FAO/GLOBAL ENVIRONMENT FACILITY
PROJECT DOCUMENT

PROJECT TITLE: Sustainable management of bycatch in Latin America and Caribbean trawl fisheries (REBYC-II LAC)	
PROJECT SYMBOL: GCP/RLA/201/GFF	
RECIPIENT COUNTRIES: Brazil, Colombia, Costa Rica, Mexico, Suriname, Trinidad & Tobago	
RESOURCE PARTNER: GEF	
FAO PROJECT ID: 621538	**GEF/LDCF/SCCF PROJECT ID:** 5304
EXECUTING PARTNER(S): Western Central Atlantic Fishery Commission (WECAFC); **Brazil**, Ministry of Fisheries and Aquaculture; **Colombia**, Instituto de Investigaciones Marinas y Costeras (INVEMAR), Autoridad Nacional de Acuicultura y Pesca (AUNAP); **Costa Rica**, Instituto Costarricense de Pesca y Acuicultura (INCOPESCA); **Mexico**, Instituto Nacional de Pesca (INAPESCA), Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA); **Suriname**, Ministry of Agriculture, Animal Husbandry and Fisheries; **Trinidad & Tobago,** Fisheries Division of the Ministry of Food Production, Land and Marine Affair	
EXPECTED EOD (STARTING DATE): March, 2015	
EXPECTED NTE (END DATE): February, 2020	
CONTRIBUTION TO FAO'S STRATEGIC FRAMEWORK	**a. Strategic objective/Organizational Result:** SO2 (sustainable provision of goods and services from agriculture, forestry and fisheries). Component 2 and 3 of the project will also contribute to SO 3 (Reduce Rural Poverty) and SO4 (inclusive and efficient agricultural and food systems). **b. Regional Result/Priority Area:** LAC Regional Initiative 3 "*Agricultural and Food Value Chain Development - Improving food and feed systems*", in particular the Result 2: Stakeholders of the value chains selected have adopted best practices (SO2, SO3 and SO4); and Result 5: Strengthened capacities to improve policy and institutional incentives and services for competitiveness and sustainability (SO1, SO4),
GEF FOCAL AREA: International Waters (IW)	
GEF STRATEGIC OBJECTIVES: IW-2	
ENVIRONMENTAL IMPACT ASSESSMENT CATEGORY (INSERT √): A B C √	
FINANCING PLAN: GEF allocation:	USD 5 800 000
Co-financing:	
Government of Brazil	USD 3 154 378
Government of Colombia	USD 3 701 285
Government of Costa Rica	USD 200 000
Government of Mexico	USD 3 582 000
Government of Suriname	USD 1 685 000
Government of Trinidad &Tobago	USD 1 365 828
Private Sector Colombia	USD 1 010 000
Private Sector Costa Rica	USD 400 000
FAO	USD 400 000
WECAFC	USD 1 250 000
NOAA	USD 450 000
Subtotal Co-financing:	USD 17 198 491
Total Budget:	**USD 22 998 491**

EXECUTIVE SUMMARY

The six countries participating in the *Sustainable management of bycatch in Latin America and Caribbean trawl fisheries (REBYC-II LAC)* project in the Latin America and Caribbean (LAC) region – Brazil, Colombia, Costa Rica, Mexico, Suriname and Trinidad and Tobago - are sharing water and marine resources in the Pacific and Atlantic Oceans. Shrimp/bottom trawl fisheries constitute an important part of the total marine fisheries economy in the project countries contributing to employment, local incomes, food security and foreign exchange earnings.

Tropical and subtropical shrimp/bottom trawl fishing is highly multispecies and the quantity of bycatch amounts up to 10-15 times more than the quantity of the targeted (shrimp) catch (in quantity). This bycatch is composed mainly of juveniles of targeted species of other fisheries and non-targeted species, small-sized fish species and incidentally caught turtles. Furthermore, the shrimp trawling may cause destruction of sensitive seabed habitats which is a concern. In general, shrimp and other key target species in the project countries are overexploited. Because of generally decreasing catches and increasing costs of operation, many fishers find it difficult to maintain the profitability of their operations. The root causes of these problems include the economic reality of the private fisheries sector and global drivers such as growing demand for fishery products.

