increase its staff capacities to use ecological and socio-economic information in fisheries management;
- Systematize and improve use of scientific research and fishery biological information to back up management decisions;
- Develop an extension programme to encourage a better awareness of the public at large regarding the importance of the sector;
- Plan a more effective use of marine protected areas as tools to contribute to sustainable fisheries management, based upon the ongoing reclassification of protected areas, set forth in Act 17,234 within the framework of the National Protected Area System (SNAP); and
- Play a more effective role in promoting and giving due consideration to fisheries and their interdependencies with the environment in government decisions and in actions originating in the economic sectors.

2.3 Fisheries structure and target species

34. Uruguayan fisheries produce an average 110.000 metric tonnes (MT) annually mainly through the industrial sector and to a lesser extent through the artisanal sector. However, some 50% employment capacity is provided by the latter, which is composed of small boats (less than 10 Gross Registered Tonnage: GRT), with small capitalization and using traditional fishing gears (such as gillnets). Artisanal fisheries relevance is denoted by the existence of near 60 fishing ports, the operation of some 1,200 artisanal boats and the exploitation of 50 fish and invertebrate species. The main commercial species reported for the coastal zone by this sector are the whitemouth croaker (*Micropogonias furnieri*), the stripped weakfish (*Cynosicion guatucupa*), the smoothhound shark (*Mustelus schmitti*), angel sharks (*Squatina sp)* and the streaked prochilod (*Prochilodus lineatus*). The whitemouth croaker and the stripped weakfish are also fished for by the industrial sector and are therefore recurrent sources of conflict.

35. On the other hand, Uruguayan fisheries also exploit invertebrates, among them, the blue and brown mussels (*Mytilus edulis edulis* and *Perna perna*, respectively), the yellow clam and the stout tagelus (*Mesodesma mactroides* and *Tagelus plebeius*, respectively), shrimps (*Farfantepennaeus paulensis, Pleoticus muelleri* and *Artemesia longinaris*) and the estuarine crab (*Neohelice granulata*). These species are collected manually in the meso- and supra-littoral zones or else using shrimp nets.

36. Freshwater fisheries are also relevant as food source. In these fisheries the target species are the characin (*Leporinus obtusidens*) and catfishes (particularly *Synodontis clarias*) the catch of which is mostly concentrated in the Uruguay river basin and in the inner Río de la Plata. Damming of a wide sector of the Río Negro which gave rise to the Rincón del Bonete reservoir, has originated a very important fishery for tiger fish (*Hoplias malabaricus*), promoting its catch at the regional level.

2.4 Main threats to the fishing activity and to preservation of ecosystems

37. The main direct threat to fish stocks is believed to be overexploitation, 30% of marine and estuarine fish species presently captured in Uruguayan waters are estimated to be fully exploited or overexploited. Some 15 elasmobranchii species are in danger, such as *Mustelus fasciatus* (CR), *Squatina oculta* (EN), *Squatina argentina* (EN), *Squatina guggenheim* (VU), *Galeorhinus galeus* (VU) and *Mustelus schmitti* (EN), which are targeted by both the artisanal and industrial fisheries. Some of these species depend upon coastal environments for their reproduction.

38. A second threat are unsustainable fishing practices and their impact on the ecosystem, mainly through the reduction of food sources, the effects of discards and incidental catch and modification of habitats (i.e. bottom trawling). Present exploitation patterns show a classical scheme of the trophic web dependent fishing phenomenon. The industrial fleet that operates in coastal waters targeting the whitemouth croaker and the stripped weakfish discards nearly 10% of its catch, whereas the shrimp artisanal fishery also contributes to incidental catch of a number of juvenile fish which are then discarded.

39. Incidental catch is also a source of conflicts as it causes mortality in birds, chelonians (*Caretta careta* and *Chelonya mydas),* pinnípeds and cetaceans (*Pontoporia blainvillei*). An issue that should be pointed out is the impact of the sea lion (*Otaria flavescens*) on artisanal fishing gears causing their destruction and catch losses. This causes, on the other hand, mortality of these mammals as they get entangled in the fishing gears.

40. Other threats are related to habitat destruction by dredging activities, contaminant sedimentation, presence of heavy metals on the Río de la Plata bottom, pesticides from agriculture dumping into the sea, and inflow of organic contaminants from livestock, urban and industrial wastes. Urban developments and lack of planning of infrastructure works in coastal areas have lead to degradation of several habitats of ecological value in certain sectors. Eutrophication in water bodies has modified the water quality and has thus affected fishery resources, while damming has drastically reduced the presence of migratory fish. Similarly, direct threats on freshwater species have become more and more worrisome. These include habitat loss or deterioration due to channeling, contamination, eutrophication, urbanization, damming, and negative interaction with exotic species. In addition to the above, social marginalization of artisanal fishers and dialogue barriers with the competent institutions hinders conflict solving.

3. Analysis of project concept and design

3.1. Goal, objectives and components

41. The project goal was to transform the utilization of Uruguay's fisheries resources into sustainable production systems through the integration of ecosystem-related principles and concepts into national legal and planning frameworks that, in turn, would contribute to a reduction in the loss of biodiversity and an increase in social well-being.

42. In order to achieve this, the project was built upon *Development Objectives* (DO) that converged to contribute to the sustainable development of the country's fisheries through:

- Reorganization and modernization of DINARA's institutional structure;
- Implementation of a sound fishery management system based on an EAF and on the best available knowledge;
- Development of an Artisanal Fishery National Plan which includes new institutional structures (co-management).

43. The project had as *Global Environmental Objective* (GEO) to move forward from a single-species coastal fisheries management to another one that reflected EAF principles, focussing on reducing impacts on the health of the ecosystems and contributing to the enhancement of biodiversity conservation by promoting fisheries sustainability while pursuing relevant national socio-economic objectives.

44. The project had three *components*:

i. Developing and implementing a National Strategy based on an EAF, site plans and fishery protected areas (FPA).
ii. Developing policies, strengthening institutional capacities and increasing public awareness.
iii. Project management, monitoring and evaluation (M&E), and knowledge dissemination.

45. Annex 11 shows the project logical framework with indication of the relations between outcomes and outputs, and evaluation indicators, respectively.

3.2 Considerations on project design

46. Within the context of the Theory of Change the project is conceptually well formulated even though, as described below, it shows limitations due to externalities that may become relevant in the medium and long term. The goal is coherent with what is proposed by and expected from an EAF in the sense of promoting a significant change demanded by different sectors and social stakeholders to accomplish the sustainable use of fishery resources in the country and particularly of the artisanal sector. This is related to the reality of Uruguayan fisheries which are subject to a gradual degradation and loss of sustainability. For this goal to be met different outcomes had been foreseen which represent necessary prerequisites and which were in general correctly identified, such as restructuring of the Competent Authority and attempting to validate EAF principles and insert them in management policies through an appropriate legal support. Similarly, different outputs had been identified such as developing local management plans, creating fishery councils, producing dissemination materials and increasing social awareness, etc, which were essential steps to achieve those outcomes. The project was built upon the assumption that it would be sustainable and replicable. This has determined the convenience of intervening in different types of fisheries, several of which already had information available and research results obtained prior to the present project.

47. The project was designed around objectives that seem to be very ambitious taking into account the initial duration (3 years) and even the extension period (1 year) as well as funds actually available, considering the historic scenario within which artisanal fisheries had been operating, the sector‘s socio-economic context, the weak existing governance mechanisms, as well as DINARA's structural constraints.

48. While different objectives, outcomes and outputs are effectively linked, some of them are believed not to be strictly dependent on the project, but rather on political or institutional circumstances over which the project may have no control. This situation represents a constraint of the logical framework and in some ways hinders the possibility of attaining the proposed goal in the long term. Similarly, the logical framework matrix contained certain indicators that were vague or ambiguous, difficult to measure (not "SMART") in some cases or not adequate. Thus, for instance, the DO that depends on the "Reorganization and modernization of DINARA's institutional structure" is not relevant since its achievement is not exclusively dependent upon the project but rather on a political-institutional decision. In turn, Outcome 1.1 requiring "EAF principles validated and included in policies and national policy frameworks" is conditioned to the sanction of legal provisions and decrees which are also outside the project capacity. The project, in the best scenario, may support or promote a better institutional organization for fisheries management or else encourage consideration of conceptual inputs to strengthen the legal context but it should never be responsible for their accomplishment or implementation.

49. With regards to the GEO, demanding a shift from a single-species assessment approach towards an ecosystem-based one, such a proposal, though valid, should be accompanied by the requirement to protect and manage the environment as the overall system embracing fishery management. This perspective has been in some ways taken into account in the management plan proposals for certain sites such as 4 and particularly in site 1, but ideally it should have been explicitly stated in the GEO as part of the ecosystem approach pursued.

50. Output 2.1 "Sanctioning a new National Fishery Act which incorporates EAF principles" does not comply with the condition of being a good or service produced by the project and received by beneficiaries during and/or upon termination. What could have been expected from the project was that it provided input in support of such an Act but its approval should have not been stated as a direct project output.

51. Indicator "Evidence of DINARA's institutional structure reorganization" does not specify what this restructuring should consist of in addition to being an indicator of an objective -DINARA's reorganization- that does not depend in itself on the project. Indicator "National Act, relevant provisions and decrees explicitly incorporating ecosystem principles and concepts" is not fully adequate to measure the GEO since the approval of a new Fishery Act for Uruguay does not necessarily constitute an indicator of a shift in the stock exploitation strategy.