While the project cannot easily change the macroeconomic context, it can address the barriers to better management of bycatch and in this way support the sustainable development of the trawling sector and the people who depend on and are influenced by it, including also other fisheries. This includes: (i) ensuring that enabling institutional and regulatory frameworks are in place; (ii) encouraging effective management of byctach through improved information, participatory approaches and appropriate incentives; and (iii) supporting enhanced and equitable livelihoods.

The project will facilitate regional collaboration by seeking institutional, technological and development solutions that are appropriate at the local level, and which will contribute at the same time to the creation of global environmental benefits in the region. The full involvement of the private fishing sector in the Project is the key to its successful implementation and fishers and fish workers are key stakeholders and partners at the local level where the project will promote co-mangement of fiheries resources with an ecosystem approach by these stakeholders, strengthening of volue chain related to byctach and non-fish related livelihoods. The project will promote regional collaboration through existing regional fishery bodies (RFBs) such as the Western Central Atlantic Fishery Commission (WECAFC). Bycatch management is a key part in the ecosystem approach to fisheries (EAF). The project will support the implementation of the *International Guidelines on Bycatch Management and Reduction Discards* and the *Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines)*, another recent international instrument with high relevance to the trawl fisheries in the LAC region.

The **Global Environment Objective** of the project is to reduce the negative ecosystem impact and achieve more sustainable shrimp/bottom trawl fisheries in the Latin American and Caribbean (LAC) region through implementation of an ecosystem approach to fisheries (EAF), including bycatch and habitat impact management. The **Development Objective** of the project is to strengthen resilience of coastal communities through promotion of responsible fishing practices and livelihoods enhancement and diversification contributing to food security and poverty eradication.

To achieve these objectives, the project has been structured into four components containing a number of outputs and related activities:

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

This component focuses on the institutional and legal arrangements, and frameworks for co-management. Considering that many of the issues and concerns with respect to shrimp/trawl fisheries are shared in the region, a regional collaboration will be necessary. Well-tested collaborative solutions will be of benefit for the whole region. With the help of RFBs, regional cooperation that allows for sharing of experience and mobilization of political support for action will be promoted. The expected outcomes are: 1.1) regional collaboration on shrimp/bottom trawl fisheries and bycatch management is strengthened and best practices identified and shared through the regional fisheries organizations; and 1.2) legal and institutional frameworks in the project countries for shrimp/bottom trawl fisheries and by catch co-management and EAF are improved.

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

This component will focus on pilot activities in each project country. Using the enabling frameworks and capacities developed under Component 1, co-management plans will be developed and implemented through participatory processes in selected pilot sites. Important elements include the collection of improved information on bycatch and discards, and establishment of monitoring arrangements that allow for systematic collection and analysis of relevant data, including traditional and local knowledge. Work will be conducted on identifying and adapting suitable technologies and/or management measures applying participatory processes and co-management. This component will also look into alternative fishing methods for catching shrimp, i.e. non-trawling techniques. The feasibility of introducing such methods will be assessed in a selected number of pilot sites and experiences shared among project countries and the wider region. The expected outcomes and long-term outcome indicators include: 2.1) selected key shrimp/bottom trawl fisheries in the region are successfully co-managed through the implementation of agreed management plans leading to the reduction of discards by at least 20% in five pilot fisheries; and 2.2) an enabling environment in the project countries that creates positive incentives in promoting responsible practices by trawl operators.

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

This component addresses livelihood issues related to the shrimp/bottom trawl fisheries sector. The logic behind this component is that if changes are made in management that reduces bycatch, there will be potential impacts on income and food security for those who previously used bycatch. Likewise, if improved management of the sector leads to a reduction of the shrimp/bottom trawler fleet, alternative employment for fishers and fish workers needs to be sought. To be able to address these issues, a better understanding of who is using bycatch and how, is needed. Value chain analyses, including a gender analysis, will be carried out with a view to improving this understanding of the value and role of bycatch for men and women and different actors, giving particular consideration to vulnerable groups and individuals. This component will also include an analysis of current livelihoods and identification of strengths and opportunities that can be built on to enhance sustainability, as well as support to organizational development. Expected outcome is: 3.1) new income generating opportunities

for men and women are identified in at least three project pilot sites; capacities and opportunities for enhanced sustainable and diverse livelihoods are created and gender equality promoted within the sector.