52. Indicator "Reduction of the present diminishing trend in biodiversity for 8 (target and non target) species, as well as in equity, in at least 2 sites, through estimates of changes in species richness in several biotic components (i.e. benthos, nekton) and estimates of diversity indices (i.e. Shannon, Pielou's eveness, taxonomic diversity, etc.)", selected to measure Outcome 1.2, is not an useful one since it does not allow one to determine the direct influence of the project on biodiversity independently from other natural or anthropic effects unless it is compared with other control sites which do not differ in their environmental and biological structures. On the contrary, and with the purpose of identifying improvements in biodiversity conditions due to project interventions, it would have been more appropriate to use an indicator related to a shift in fishery management measured through a demonstrated increase/reduction in fishery landings of incidental,

"key", endemic or at risk species, under the assumption that avoiding catching this type of species would necessarily have an effect on their density and distribution and therefore in specific diversity and richness.

53. Indicator "Non-project supported activities documented in support of EAF approach (i.e. NGO campaigns, non-participating community activities)" for Outcome 2.2 is not well formulated due to its ambiguity since it should specify what type of activities are expected instead of mentioning uncertain and unexpected events as indicators of achievement.

54. These conceptual weaknesses in the logical framework were not formally corrected during project operation although certain adjustments were made. As the project evolved and as the PPRs and PIRs were produced, it became evident that the project managed, to a large extent, to orient activities towards the stated objectives. In addition, as this project is the first of its kind in Uruguay and in the region where EAF principles are not yet fully established and understood by specific fishery management-related institutions, this may be regarded as an attenuating reason to explain conceptual drawbacks in the logical framework.

55. As a positive aspect it should be highlighted that the project produced several additional and important outputs other than those included in the logical framework that strongly contributed to strengthen the project.

3.3 Selection of pilot sites and geographic scope

56. Pilot sites for the implementation of Ecosystem-based Fishery Management (EFM) schemes were selected through a participatory process that included national and local workshops, as well as a technical analysis of geographic priorities for EFM in Uruguay (Figure 1). Such analysis consisted in ranking sensitive areas in order to determine those with ecological value, socio-economic relevance, and status of conservation indicating a high priority for the implementation of fishery management and biodiversity conservation areas (Defeo *et al.* 2009). As a result, four sites were identified which are characterized by dissimilar conditions that are representative to a large extent of the different fishing scenarios in the country.

57. Consistent with the intention of implementing an EAF, scientific, social and political criteria were taken into account. Among the scientific criteria, the availability of previous fishery and environmental information as well as the possibility of collecting new information were considered an asset. Social criteria included the historical context and tradition of local communities in artisanal fishing activities, and their present or potential cohesion to participate in a new management strategy considering relationships between fishers and the fishery administration. Among political aspects, the feasibility and the need to manage resources in conflictive or socio-economic relevant areas were assessed.

58. **Site 1**, encompassing La Coronilla-Barra del Chuy coastal strip, stood out due to its high benthic invertebrate richness, high diversity of habitats for coastal organisms, high aquatic productivity, species with conservation problems and a yellow clam (*Mesodesma mactroides*) fishery in critical status but unique in Uruguay. This fishery had been closed since 1994 even though reduction in resource abundance had been observed since 1984, only three years after the channel system that discharges on the coast through the Andreoni channel had been completed. This area, on the other side, had been internationally designated as a Ramsar area and Biosphere Reserve (UNESCO-MAB) and identified as the ecosystem with highest benthic invertebrate richness in the Uruguayan coastal zone, high diversity of habitats, high aquatic productivity and the presence of endangered species. A serious conflict at this site is the impact of the Andreoni channel outflow that drains part of the Rocha and the Laguna Negra wetlands. This channel receives the run-off from nearby rice fields (68,000 ha) not only affecting biodiversity and its habitats but also producing cascade effects on productive activities such as tourism (i.e. diminishing beach quality) and

invertebrate and vertebrate artisanal fisheries.

59. **Site 2** was located at Punta del Diablo where there used to be an important annual artisanal fishery for elasmobranchii, many of which are endemic and have conservation problems (i.e. the smoothhound shark *Mustellus schmitti*), and at certain times of the year fishing is directed to the Argentine red shrimp (*Pleoticus muelleri*). It includes habitats with high fauna richness such as Cerro Verde and nearby islands (Verde and La Coronilla), sites which have been already proposed for incorporation into the SNAP. This ecosystem is also of socio-economic relevance not only because of artisanal fishing but also as a summer resort. The site was well-known for its fishery, having 13 fishing boats in 2009 which landed 70 tonnes/year.

60. **Site 3**, comprising the Santa Lucía-Solís Grande corridor, represents a strategic area for the operation of the whitemouth croaker artisanal fishery and of the coastal industrial fishery as well. It includes the mouths of several streams (Pando, Solís Chico, Solís Grande) and adjacent coastal zones characterized by their role as juvenile breeding and feeding grounds for some of the main fishery resources of the region. This site, in turn, exhibits the highest concentration of artisanal ports in the country and the major identified conflicts related to incidental fishing and interaction between fisheries and marine megafauna threatened worldwide (franciscana dolphin, sea lion and turtles), as well as overexploitation of the main fishery resources (whitemouth croaker and stripped weakfish). This is a group of fisheries that also enter into conflict over the use of space, their differences in fishing capacity and the fact that they are composed of fishers who migrate between fishing grounds following the seasonal migrations of the target species once the fishing season ends at their own localities.

61. **Site 4**, encompassing Rincón del Bonete reservoir and specifically San Gregorio de Polanco locality, was selected due to its historical background as a strategic location for an artisanal fishery operating particularly on the tiger fish. At this site, fishing produces direct benefits in the way of income, employment and food production, which together with tourism-related activities constitute the main activities at the reservoir.

Figure 1: The 4 selected pilot sites

Mapa de Uruguay con los 4 sitios piloto seleccionados (en color rojo). Fuente: FAO Uruguay

Source: FAO, Uruguay

3.4 Links between the project and other interventions in the region

62. Research conducted by the project emphasized the identification of Marine Protected Areas (MPA) as EAF tools oriented to enhance fishery resource management and biodiversity conservation in the Uruguayan coastal zone. Research results allowed the identification of three ecoregions along the coastal zone between San José and Rocha with differences in their environmental and ecological features.

63. The project is closely related to protected areas already in the SNAP, such as Cerro Verde and islands off La Coronilla (Defeo *et al.* 2009) and it may provide key inputs to be incorporated into the management plan presently under development. It is also related to the proposal to incorporate into the SNAP the Cabo Polonio Marine-Coastal Protected Area which is part of the Laguna de Castillos Protected Area, already in force through legal decree, and of the Bañados del Este Biosphere Reserve, which was incorporated into the reserve network under UNESCO's Man and the Biosphere programme (MAB) in 1976, as well as of the Ramsar Site designated on May 22, 1984. At a global scale, the marine space encompassing Cabo Polonio and the Torres and Castillo group of islands is part of the Uruguay-Buenos Aires Shelf ecoregion which has been regarded as a key region for conservation in Latin America whereas regionally it has been identified as a priority area for conservation by the FREPLATA project. Within the project area there is also a National Lake Park and Multiple Use Area conformed by the José Ignacio, Garzón and Rocha lagoons, the latter with Protected Landscape status and including a defined marine area. All these lagoons are directly connected to the ocean which results in a close relationship between the conditions of these environments and of the marine coastal area and highlights the importance of the ecological connectivity between these systems and the marine environment for different resources. In addition, a GEF project aimed at preserving coastal and terrestrial landscapes is about to be implemented.

4. Analysis of the implementation process

4.1. Project management

64. FAO acted as GEF agency and as the project executing agency. As GEF agency, FAO was responsible for supervising the project to ensure that GEF's policies and criteria were met and that the project managed to fulfil its objectives and achieved expected outputs in an efficient and effective manner. FAO reported project progresses to GEF's Secretariat; financial reports were delivered to GEF's Trust. FAO closely supervised the project (through its Investment Centre) providing technical assistance (through its Fisheries and Aquaculture Department) and carried out field missions. FAO's Representation Office in Uruguay was the project budget holder and ensured the project's timely execution and administrative and financial management, including fund delivery.

65. The General Direction Commitee (GDC) was responsible for determining the plan of action and for decision-making. It met yearly and approved annual Budgets and Work Plans. It was composed of DINARA's Director General, the NFMP Director, the NFMP-GEF MSP Scientific and Technical Directors and the project National Coordinator.

66. The Project Advisory Committee (PAC) was a multi-institutional team that provided technical advice and facilitated implementation of project activities in other sectors and institutions at the technical level. The Committee was responsible for: (i) strategic actions; (ii) assessment of progress and timely fulfilment of project objectives; and (iii) identification of possible corrective actions and/or adjustments during project implementation. The PAC was integrated by representatives from the following institutions: (i) DINARA's Director General; (ii) FAO - Uruguay; (iii) MGAP; (iv) Ministry of Housing, Space Management and the Environment (MVOTMA); and (v) FAO–HQ's Investment

Centre and Fishery Department. The Committee worked directly with the project Scientific Director and National Coordinator. It met twice a year.

67. The Project Management Unit (PMU) was responsible for the day-to-day programme operation. The role of the PMU was to ensure coordination and execution of the integrated programme and implementation of the work plan in consultation with the GDC and PAC members. The PMU acted as the PAC's Secretariat. It coordinated work and closely followed up implementation of project activities, managed and addressed day-to-day issues and requirements so as to ensure a high level of national and local interinstitutional collaboration, monitored project progress and ensured timely delivery of contributions and outcomes. It was responsible for the production of quarterly and bi-annual project progress reports and assisted in the preparation of the final project evaluation. It prepared and coordinated implementation of the Annual Work Plan and Budget (AWP/B).

68. At the local level (pilot sites) project responsibility was conferred to regional fishery councils (RFC) which were created under DINARA's leadership and initiative. Their main objective was to promote basic EAF principles at each project pilot site, specifically to include co-management and fishery resource management. RFCs were integrated by representatives from the following institutions: (i) DINARA; (ii) local governments, (iii) national coastguard (PNN); (iv) Pilot site coordinator; and (v) local fishers associations.

69. DINARA offered office facilities and support as counterpart contribution. The project's technical assistance was provided by DINARA's technicians and two of the pilot sites were represented by a *part-time* member of the local community which was the main link between DINARA and the local community. During certain time periods *part-time* coordinators were engaged at each pilot site.

70. The Project National Coordinator had the following responsibilities and duties:

a. Plan, guide, coordinate and supervise all programmed activities, both internally at DINARA and externally with other stakeholders of the fishery sector with the purpose of ensuring that project objectives were met.
b. Actively participate in the design of instruments to improve fisheries management, both regarding human resources and lines of research.
c. Conform and/or consolidate and coordinate the different working teams in the relevant project subject areas.
d. Interact with the General Direction Committee, the Technical Coordination Committee and the Project Advisory Committee with the purpose of providing information required to evaluate fulfilment of objectives.
e. Interact with the project scientific Director to coordinate and support activities of research teams in the relevant project subject areas.
f. Coordinate activities of the members of the Project Management Unit in agreement with guidelines proposed at the different project management levels.
g. Coordinate activities with the pilot site Coordinating Units in order to ensure fulfilment of project objectives.
h. Articulate, together with FAO-Uruguay and TCU-Rome, implementation of FAO's Technical Assistance Missions agreed to in the project framework.
i. Submit project reports with the frequency required by GEF.

71. Under the general supervision of DINARA's Direction General and of the Field Operations Officer with FAO Representation Office in Uruguay and in close collaboration with the project National Coordinator, the Administrative Assistant supported the project technical team in administrative tasks.

72. FAO Representation Office in Uruguay was designated Budget Holder (BH). The BH was responsible for operative, administrative and financial tasks and authorized fund releases. Both of them were responsible, *inter alia*, of facilitating project coordinating activities including identification and recruitment of consultants and implementation of subcontracts with participant institutions and/or persons (professionals) closely related to the PMU.

73. Staff from DINARA and personnel specifically engaged to undertake required technical and scientific tasks participated in the project. Many of these tasks were developed through Letters of Agreement to take advantage of and improve information which was being already collected at some of the project sites or else to complement baseline information. Letters of Agreement played an essential role in the project and addressed the following aspects:

a. Contribute to the generation of knowledge applied to integrated fisheries management, to the creation of a system to collect information, and to fisheries co-management through human resources capacity development at San Gregorio de Polanco- Paso de los Toros (Department of Ecology and Evolution of the School of Sciences, University of the Republic);
b. Provide inputs that may contribute to generation and implementation of a strategy for ecosystem-based fishery management (Sea Sciences Unit of the School of Sciences, University of the Republic);
c. Develop a methodology for determining conditions for the development of regional fishing activities (Department of Economics, School of Social Sciences); and
d. Compile and analyse information on marine biodiversity from the area of Punta del Diablo, Cerro Verde and nearby islands, assist in the implementation of selected ecosystem-based fishery management measures with emphasis in chondrichthyan species previously identified in the area, and develop didactic materials on local diversity and ecosystem principles for students and the public in general (National Museum of Natural History).

74. The project did not have an explicit M&E Plan to record monitoring and progress made with relation to expected outputs and outcomes. The only tool used was the logical framework matrix with its indicators of outputs, outcomes and impact. This partially explains observed delays in budget delivery during the first and the final stages, delays in implementing certain activities duly reported in “Back to Office Reports”, and, by the end of the project, lack of availability of formal printed documents containing the National Strategy for Uruguay and the Management Plans for the pilot sites. Given their relevance, such documents should have been layed out as self-contained documents rather than as annexes to other documents. In order to overcome these drawbacks an assistant to the coordinator and an expert in communication were hired upon finalization of the project's first year.

75. The ProDoc logical framework was not modified during the project life. Neither were the indicators of project objectives even though the scope of some of them was restructured during project execution. During the evaluation of the project it was observed that other outputs which were not formally required had been developed and even though they were in preparation they will be of great value to move forward towards stated objectives in the short term.

76. In its early stages the project showed constraints which were pointed out by the first two LTU technical support missions mainly due to the late engagement of the project coordinator (about 3 months after commencement date) and of the project assistant (more than 1 year after commencement date) in addition to both of them having been initially hired only on a part-time basis.

77. The project was initially hindered by discrepancies between the Scientific Director and the National Coordinator due to overlapping roles or else differing visions regarding required activities. However, the major obstacle to the success of the project was lack of commitment and support by DINARA's staff. Two subsequent missions allowed the verification of the extent to which those drawbacks were being overcome. At the time of the final evaluation the ET was informed that the coordinator assistant was no longer working with the project as of mid 2013 without this being directly attributable to the project. However, this negatively affected clearance and availability of some committed outputs in time and as expected. At the time of this evaluation mission, some of them were at the final preparation stages or else waiting for FAO's clearance.

78. Several follow-up documents were delivered throughout the project life, which constitute M&E tools. The project delivered 3 PIRs and 8 PPRs showing a comparison between objectives and outputs and their indicators with initial baseline levels, mid-term expected objectives, progress made at the time of the assessments and objectives expected to be achieved by the end of the project, evaluating progress according to an unsatisfactory-satisfactory scale.

79. These reports also recorded in detail training and capacity-building activities as well as constraints and risks identified, actions taken to overcome obstacles hindering outputs and outcomes achievement, which led to less satisfactory scores, and a plan of action for the subsequent period.

4.2. Financial resources management

80. Daily monitoring of the MSP project implementation was carried out through preparation and implementation of an Annual Work Plan and Budget (AWP/B).

81. The AWP/B constituted the output of an integrated planning process. As a tool, it identified actions proposed for the following project year and provided details needed to follow up their implementation. Site-specific inputs for the AWP/B were obtained based on a participatory work plan conducted at each site through workshops. These inputs were assessed by the PMU and consolidated before being submitted to the PAC and the GDC for their evaluation and clearance. Once received and checked by the two latter, they were forwarded to FAO and GEF.

82. Upon approval of the MSP, the work plan and budget for the first year of the project (AWP/B) was adjusted to synchronize it with the timetable of preparation and reporting of the respective programme. In subsequent years the MSP's work plan and budget followed the same preparation method as established in the respective programme.

83. Due to the delay in project commencement, several expected activities were postponed, leading to a reallocation of funds among the different project components. It should be noted that this was the first GEF project in Uruguay and it brought about certain confusion in the incorporation of data into the field programme management information system (FPMIS). Initially, data was entered using as reference the different *babies* (components) but this procedure was then interrupted, as the parties arrived at an agreement to start providing the necessary economic information through a modality that would be more compatible with project management.

84. This implied using a document identified as *costing* and the budget approved in the project document. It was emphasized that observed differences had been reported to FAO-Rome. Since the *costing* document (not officially established in the project document) was very useful for management purposes due to the detailed information it contained, it was used as a model to enter the new approved budget data.

85. It should be pointed out that, in January 2013, a one-year extension was approved through Budget Revision E, without additional funding, with the purpose of consolidating project outcomes. This extension did not lead to changes to the project logical framework, objectives or expected outcomes. Modifications made were mainly related to the timetable and to operative tools used in implementing established activities. It is worth noting that co-management is a new process for the fishery sector in Uruguay and it requires human resources, as well as legal and logistic structures that had not been completely developed.

86. The project had achieved important outcomes even though some activities had been delayed, in particular, those directly related to the Fishery Act. The extension period was also used to further strengthen participatory fishery instruments and EAF concepts.

87. More than one year after the project had started, financial delivery was 20 % of the budget, which represents a substantial delay in delivery due to a weak budget planning. This may be mainly attributed to difficulties in project coordination, particularly as regards management issues. Because project management coordination demanded considerable time and a permanent interaction with FAO which often was not compatible (in time frame) with the project's technical coordination requirements it was deemed necessary to hire another person to assist the project coordinator.

88. Thus, in September 2011, a person was hired who took responsibility over management coordination and was mainly in charge of ensuring an adequate delivery, of coordinating purchases and submitting reports to FAO in time and in the proper format. The coordinator assistant dropped off the project as of the second semester 2013 without this being directly attributable to the project.

89. Similarly, by the end of the project there was certain delay in fund delivery due to outputs still pending completion. This delay reflects problems in planning which may also be observed in budget delivery, an 8 % of which was left for 2014.

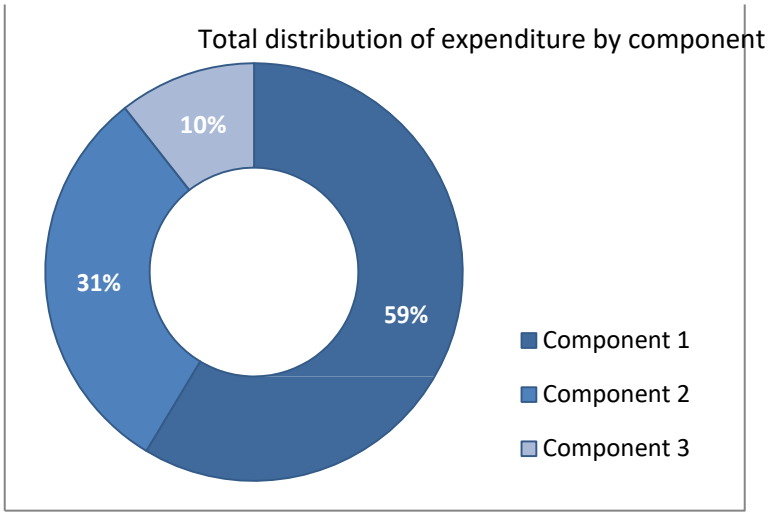
Table 2: Budget delivery by item

Budget delivery by item								
	2010	2011	2012	2013	2014	Total	Delivery as at 2013	Balance for
National Consultants	15773	42442	107204	192400	41900	399719	90%	10%
Travel	1543	21532	19214	39649	3000	84938	96%	4%
Contracts	14905	42648	100000	34112	0	191665	100%	0%
Expendable procurement	928	2717	13018	32500	5500	54663	90%	10%
Training	3547	6645	11575	28500	6500	56767	89%	11%
Professional Salaries	0	0	0	18327	6109	24436	75%	25%
Non expendable procurement	32281	21798	36701	9000		99779	100%	0%
International Consultants	0	4181	4292	5000	0	13473	100%	0%
General Expenses	1657	1988	7364	5000	8550	24559	65%	35%
Total	**70635**	**143951**	**299368**	**364488**	**71559**	**950000**	**92%**	**8%**

Source: Evaluation team

90. It is not possible to determine, out of the annual expenses (effective and presently projected for 2014), how disbursements were distributed between components, and viceversa, and what was the delivery planned for each line-item and component.