Component 4: Project progress monitoring, evaluation and information dissemination and communication*:*

The objective of this component is to ensure systematic progress monitoring of the project's outcomes and outputs, including its annual goals, as established in the project results framework. Furthermore, lessons learnt and good practices will be broadly disseminated for use in the wider region and in other regions where shrimp/bottom trawl fishery is associated with bycatch issues.

Not all project countries will implement exactly the same activities and some outputs may be more relevant to some countries than to others. Each country has prepared a national results matrix, and specific pilot sites have been selected in each country.

FAO is the GEF agency responsible for supervision, provision of technical guidance and financial execution and operation of the project. The project's executing partners are WECAFC and the national fisheries authorities. The project will be implemented in close collaboration with other RFBs and project partners including the National Oceanic and Atmospheric Administration (NOAA) and private fisheries sector. The project will also collaborate with other relevant regional initiatives such as the Caribbean Large Marine Ecosystem project (CLME+), in particular with its shrimp and groundfish component. Small and large-scale fishers and relevant stakeholders in both harvesting and post harvesting, processing and marketing, constitute also a key group of partners as they are directly concerned by the project and its goals and achievements. The private sector is expected to take a lead role in project activities, including their participation in gear trials which will play a particular critical role in regards to the adoption and scaling up approaches developed by the project.

The Project Coordination Unit (RPCU) will be hosted by the Secretariat of the WECAFC located in FAO Subregional Office for the Caribbean (FAO-SLC). The project has a duration of five years and a total budget of USD 22 997 648 consisting of USD 5.8 million of GEF funding and USD 17 197 648 of co-financing.

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GLOSSARY OF ACRONYMS

ANPAC	Asociación Nacional de Pescadores Artesanales de Colombia
AWP/B	Annual Work Plan and Budget
AUNAP	Autoridad Nacional de la Acuicultura y Pesca
BH	Budget Holder
BRDs	Bycatch reduction devices
CAMAPUN	Cámara Puntarenense de Pescadores
CBD	Convention on Biological Diversity
CCA	Climate change adaptation
CCRF	Code of Conduct for Responsible Fisheries
CEO	Chief Executing Officer (GEF)
CEP	Caribbean Environment Programme
CERMES	Centre for Resource Management and Environmental Studies
CLME	Caribbean Large Marine Ecosystem
COFI	Committee on Fisheries
CONACOOP	Confederación Nacional de Cooperativas.
CONAPESCA	Comisión Nacional de Acuacultura y Pesca
CPFs	Country Programming Frameworks
CRFM	Caribbean Regional Fisheries Mechanism
EAF	Ecosystem Approach to Fisheries
EIA	Environmental impact assessment
EP	Executing Partner
DRM	Disaster risk management
FAO	Food and Agriculture Organization of the United Nations
FIP	Fisheries and Aquaculture Policy and Economics Division
FIRO	Fishing Operations and Technology Branch
FPMIS	Field Project Management Information System
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
ICZM	Integrated Coastal Zone Management
IFREMER	French Research Institute for Exploitation of the Sea
IMR	Institute of Marine Research
INCOPESCA	Instituto Costaricense de Pesca y Acuicultura
INVEMAR	Instituto de Investigaciones Marinas y Costeras
LAC	Latin America and Caribbean
LTO	Lead Technical Officer
LTU	Lead Technical Unit
MARAFT	Marine Area for Responsible Artisanal Fishing of Tárcoles
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
METTs	Monitoring Evaluation Tracking Tools
MSC	Marine Stewardship Council
MTE	Mid-Term Evaluation
NBSAPs	National Biodiversity Strategies and Action Plans
NFFP	NEPAD-FAO Fish Programme
NOAA	The National Oceanic and Atmospheric Administration
NPCs	National Project Coordinators
NWG	National Working Groups
OSPESCA	Organización del Sector Pesquero y Acuícola del Istmo Centroamericano
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review
PPG	Project Preparation Grant (GEF)
PPR	Project Progress Report
PRODOC	Project Document
PSC	Project Steering Committee

PY	Project Year
RPCU	Regional Project Coordination Unit
SAGARPA	Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación
SDGs	Sustainable Development Goals
SPAW	Specially Protected Areas and Wildlife
STAP	Scientific and Technical Advisory Panel
TCI	Investment Centre Division (FAO)
TDA	Transboundary diagnostic analysis
TEDs	Turtle excluding devices
TOR	Terms of Reference
UNCLOS	United Nations Convention on the Law of the Sea
UNGA	United National General Assembly
UNIPESCA	Unión Independiente de Pescadores Camarones.
USD	United States Dollar
WCR	Wider Caribbean Region
WECAFC	Western Central Atlantic Fishery Commission

SECTION 1 – RELEVANCE (STRATEGIC FIT AND RESULTS ORIENTATION)

1.1 GENERAL CONTEXT

a) General development context related to trawl fisheries bycatch in the Latin America and Caribbean region

The six countries participating in the *Sustainable management of bycatch in Latin America and Caribbean trawl fisheries (REBYC-II LAC[1]) project* in the Latin America and Caribbean (LAC) region – Brazil, Colombia, Costa Rica, Mexico, Suriname, and Trinidad and Tobago – are sharing water and marine resources in the Pacific and Atlantic Oceans. Spanning a considerable area, there is great diversity in marine resources and fisheries in the project region. While only Suriname shows an important contribution of fisheries to national GDP (4 percent)[2], the sector is generally important in all project countries for foreign exchange earnings and contributes significantly to food security, employment and local incomes. In southern Brazil, fisheries account for up to 25 percent of the agriculture GDP of municipalities in the estuary of Patos Lagoon (Kalikoski and Vasconcellos, 2012)[3].

Shrimp/bottom trawl fisheries constitute an important part of the total marine fisheries economy in the project countries. According to FAO statistics, about 17 percent of total reported marine catches (approximately 265,000 metric tons annually) are landed by the shrimp/bottom trawl fisheries in the countries. The subsector is large and diverse, involving both small and large-scale trawlers totalling an estimated 57,334 units and employing about 228,000 fishers in 2014 (see Table 1.1) and providing hundreds of thousands of jobs in the auxiliary activities (e.g. fish processing, trade and market). The shrimp subsector also plays an important role as a foreign exchange earner as some 80 percent of the production is exported.

Table 1.1: Number of trawlers and employment in shrimp fisheries in project countries

	Shrimp trawlers		***Employment (in harvesting only)***
Country	***Small-scale***	***Semi-industrial and large-scale***	
Brazil	4 000	370	21 500
Colombia	178	109	13 812
Costa Rica	1 540	69	730
Mexico	47 950	1 496	190 884
Suriname	318	46	513
Trinidad & Tobago	1 200	35	348
TOTALS	***55 186***	***2 148***	***227 787***

[1] The acronym of the project – REBYC – refers to the title and abbreviation of the earlier *REBYC* project: *Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of Bycatch Reduction Technologies and Change of Management*, adding LAC for the *Latin America and Caribbean region*.

[2] In the other project countries, the share of fishery GDP is less than 1 percent (World Bank, 2012; FAO Fishery Country Profiles).

[3] Kalikoski, D.C. & Vasconcellos, M**.** *Case study of the technical, socio-economic and environmental conditions of small-scale fisheries in the estuary of Patos Lagoon, Brazil: a methodology for assessment.* FAO Fisheries and Aquaculture Circular. No. 1075. Rome, FAO. 2012. 190 pp.

However, because of generally decreasing catches, in particular of more valuable species and increasing costs of operation, many fishers find it difficult to maintain the profitability of their operations. For example, in Costa Rica, fisheries are threatened by a decline in marine catches – caused by overfishing, pollution and climate change – and increasing fuel costs (FAO, 2013[1]). Shrimp and other key target species in the project countries are often overexploited, and many fisheries suffer from overcapitalisation. According to FAO's latest Review of the State of World Marine Fishery Resources[2], shrimp resources in the Southwest Atlantic (FAO Statistical Area 41) and in the Western Central Atlantic (FAO Statistical Area 31) are either fully exploited, overexploited or there is a lack of data and information on some of these target stocks (FAO, 2011, p. 298 and 304).

Moreover, shrimp/bottom trawling tends to catch large amounts of bycatch, i.e. fish that are not targeted but still ends up in the nets (see Box 1). In tropical and subtropical shrimp trawl fishing, the quantity of bycatch is in general between three and 15 times more than the targeted shrimp catch (in quantity).