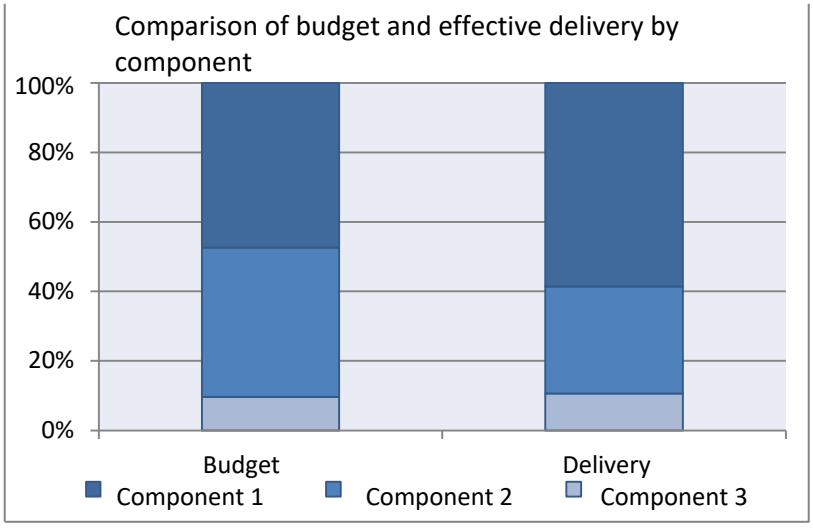
Figure 2: Total distribution of expenditure by component



Source: Evaluation team

91. Comparison of budget to effective delivery shows a reallocation of funds in favour of component 1 (+24%) and, to a less extent, of component 3 (+10%), and a reduction in component 2 (-28%).

Figure 3: Comparison of budget and effective delivery by component



Source: Evaluation team

92. Records of expenses and their assignment to budget line-items on the project budget delivery worksheets do not agreee with those initially established in the ProDoc. The project did not exceed its global budget. However, inconsistency in financial recording hinders comparison of expenses by line-item. This may lead to conclude that there has been a surplus in certain line-items, while some expenses provided for under a given line-item were actually charged to another one, which shows an overrun.

93. The high share of professionals and national consultants in the salary line-item (according to expenses worksheet F surrendered by the project), which represents 45% of the total budget, is an indicator that there is capacity in the country in terms of human resources to ensure project sustainability. However, the need to draw upon experts outside DINARA's structure is also an indicator of the need to improve specialization of staff with the institution in the specific subject areas of this project.

Funding cost-efficiency relationship

94. The project complied with UNDP/GEF concept and guidelines on incremental costs. GEF funding was used to cover the costs of activities that could not be covered by the State, this being regarded as an effective mechanism to increase the amount of information, generate new technical and scientific inputs and outputs, and promote several activities within the artisanal fishery sector. A relevant aspect that indicates a positive cost-benefit relation was the possibility of accomplishing a very high capacity building in stakeholders on a wide variety of subjects never before dealt with by previous projects. Therefore, funds were invested in generating non redundant outputs, many of them even unforeseen in the ProDoc. On the other hand, the project managed to improve relationships between institutions interested in environmental issues and related social aspects at the local level, leading to mobilization of economic resources to strengthen ventures oriented to improve post-capture conditions. The project contributed to DINARA's institutional strengthening in terms of training technical staff and raising the need to improve its structure and organization.

4.3. Efficiency and effectiveness of institutional arrangements including government participation

95. The project contributed to the enhancement of DINARA's profile in the eyes of the artisanal fishery sector through an increasing frequency of visits to the pilot sites and reduced existing tensions given that many stakeholders interpreted the continuous presence of hired and regular staff working jointly as an indicator of the institution's disposition to improve its relationship with the sector. This, in turn, contributed to a better dialogue and to fishers inclusion through informal meetings and assemblies. Although this strategy brought about many positive aspects it did not manage to completely overcome the lack of regular staff specifically assigned to the project at the pilot sites during the whole project life, particularly at those sites where conflictive situations and difficulties in the constitution and operation of fishery councils arose.

96. Participation of other government entities such as DINAMA constituted a positive aspect for the insertion of fishery considerations into management of protected areas.

97. Project development strongly benefited from close collaboration between DINARA, FAO, local governments, PNN and several participants from the academy. Such arrangements may be regarded as efficient as they optimized the use of human resources required to implement EAF. Administrative project management was initially conflictive due to lack of specific staff assigned to solve management issues and to put into practice a formal M&E plan, even though there were economic resources available.

98. Difficulties in integration of DINARA's staff with hired staff were observed. This constituted a weak aspect of the project for it was not possible to take advantage of the potential of available human resources. This situation was not general since while some members of the institution claimed to know little about the project or to not have seen the logical framework, others participated in field tasks, in Fishery Council meetings and in the development of technological improvements to fishing techniques or putting into operation wide-range automatic identification devices or the system known as AIS. This notwithstanding, it was observed that several project activities such as fishery data collection and specific biological studies at sites 3 and 4 were not implemented due to a lack of coordination or agreement upon which stakeholders should be responsible for collecting such data or obtaining certain specific outcomes based on field data. These drawbacks could not be completely overcome thoughout the project life and may be partially attributed to differences in salaries of regular DINARA staff and consultants hired by the project, as well as to different professional incentives given by the possibility of producing scientific theses or publications.

4.4. Lessons from other relevant projects incorporated in project implementation

99. The project does not mention other similar projects in the region since there are no similar projects in South America in terms of objectives and diversity of sites selected to develop management plans with an ecosystem approach.

4.5. Stakeholder engagement

100. A remarkable engagement of stakeholders was achieved by this project; the main ones are listed in **Table 3**.

Table 3: Main stakeholders in the project

stakeholders	Description	Role
DINARA	Government entity responsible for fishery management and surveillance in Uruguay. It is in charge of developing and implementing the fishery policy.	It promoted and developed the project at its different stages and levels facilitating human, technical, logistic, and economic resources.
DINAMA	Government agency responsible for developing, supervising and evaluating national plans for the protection of the environment and its resources.	It strongly supported and interacted with the project through technical consultations and the use of available information.
School of Sciences, University of the Republic	Includes a Vertebrate Zoology Section and a Sea Sciences Unit.	It provided human resources of several levels to work with the project and produce expected outputs.
National Museum of Natural History at Montevideo	An Executive Power institution and a dependency of the Innovation, Science and Technology National Directorate (**DICyT**) with the Ministry of Education and Culture (**MEC**) which puts together and maintains biological, palaeontological and geological collections with research and dissemination purposes.	It provided human resources to fulfil objectives related to biological aspects.
Pro-Foundation Association for Social Sciences	A Foundation with the School of Social Sciences.	It provided human resources to fulfil objectives related to socio-economic aspects.
Intendencia Municipal de Canelones (Canelones Local Government), authorities in Paso de los Toros, San Gregorio	The Intendencia Municipal is the department's executive body.	Local authorities supported the different project objectives through administrative management services .
Karumbe	Non-governmental organization concerned withn the protection of endangered marine biodiversity.	It provided biological information of interest to the project.
FAO's Representation Office in Uruguay	FAO is the main organism with the United Nations responsible for guiding international hunger relief activities.	It administered and supervised efficient and effective use of GEF resources, monitored progress and provided technical assistance to ensure quality of outputs and outocmes.
PNN (National Coastguard)	Responsible for navigation surveillance as Police Authority in maritime, fluvial and lacustrine areas under the Army's jurisdiction; it participates in vessel flagging and has record-keeping functions.	It collaborated in fishery data collection and supported the project field work.
Educational institutions	Public schools and highschools.	Participated in information dissemination and educational activities.
UTE (National Electricity Company)	Power plants and electric facilities. It is the company in charge of operating Rincón del Bonete reservoir.	It collaborated with the project at different levels, providing subsidies and logistics.

ANCAP (National Administration of Fuel, Alcohol and Portland)	Public company that has the monopoly for the production and administration of alcohol, fuel, and concrete, as well as for importing, refining and selling petroleum by-products.	Contributed with fuel subsidies.
DyCS (Dirección General de Desarrollo y Cohesión Social, Promoción y Prevención de Salud de la Comuna Canaria)	National Directorate for Development and Social Integration, Health Promotion and Prevention of the Canelones Local Government.	It provided human resources of several levels to work with the project and produce expected outputs.
MIDES	It develops programmes to promote participation of different stakeholders and institutions within the territory.	It provided human resources of several levels to work with the project.
ANII (National Research and Innovation Agency)	It works in the design, organization and administration of plans, programmes and instruments for scientific and technological development and the promotion and strengthening of innovation capacities.	It granted economic resources to several project participants.
Artisanal fishers associations	Fishers that have specifically grouped to discuss either in meetings or informally project-related issues.	They participated in workshops, trainings and courses.

Source: Evaluation team

101. Most stakeholders became engaged at the commencement of the project, relating with it through fishery councils, workshops, related festivities, drawing contests, etc. In some sites, such as site 4, fishers participated from an early stage since de planning process lasted more than 4 years (September 2008 to September 2011). A very good interaction with the fishery sector was accomplished through specific activities such as field work and workshops on marine biodiversity, comanagement concepts, EAF principles, user rights regime, post-harvest practices, beach conservation ecology and management, fishery technology, artisanal fisheries, and biological information required for decision making. These workshops served to attract fishers and to explicitly incorporate local ecological, fishery, and socio-economic knowledge to ensure success in operative management measures. During these workshops fishers were asked about fishery and environmental issues.

102. Fishers' contribution to the development of the logical framework, however, was limited, even through at sites with previous activities fishers' inputs were used for project conception. In contrast with the wide inclusion of the governmental sector, the civil society, and non-governmental organizations -though to a less extent-, the scarce participation of the fishery industrial sector is to be noted as well as the virtual non intervention of agriculture and stock-breeding related entities.

103. It should be pointed out that the project promoted education on various EAF aspects through several dissemination and educational publications.

104. The decision to conduct these activities is an indication of the close interaction between the project staff and the fishers, and women's involvement in several of these activities should be highlighted. Among participating stakeholders it is possible to distinguish three categories: i) Primary stakeholders, represented by fishers' associations, DINARA and the School of Sciences. These stakeholders constituted the foundation for the project due to their relevance and influence. Fishers because they were the direct beneficiaries, DINARA because it was the institution responsible for conducting and

promoting the project jointly with other stakeholders, and the academy because it provided much of the required technical and scientific skills; ii) Secondary stakeholders, which played a relevant role, though with less influence, and comprises DINAMA, FAO's Representation Office, PNN, Local Governments; and iii) Tertiary stakeholders, which included NGOs, ANII, UTE, ANCAP, MIDES, MVOTMA, educational entities, etc.

5. Relevant project results

5.1. Outcomes and outputs

105. The following includes considerations related to achievement of objectives, outcomes and outputs, contained in annex 12, and also to indicators in the logical framework matrix.

106. Management plans were developed for sites 1 and 4 so as to ensure operation of Ecosystem-based Fishery Management Functional Units (EFMFU) as a tool for fishery management and for conservation of Uruguayan coastal ecosystems with the purpose of reversing or mitigating deterioration trends in artisanal fisheries and maintaining ecosystem processes.

107. Fishery councils were created as management tools and as a mechanism for dialogue, thus setting the basis for the application of comanagement principles.

108. The project contributed to substantially overcome barriers that kept artisanal fishers excluded from government management policies and to reduce top-down interaction while replacing it with more transversal interactions.

109. Emphasis was placed on the identification of Marine Protected Areas (MPA) as EAF tools oriented to enhance management of fishery resources and biodiversity conservation.

110. Biological and socio-economic information was jointly analysed and entered into a Geographic Information System (GIS). This involved compilation of 30 years' worth of ecological descriptors (number of species, abundance, biomass, breeding and spawning grounds, type of habitats), fishery descriptors (catch, fishing intensity , CPUE), socio-economic descriptors (urbanization, tourism) and legal ones.

111. Different EFMFU were defined through participatory mapping. This allowed the delineation of : a nucleus zone, encompassing key habitats for reproduction, feeding, recruitment, etc; fishing zones subject to comanagement, for which criteria for artisanal fishing exploitation have been set by means of regulations oriented to the sustainable use of fishery resources; a buffer zone, in which fishing activities are managed through traditional measures (i.e. control of fishing intensity and use of selective techniques) in order to ensure effectiveness of the adjacent nucleus zone; and a zone for "public use", in which diverse socio-economic activities are permitted (i.e. tourism, recreation) except collecting resources that may reduce biodiversity in the area and sustainability of fishery exploitation in adjacent managed zones.

112. Macro-ecological analysis of the Uruguayan coastal zone allowed the creation of more than 35 ecosystem indicators including ecological, fishery, and socio-economic elements, environmental regulations and risk factors or threats to EAF objectives, many of them associated with baseline levels. Within the study area, 15 coastal-aquatic habitats were identified as well as areas with spacial overlapping sub-environments mainly related to rocky outcrops, islands, subestuaries and the modal turbidity front.

113. A detailed site 1 zoning was produced with the joint participation of fishers and authorities, and 5 sectors were distinguished for which different management and conservation measures were proposed for the yellow clam fishery and the development of other activities.

114. The effect of fishing, market prices and climate variability on exploited resources was assessed at site 1, quantifying the negative effect of increases in sea surface temperature anomalies.

115. Also the trophic structure was determined for the sandy ecosystem at La Coronilla – Barra del Chuy (site 1); trophic relationships and the extent of the trophic web were studied.

116. The effect of agrochemicals on macro fauna populations was assessed for La Coronilla – Barra del Chuy sandy ecosystem and spatial and temporal variations in pesticide load in water and sediment was determined for three locations differently affected by their discharge.

117. The structure of the bird assembly that use La Coronilla – Barra del Chuy sandy beach was determined, as well as the dynamics of such assembly and the food resources they depend upon.

118. At site 3, additional fishery information was collected through the development of more complete logbooks, fishing intensity maps were produced for the different fleets (industrial and artisanal) operating there, and maps were also produced to determine and quantify distribution of fishing areas of potential conflict for the use of space between the industrial and artisanal fisheries. These allowed the reduction of the intensity of interdependencies between fisheries, mainly promoting measures to control coastal trawling fishing intensity between 7 and 12 nm.

119. Baselines for biodiversity were determined at site 3 through the analysis of existing published and unpublished information with the purpose of developing criteria for ecosystem-based management.

120. Artisanal fishery social and economic information was collected at San Luis and San Gregorio de Polanco to be incorporated in a multi-criteria analysis to assess socio-economic capacity and potential for the development of regional fishing activities as a decision-making tool to promote their development, thus providing DINARA with realistic criteria to decide on interventions and whether or not to assign resources thereto.

121. At site 3, a multi-criteria analysis was performed for the implementation of EAF measures based on the Ecological and Fishery Conservation Priority Index (ECPI), thereby identifying areas with the largest number of ecological, fishery and social indicators as well as with environmental legislation that would facilitate effective implementation, and also the least amount of conflicts which may hinder their implementation.

122. Complex technological devices (AIS) were used at site 3 for a better knowledge of the artisanal fleet fishing grounds with the purpose of improving surveillance of fishing activities, and new procedures were developed to improve the quality of artisanal fishery information.

123. The project contributed to the improvement of post-capture processes by means of simple technologies oriented to improve quality of fishery products (bivalves) at site 1, and in the short term it will have influence on marketing mechanisms by reducing the intermediary chain thus improving economic benefits for fishers at site 3.

124. Progress was made in identifying alternatives to reduce incidental fishing in the trawling fleet at site 2 and in improving fishing yield at site 4 by increasing mesh size to reduce capture of fish that has not yet developed its growth potential.

125. A zoning was made at site 4 to provide guidelines for managing fisheries in the area, reducing conflicts between artisanal and recreational fishers with different fishing power, improve equity in the activity, protect relevant habitats in the ecosystems and preserve traditional artisanal fishing activities and main resources.

126. Fishers became more aware of the importance of their participation in data collection and the benefits of obtaining reliable and regular fishery information, affirming the value and usefulness of their ecological knowledge in ensuring more effective management. Evidence of this is their interaction to develop participatory maps which served as bases for a better management of fisheries and for the adoption of specific regulatory measures.

127. As for education, the project has carried out an intense environmental education and awareness-raising campaign at different social levels, promoting ecosystem principles as the basis for fishery sustainability in the region. The project worked with local schools and produced didactic material on EAF principles addressed to students and the public in general.

128. The project has produced abundant dissemination materials for fishers and researchers such as a book on the Río Negro ichthyofauna that will contribute to a better identification of fish in the field, as well as a booklet containing practical guidelines for the application of the ecosystem approach to fisheries.

129. In addition, the project produced a handbook for the application of the ecosystem approach to fisheries in Uruguay as a basis for the development of the National EAF Strategy. This document is addressed to decision-makers and resource managers and is expected to be adopted by DINARA.

5.2. Gender equality

130. This aspect was not explicitly addressed in project design, and no activities were observed related to assessing how gender relations could be improved or strengthened by the intervention at pilot sites. PPR´s show the number of people that participated in each meeting or training separated by sex. (see Annex 7). The ET observed little participation of women at the fishery councils and meetings held with fishers to evaluate project performance. These aspects may be related to the different roles and cultural barriers that characterize artisanal fishing communities in Uruguay, where women are basically restricted to fish processing but do not have an active influence or voice in community decisions. In subsequent stages the project could balance these scenarios maybe encouraging women to gather together to deal with issues of particular interest to them, thus managing to have greater visibility. This notwithstanding, DINARA may also promote participation of women in fishery councils.

5.3. Institutional alliances and partnerships

131. Alliances between participating institutions are regarded as satisfactory since a strong cooperation was achieved at several sites. Joint work between DINAMA and DINARA to optimize the approach to fishery resource management at site 2 is an indicator that these synergies have yielded good results, even though in some cases legal aspects have not yet been favourably solved and have experienced delays. In this context, the project contributed to a better articulation between fisheries management and environmental policies by promoting a shared vision on the benefits of creating marine protected and managed areas where preservation of key habitats for the development of fishery resource biological cycles are duly taken into consideration.

132. Cooperation of Canelones local government and San Gregorio political authorities with the project was remarkable. In the first case, a close relationship was achieved with COSTAPLAN which stands for the Canelones local government territorial management plan and is involved in design and establishment of a new market for selling fishery products. Additionally, and by means of the Community Network, a socio-economic and fisher household census was conducted with this government at San Luis fishing community, which was used to identify deficiencies in essential services.

133. A close collaboration with MIDES was encouraged which led to an agreement for the exchange of information related to the development of socio-economic indicators and incorporation of fishers' traditional knowledge in management plans. In turn, joint efforts were made with Canelones local government DyCS to implement the fisher census at San Luis community. On the other hand, the project established a close relationship with San Luis community network.

134. The working alliance with the local Coastguard at site 3 should be highlighted. This enabled to expand and improve data recording in logbooks to include information on spatial distribution of fishing grounds, type of fishing techniques , as well as fishing intensity of the artisanal fleet off the Canelones coastline. However, this alliance was also unevenly efficient. For instance, support by the local Coastguard at site 4 to collaborate in collection or delivery of fishery information was very limited due to institution's staff and budget constrains at this region, and it is uncertain whether this situation will change in the near future. This points out the need to underpin DINARA's activities in the region with regular staff.

135. The project also established strategic alliances with some NGO's and national universities on environmental issues which contributed to take into account, mainly through Letters of Agreement, other aspects that had not been addressed in the original proposal, such as chelonia and chondrychthian mortality, use of information from natural protected areas close to site 2, and effective inclusion of previous research results at site 1. However, some institutional relationships could have been closer as is the case of NGOs. Even though the project interacted with some of them, NGOs seem to have had a small participation despite the fact that they play an important role in social aspects in Uruguay.

136. **Table 4** summarizes project rating according to criteria set forth in the TORs.

5.4 Project rating

Table 4: Project rating

Evaluation criteria	Rating	Comments
Achievement of objectives	**S**	The project managed to create the need to adopt EAF as a framework for future fisheries management, implying a shift in management paradigms by favouring greater involvement and horizontal interaction.
Accomplishment of outputs and activities	**HS**	Different high-quality outputs were produced by means of well-planned activities and a high involvement of fisher communities.
Cost-efficiency relation	**S**	Relation between activities conducted and funds used was appropriate.
Impacts	**HS**	The project has demonstrated to have had a good reach out with different artisanal fishery related stakeholders.
Risk management	**S**	Risks were regularly monitored.

Sustainability	**MS**	There is some uncertainty regarding DINARA's capacity to adjust its operation and structure to continue and expand the project in the long term.
Stakeholder engagement	**S**	Adequate stakeholder engagement in 3 of the 4 sites.
Appropriation	**MS**	While DINARA's Direction General showed a strong commitment with the project, the same was not observed in all its staff. Other government entities also showed a great interest in the project.
Implementation approach	**MS**	The project made adjustments and modifications that were not necessarily reflected in the logical framework.
Financial planning	**MS**	Budget delivery was not always in agreement with expected time frames.
Replicability	**HS**	The project is highly replicable and could currently be implemented at other sites.
Monitoring and evaluation	**MS**	Several products were unfinished or pending printing at the time of the evaluation.

Source: Evaluation team

137. Results were rated according to the following scale:

- ***Highly satisfactory (HS):*** The project does not have deficiencies or obstacles preventing accomplishment of objectives in terms of their relevance, effectiveness and efficiency.
- ***Satisfactory (S):*** The project has minor deficiencies hindering accomplishment of objectives in terms of their relevance, effectiveness and efficiency.
- ***Moderately satisfactory (MS):*** The project has moderate deficiencies hindering accomplishment of objectives in terms of their relevance, effectiveness and efficiency.
- ***Moderately unsatisfactory (MU):*** The project has significant deficiencies hindering accomplishment of objectives in terms of their relevance, effectiveness and efficiency.
- ***Highly unsatisfactory (HU):*** The project has major deficiencies hindering accomplishment of objectives in terms of their relevance, effectiveness and efficiency.

6. Analysis by evaluation criteria

6.1 Relevance

138. The project is consistent with the need of the country to adequately manage its fisheries and encompasses the willingness of society to preserve the fishery resources through a considerable improvement in the regulatory framework. Is is also consistent with the new Fishery Act passed in Uruguay (Act 19,175) which explicitly supports management processes under an ecosystem approach. On the other hand, it has potential for providing valuable inputs to other GEF projects to be implemented and to the development of the SNAP where the fishery component is of great relevance and it is necessary to introduce ecosystem criteria to preserve fishery resources.

139. The project made an attempt to encourage complementary activities in support of policy in general and of the new National Fishery Act in particular, by making scientific contributions that would serve to promote integration of EAF principles into the country's new national legal framework. The project is aligned with Strategic Objective 1aimed at “Sustainability of the Protected Area System”, and with Strategic Objective 2 aimed at “Increasing biodiversity conservation in terrestrial and marine landscapes”, of GEF's biodiversity strategy. Specifically through Objective 1, the project attempted to increase representativity of effectively managed marine protected areas.

140. At the national level, this GEF project has the capability of interacting with other similar projects such as:

- Implementing Pilot Climate Change Adaptation Measures in Coastal Areas of Uruguay;
- Reduction and prevention of contamination from terrestrial sources in the Río de la Plata and its Maritime Front through implementation of FREPLATA's Strategic Action Plan (SAP); and
- Support to the National Protected Area System (SNAP) in Uruguay.

141. The project under evaluation is also consistent with the Code of Conduct for Responsible Fisheries, by promoting more friendly fishing practices, and with FAO's technical guidelines for an EAF based on biodiversity conservation and social equity. It follows, on the other hand, FAO principles promoting a sustainable use of fishery resources with the purpose of contributing to social welfare through food security and poverty alleviation. It is also in line with the following FAO's strategic objectives:

- Improve fishery governance, which in the case of the project was achieved through the creation of fishery councils;
- Improve the status of resources and ecosystems through an effective management of the catch, which in the case of the project was achieved through regulatory measures to better mange fishing activities and to reduce their impact on protected areas and through collection of fishery data to produce catch and intensity estimates;
- Improve fishery technology in order to ensure the least possible impact on the resources and the environment, which was covered by the project through the development of devices and by adapting fishing techniques to reduce incidental and juvenile catch; and
- Develop post-capture and marketing processes for a more responsible use of the resources, which was contemplated in the project by the development of technologies to enhance quality of fishery products (bivalves).

142. An innovative and relevant aspect of the project was the application of the concept of Ecosystem-based Fishery Management Functional Units (EFMFU) as sites jointly managed by the government and key stakeholders. Within these EFMFUs, biodiversity, ecosystems and natural resources are expected to be continuously preserved so that they may produce environmental goods and services enabling a sustainable development. Also, in these EFMFUs, and through intense involvement of fishers , new governance approaches are expected to be implemented, fishers' socio-economic situation would be improved, negative trends in the catch would be reduced/halted, and the structure and function of the aquatic ecosystems would be preserved.

143. Another aspect that underlines the project's relevance is its strong interconnection with the National Fisheries Modernization Programme (NFMP), currently in progress , particularly by providing inputs to promote: restructuring and modernization of DINARA's institutional structure; implementation of a sound aquatic resource management system; reduction of incidental and by-catch, diversification of fish production; as well as redefinition of the artisanal fisheries subsector, including implementation of a new management institutional structure. It is, on the other hand, in line with the development strategy of the fishery sector in Uruguay as it seeks to better manage artisanal fisheries and contribute to an improvement in fishers' socio-economic situation.

144. The project specifically addresses the country's needs since management and surveillance provisions were not efficient enough and it was evident that little attention was placed on the needs of the artisanal fishery sector and also that there was little capacity for conflict solving. On the other hand, management of artisanal fisheries lacked a more comprehensive framework that took into consideration socio-economic issues. In addition, freshwater fisheries were incorporated as a management target.

6.2 Efficiency

145. The project was efficient in making use of most of the available human resources with strong interest in participating, even though involvement of DINARA's staff could have been more effective. Collaboration of other related government bodies, even in social aspects, should be highlighted as well as the participation of local organizations.

146. Even though financial resources were rationally used which allowed implementing almost all stated activities, budget delivery was not even during the project life. DINARA did not spare efforts to supply the required materials, equipment and staff.

147. The staff more directly involved in the project showed sound technical knowledge and a clear perception of how to achieve stated objectives through development of outputs of proper quality and applicability. This turned out to be crucial to overcome observed constraints in the logical framework which was not modified throughout the project.

148. Lack of regular staff at the pilot sites to coordinate tasks, encourage activities or take part in conflict solving may constitute a barrier to project governance. It would be convenient that DINARA established regional delegations as part of the restructuring process.

149. Project efficiency was hindered by the fact that project complexity was somehow underestimated as no staff qualified in project management was engaged from the outset and also by the differences in criteria to guide the project between the technical coordinator and the scientific director. This led to delays in meeting deadlines for output delivery.

150. Administrative processes for budget delivery were correctly implemented showing there has been an adequate follow up and control by FAO's Representation Office in Uruguay. The project did not use all the human resources that would have been necessary from the beginning since it lacked a project assistant to back up the project coordinator and to supervise the course of activities.

151. M&E mechanisms were essentially based on reports required from the project whereas it would have been desirable to explicitly develop a plan following GEF guidelines to ensure timely and proper project performance.

152. Failure to implement an explicit M&E plan prevented delays in activities and outputs from being rapidly adjusted during the initial project stages. However, PPRs and PIRs were adequately used to monitor project progress. Section 3 of PIRs, in particular, allowed to compare the baseline situation with different project instances, even though progress was not rated in percentages. Monitoring was strengthened by several committee meetings and 4 by FAO missions aimed at monitoring project development.

153. The project was efficient in hiring human resources to develop technical work, but not as much for administrative tasks due to late implementation of corrective actions to improve project management.

6.3 Effectiveness

154. The project produced numerous outputs, several of which had not been originally expected. At the time the evaluation was carried out, several outputs were still being completed and final documents were still in preparation or had been recently forwarded to FAO for revision and clearance. Others, on the other hand, had been cleared but were still pending editing or publishing. For this reason the project's effectiveness regarding expected outputs may be deemed moderate. This notwithstanding, total output production should be underlined and also the possibility of them being published upon project completion through DINARA's own economic resources. Some of the stated outputs such as the National Ecosystem Approach to Fisheries Strategy and Site Management Plans were found to have benn inserted in other documents as chapters or annexes, and this concern was communicated to the project scientific director since, as these are highly relevant documents that constituted, to a large extent, some of the project's pillars, they should have had their own identity and greater visibility. Management Plans were developed for only two of the four pilot sites; at the time of the evaluation, that for site 4 was still being completed.

155. As to implementation, it may be asserted that the project showed high effectiveness given that in a very short time-frame it managed to put in place a co-management process not only through creation of fishery councils endorsed by DINARA but also because this reflected a change in vision of an entity historically oriented to conventional management. This successful implementation was related to the outstanding work carried out by the project general coordinator by establishing a close relationship with the artisanal sector, backed up in turn with a highly qualified scientific director and his collaboration team, and the valuable experience of DINARA's staff who had already had previous interaction with fishers at the different pilot sites. Outcomes achieved were diverse with uneven effectiveness at the different pilot sites, which must be partly attributed to previous working experience at each of the sites, the different issues identified, and to intrinsic difficulties related to asymmetries in social and environmental capitals among sites.

156. The project had an institutional framework based on the participation of DINARA, an entity with already certain presence at the pilot sites, which facilitated a closer understanding with the sector. Letters of Agreement, on the other hand, strongly contributed to increase or consolidate this type of knowledge and to achievement of expected outcomes. However, involvement of DINARA's staff in the project was not as high as expected since part of it did not actively participate as desirable in data collection and processing or even stated not to be much acquainted with the project. DINARA's poor involvement may also be explained by the fact that at project commencement the Fishery Act had not been yet approved. Most project activities were conducted by hired staff and this hindered efficient use of human and economic resources. Nevertheless, the Direction General of this entity showed a permanent concern in overcoming existing constraints and ensuring achievement of stated objectives.

157. On the other hand, the project promoted a better association between local governments and the community through developing local management capacities, environmental education and raising public awareness on issues such as biodiversity and protected areas, which denotes an efficient strategy. Creation of fishery councils acted as a strong incentive to consolidate relationships between local governments and the project. Professionals with Canelones government were observed to have actively participated in the design and development of a new fishery product market and accessory facilities as part of the COSTAPLAN project which addresses land management needs at Ciudad de la Costa.

158. Activities conducted throughout the project included training human resources at several specialization levels, dictating lessons, courses and graduate or postgraduate mini-courses and capacity-building courses (DINARA) regarding key EAF-related concepts. A project value added was the possibility it offered to conduct several graduate and postgraduate theses, including staff with DINARA, aimed at developing capacities to deal with the EAF in the country, which resulted in local and international publications. This constitutes a valuable capital which may have long term impact provided these resources are incorporated into the national scientific system.

159. Graduate and postgraduate human resources were also trained at courses organized by the University of the Republic, through lectures by project scientists on project-related subjects. These courses were also implemented at teachers training institutes (high school teachers and Biology students at the Profesores Artigas Institute), at the Maritime School of the Polytechnic University in Uruguay, and for personnel involved in DINAMA's National Protected Area System, so as to reach out an important public for disseminating knowledge related to several EAF aspects.

160. It should be pointed out that the project will be terminated without having held a final workshop to report results obtained to the different stakeholders. This omission is considered a drawback as it may somehow hinder the good image the project put so much effort to build, also conditioning dissemination of results among stakeholders and eliminating the possibility of receiving direct feedback to improve project achievements in the future.

6.4 Project sustainability

161. Overall the sustainability of the project is believed to depend on its own capabilities but also on different externalities associated to execution processes with their own time requirements. One such case is the regulatory framework for the new Fisheries Act, another one is DINARA´s capacity to engage additional staff. Institutional sustainability demands a restructure in DINARA which is still pending but that may be partially compensated by the engagement of new staff effective in 2015. Clearly DINARA needs more staff to process and update fishery information from landings' and fishers' censuses, better capacities to improve or expand *in situ* fishery sampling, needs to create regional delegations, address social and economic fishery-related issues, etc. These constraints are not exclusively related to the project but, in a way, they hinder the institution's opportunity to ensure project continuity. There are, however, other sources of support, such as the National Research and Innovation Agency (ANII) system, local support by Governments, converging criteria with DINAMA on management of protected areas, interest shown by the Rural Development Network, which may assist while the stated institutional restructuring takes place.

162. Financial sustainability may be enhanced with funding from the Fishery and Aquaculture Facility provided for in Act 19,175 and with funds to cover research expenses granted by ANII, but which will always be short-lasting. This is because this institution supports and promotes research and grants research funds but with limited duration. In fact, part of the financial resources used for several project activities were granted by this agency. Contributions from local governments in infrastructure are also expected, as is the case of the fish market under way at site 3 which will play an important role in improving the marketing process and optimizing economic benefits from fishing.

163. Technical sustainability may be jeopardized in the short term due to insufficient human resources with DINARA to ensure, on their own, project continuity. Part of its staff is well qualified, has vast experience on artisanal fisheries but is not much motivated to participate due to low salaries and lack of professional stimuli. A feasible option to

strengthen technical aspects is to ensure continuation of project staff through ANII, particularly of individuals with curricular objectives that may motivate them to build on project achievements, as well as the renewal of contracts and letters of agreement with universities and other organizations.

164. Environmental sustainability will be, on the one hand, undermined by problems that produce local impacts and even by uncertainties in institutional competencies over biological resources and certain coastal habitats, risks due to oceanographic externalities, climate change. hydrotechnical works, increasing over- and incidental fishing risks, and, at the same time, favoured by the significant progress made in the delineation of reserve areas with managed resources, identification of areas where territorial user rights could be applied and the protection (closed areas) of critical habitats for the life cycle of target species.

165. Finally, political and institutional sustainability is strengthened by favourable conditions for the maintainance of social inclusion strategies in the country provided the government political priorities remain unchanged in 2015. The approval of a new Fishery Act which promotes the creation of a Fishery Consulting Committee and Regional Artisanal Fishery Councils grants a strong institutional support to the project and this will further improve once the corresponding regulatory framework is developed.

6.5 Project impact, catalytic role and potential for replication

166. The project marks a shift of paradigm in the management concept of Uruguayan artisanal fisheries by attempting to replace conventional management focussed exclusively on target stocks, scarce participation of fishery-related stakeholders in decision making and lack of an holistic approach which incorporates biodiversity and environmental conservation with an ecosystem approach that takes into consideration these and other aspects.

167. The project has a remarkable capacity for generating impact in the short term, as it has increased public awareness, improved technical skills and developed human resources, and has also influenced mass media and local stakeholders. Its impact will be important since it has contributed the reduction of cultural gaps between fisher communities and other social sectors, and revalue artisanal fishers' culture.

168. The project opens a path for the artisanal fishery sector to acquire knowledge to better understand issues related to fishery management as socio-ecological systems and even adopting post-harvest practices that enable them to increase economic benefits. All of the above is expected to remain in the long term.

169. The project has impact on resource conservation and management strategies in marine and coastal areas, which will be useful for areas that are still without protection. This is important since many estuarine and marine coastal ecosystems in Uruguay have been catalogued as conservation priorities in Latin America and the Caribbean.

170. The project has a significant impact on science by validating EAF as a management tool. It shows it is possible to apply ecosystem-based management on different types of artisanal fisheries and under different situations but that it should be based on reliable information and on the use of the latest assessment methodologies that may pertain to the spectrum of ecology, sociology, biology, oceanography, limnology, etc. In this way, the project contributes to the encouragement of an holistic approach to managing fisheries as an appropriate scientific tool to maintain them at sustainable levels.

171. The project's catalytic role on environmental aspects will become more evident as progress is made in improving uses of land and water. An important outcome of this project is showing the need to pay attention to how the environmental setting of any fishery affects its quality and even its feasibility. Sites 1 and 4 have visible effects of the use of land through often contaminating agriculture practices that affect water quality, landscape aesthetics, the possibility of producing mortality, etc. In this sense, the project has served to make fishers more aware of the need to also avoid bad productive practices and not only pay attention to inadequate fishery practices.

172. At the educational level, the project influenced educational curricula of institutions at the intervention sites and raised awareness in young people of the value of conservation and responsible use of resources for the benefit of society.

173. The project has built a platform, still preliminary due to its pilot nature, which turned out to be effective for the involvement of different sectors with interest in the development of a co-management experimental model. It has a high potential for being replicated elsewhere in the country given the legal support provided by the new Fishery Act. In addition, it constitutes a promising model to be replicated in the region provided it is possible to train, raise awareness in related sectors and disseminate its achievements. At present there is a specific demand for creating fishery councils at two new sites, outside the project, which demonstrates that there is particular interest in expanding its reach.

7. Conclusions and Main Project Achievements

174. The implementation and completion of this project constitutes a strong indication that the Uruguayan government has recognized the need to develop a fishery policy that may be sustainable in the long term through guidelines directly related to an EAF mainly built on biodiversity conservation, ecosystem health and co-management as management philosophy.

175. The project constitutes a hinge in conceptualization of artisanal fishery management in Uruguay and has a high potential for replication in the region. It has great value as a mobilizing and catalytic element to start modifying artisanal fishery management approach in Uruguay. It formally incorporates EAF as a new framework aimed at improving living conditions of fishery communities and preserving status of ecological systems and resources exploited therein, by inserting co-management as a governance model.

176. The project managed to give visibility to the issue of viewing fishery management as a multidimensional problem embracing not only fishery aspects but also environmental, social, and economic ones. This approach was not so evident in the country's artisanal fishery management, or rather, it could not be completely developed under the conventional approach traditionally applied. Through appropriate legal instruments set forth in the new Fishery Act, the co-management concept was institutionalized as the main tool to implement new governance processes, develop participatory mechanisms, improve fishers' socio-economic conditions, reduce/halt negative trends in catch, and preserve the structure and function of the aquatic ecosystems.

177. The project had some design flaws since certain objectives and outputs are believed not to directly depend on the project performance but rather on political and administrative externalities. Certain indicators were ambiguous, not specific enough and even conceptually inappropriate. The logical framework matrix was not adjusted as required following changes detected as the project evolved.

178. The project could not achieve all expected outcomes due to an over-estimation of available resources, objectives excessively ambitious for the established time frame, and partially inadequate statements in its logical framework regarding objectives that did not directly depend on its own performance. The largest constraints were related to the complexity of certain fisheries such as that at site 3 where tourism development hindered fishing activities leading to a reduction to just 4 boats in the artisanal fleet and to the fact that DINARA did not have project or its own staff settled at some of the pilot sites.

179. The development of the project showed it is necessary to support DINARA's institutional restructuring, so that it may effectively and efficiently continue the ecosystem-based management process and expand the EAF to other areas of the country.

180. The project promoted and stressed the need to integrate the ecosystem approach to fisheries into management of protected areas and pointed out the need for entities such as DINAMA, DINARA and academia to articulate actions and exchange information.

181. The project complemented and increased knowledge generated by previous research initiatives at the pilot sites and filled information gaps, thus making a better use of available resources.

182. The EFMFU concept, in terms of sites co-managed by the government and relevant stakeholders, was defined and promoted, and incorporated in DINARA's National Artisanal Fishery Plan.

183. The project produced valuable baseline information on the biology of the main target species and environmental aspects at the pilot sites. Improvements were made in collection of fishery data, such as catch and fishing intensity of the coastal fleet, through a more complete logbook and the use of electronic devices that monitor the movements of the fleet.

184. The project promoted the use of tools for EAF application based on multi-criteria analysis aimed at identifying priority conservation areas, reducing conflicts in use, implementing TURFs, as well as assessing socio-economic capacity and potential for the development of regional fishing activities.

185. A closer and more active participation of different stakeholders from civil society was encouraged by creating or strengthening Fishery Councils as a mechanism to trigger participatory processes and to improve governance by modifying the government's and fishers' view of their role in fishery management.

186. It was demonstrated that it is possible to incorporate fishers into technical data collection processes taking advantage of the valuable ecological knowledge they have of the natural resources.

187. The project has significantly contributed to human resources development at the educational and academic level through training courses and support to graduate and postgraduate theses.

188. Abundant scientific and dissemination materials were produced in support of applying an ecosystem approach to artisanal fisheries in Uruguay.

189. The environmental education and public awareness programme was one of the project strengths and constituted a key mechanism to keep the public informed on project development and achievements.

190. Project continuity is still uncertain due to DINARA's structural and operative constraints, discontinuity of staff hired by the project and the high dependency on research funds to complete and complement required outputs and outcomes.

191. In favour of its continuity are the following project achievements: number of relevant outputs produced, quality of human resources developed, consolidation of fishery councils, appropriation of the project by DINARA's Direction, and the belief of many stakeholders that the process must be further developed, aided by the availability of already experienced staff.

192. In promoting the ecosystem approach, the project does not seem to take into account gender considerations, concealing women's roles in the fishery sector and their differential needs.

8. Recommendations

193. The success of the project demonstrates the importance of being capable of establishing good relationships with the fishery sector and communicating concepts underlying EAF, of having an appropriate technical and scientific baseline, of having a strong institutional support and also a demonstrated decision on the part of governmental institutions to take the lead in these processes as well as to promote empowerment of local organizations and establish co-management as a mechanism to take them into account in decision making.

Recommendation 1 to FAO and the Government:

Strengthen synergies especially between DINARA and other organizations such as DINAMA, PNN, Local Governments, NGOs.

Recommendation 2 to FAO and the Government:

Promote creation by DINARA of regional delegations for a better implementation, surveillance and monitoring of management plans, a higher visibility of the State institutional presence and also to encourage a closer relationship with the fishing communities.

Recommendation 3 to FAO and the Government:

Involve all stakeholders at all levels and strengthen and promote synergies and collaboration mechanisms between them so as to ensure the accomplishment of co-management as the basic strategy to move forward towards full ecosystem-based fisheries management in Uruguay. This implies strengthening the operation of fishery councils and trying to meet the expectations of the different stakeholders involved in them; inserting recreational fisheries particularly in coastal areas as a key element in fisheries management considering they fish for resources shared with artisanal fisheries, there are territorial conflicts and they are subject to different control and legal measures; promoting inclusion of the industrial fishery sector with the purpose of extending the basis and scope of ecosystem management to large-scale fisheries; and incorporating productive sectors with activities that directly impact on the quality of the aquatic environment.

194. Since it is unlikely for Uruguay to create in the short term an institution oriented to fisheries evaluation and development in line with national policies and with a high capacity to develop qualified human resources and to integrate them into its staff, it is necessary to encourage an effective institutional modernization in DINARA. This will require changes in the institution's structure and in the organizational chart aimed at a more hierarchical structure by separating, as far as possible, scientific and technical operations from the administrative component.

Recommendation 4 to FAO and the Government:

Design in the short term a strategy based on identifying economic instruments and mechanisms and required human resources (experts in fisheries aspects as well as in social, oceanographic, economic and post-harvest technological and other issues) so that DINARA may ensure an adequate sustainability of project outcomes.

Recommendation 5 to FAO and the Government:

Promote concepts of good fishing practices and encourage their application in those communities where there are signs of excessive fishing intensity or even overfishing, unauthorized catch (species, sizes), lack of knowledge of specific regulations (closed seasons and areas) or use of non-selective or unauthorized fishing techniques .

Recommendation 6 to FAO, GEF and the Government:

Promote training in fishery product processing techniques, value added and marketing strategies with the purpose of generating feasible alternative technologies thus promoting a more rational resource use, a reduction in fishing intensity and an increase in economic benefits for the artisanal sector.

Recommendation 7 to FAO and the Government:

Actively promote the concept and benefits of allocating TURFs in certain areas as an effective means of eliminating overfishing, controlling fishing intensity, increasing economic benefits, protecting critical habitats, reducing conflicts and improving user awareness of the benefits of having jurisdiction and decision-making capacity over the resources they exploit.

Recommendation 8 to FAO and the Government:

Improve biological and fishery knowledge of those aspects that were not adequately covered by the project but which are required to adjust management plans and make progress towards consolidation of EAF. In particular, it is recommended that the use of fishers' ecological knowledge be promoted and valued in order to increase information at the local level.

Recommendation 9 to FAO and the Government:

Ensure involvement and participation of women as primary stakeholders in coastal areas and enhance visibility of their role and relevance. In order to achieve this, it is important that participation of women in fishery councils be encouraged, specially by DINARA.

9. Lessons learned and future actions

195. Implementing EAF projects requires weighing their possibilities and scope before writing the project document, through an appropriate analysis of the social, economic, environmental and institutional scenarios in order to adjust the possibilities of obtaining specific outputs and outcomes and to ensure their sustainability upon project termination.

196. Success in a project of this kind may be better ensured if during project design components of the logical framework that depend on political and administrative externalities are avoided. In addition, "SMART" indicators should be selected.

197. A basic requirement to ensure effective and appropriate achievements in EAF projects is to be able to properly balance available resources with expected outcomes and, particularly, the government's capacity to make a timely and appropriate contribution as a necessary counterpart.

198. Implementing projects under an EAF should ensure establishing adequate alliances and synergies with other institutions related to social, institutional, economic and environmental aspects that may have impact on fisheries issues with the purpose of strengthening implementation processes at different levels and scales.

199. EAF projects must be flexible and adjustable so that they may be approached from social, economic, institutional and environmental perspectives , preferably in a synchronised manner, but always adjusting themselves to the special features of each fishery and its priorities.

200. Establishing the EAF concept that has co-management as its central philosophy, demands that both the government and the users agree and become engaged with the fundamentals and objectives of this approach, strengthening their interaction through participatory mechanisms that reflect transparency, credibility and mutual trust among stakeholders.

201. It is essential to have an appropriate technical and scientific baseline, strong institutional support and demonstrated decision of governmental institutions to take the lead over these processes as well as to promote empowerment of local organizations and establish co-management as a mechanism to take them into account in decision making.

202. Success of EAF projects must be ensured on the basis of widening the fishery management vision and provided adequate conditions and human resources are available and may be further developed. Communication, interpersonal relations and skills to organize working teams within the project must be regarded as essential conditions to ensure its effective implementation, and they should be granted the necessary resources in the future.

203. It is necessary to have strategies in place to reduce potential conflicts that may originate in competences and differences in salaries between the recipient institution regular staff and project-hired staff by generating equal opportunities and strengthening human resource development during project execution, thus consolidating processes required by the EAF that enable an adequate operation.

204. In the near future, project outputs and outcomes should be properly disseminated as well as the scope of the new Fishery Act by means of a workshop inviting representatives from the different pilot sites, from governmental and non-governmental institutions, and from the academy in order to show project achievements and disseminate future actions. This would grant larger visibility to project outcomes and outputs through production of *ad hoc* documents specifically addressed to fishers showing socio-economic, fishery and biological outcomes of the project.

205. Strengthening EAF requires a larger regional vision that may allow the understanding of how fishing affects shared resources and, particularly, resources with high temporal and spatial variability in the use of different habitats throughout their life cycle. For this to be achieved, a closer interaction should be encouraged among countries of the region and particularly among countries with shared resources with the purpose of communicating and discussing criteria for, benefits of and barriers to the application of ecosystem-based management in this type of fisheries so as to articulate and put into practice joint actions or measures.

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