Box 1: What is bycatch?

There is no standard international definition of bycatch because of the very diverse nature of the world's fisheries and because of historical differences in how bycatch has been defined nationally. In general terms, bycatch is the catch of fish or other animals and plants that a fisher did not intend/want to catch, did not use, or which should not be have been caught in the first place.

For practical purposes the term 'bycatch' includes anything that a fisher does not intend to catch but still ends up in the net or gear. Bycatch can be considered sustainable when it is harvested consistently with the fisheries management plan that is based on the 1995 Code of Conduct for Responsible Fisheries (CCRF) and on the International Guidelines on Bycatch Management and Reduction of Discards (FAO 2011). All other bycatch is unsustainable.

In some cases, unwanted animals and plants are thrown away at sea, which is called discards. Discards may be alive or dead. In the context of this project, discards refer to the part of the bycatch that is not utilized but returned to the sea, either dead or alive. Corals and other fauna and flora "taken" by the trawl from the sea bed are also considered bycatch and generally indicate that bottom habitats are impacted by the trawl operation.

Notwithstanding how bycatch is defined, the unreported elements of catch and bycatch can be significant for some capture methods and fisheries. If not taken into account, these elements may be aggravating factors to overfishing and pose a serious risk to the effective management of fisheries. Part of the bycatch is often juveniles of species targeted by other fisheries preventing these fish from reaching reproduction age; bycatch may therefore impacti future catches of these other fisheries. When bycatch is managed effectively and utilized sustainably, it can contribute to food security and nutrition. When it is discarded, it represents a loss of food and income.

[1] FAO-SLM. Contribución de la pesca y la acuicultura a la seguirdad alimentaria y el ingreso familiar en Centroamérica. FAO, Honduras. 2013. 110 pp.

[2] FAO. Review of the state of world marine fishery resources. FAO Fisheries and Aquaculture Technical Paper No. 569. Rome, FAO. 2011. 334 pp.

b) Global Environmental Benefits (GEB) threatened by trawl fisheries bycatch and causes and problems the project will address

Problems associated with bycatch include the capture of juveniles targeted by other fisheries and non-targeted species, incidentally caught turtles (especially if trawls are not equipped with turtle excluder devices – TEDs), as well as destruction of corals or sensitive seabed structures. Bycatch is also at times returned – dead or alive – to the sea as discards. When bycatch is effectively managed and utilised, it can contribute to food security and nutrition and constitute an important source of income for local populations. However, when it is discarded or if catches are unsustainable, it represents a loss – to people and to the global and regional environment. There are hence both livelihood and regional and global environmental sustainability concerns related to current practices that need to be urgently addressed.

In the LAC region, detailed information on the composition, volume, value and potential utilization of bycatch – as well as on the fishing impact on sea bed habitats – from shrimp/bottom trawl fishing is largely inadequate but it is recognised that these fisheries have a significant effect on targeted and non-targeted fishery resources, marine ecosystems and fishing communities. As shown in table 1.2 below, the bycatch portion of the trawl catch can constitute more than 90 percent of the total catch in the project countries.

Table 1.2: Examples of bycatch ratios from project countries

Country	***Fishery***	***Bycatch***
Brazil	Large-scale shrimp fisheries in the north	Bycatch of 4-7 kg per 1 kg of shrimp tail.
	Small-scale shrimp fisheries in the northeast	Bycatch of 1-5 kg per kg of shrimp.
Colombia	Large-scale shrimp fisheries Caribbean sea	Bycatch of 2,1-12 kg per kg of pink shrimp; 5-20 kg per kg of shallow water shrimp; 1-3 kg per kg of deep sea shrimp
Mexico	Large-scale shrimp fisheries on Atlantic coast	Bycatch of 3-19 kg per kg of shrimp.
Suriname	Large-scale shrimp fisheries	Bycatch of 4-9 kg per kg of shrimp.
	Large-scale seabob trawlers	Bycatch of 2-6 kg per kg of shrimp.
Trinidad and Tobago	Semi-industrial shrimp trawlers	Bycatch of about 12 kg per kg of shrimp.

NB: See Appendix 7 for more information.

The bycatch usually consists of juveniles of ecologically important and economically valuable finfish, small-sized fish species, and of fish that is damaged or low quality for other reasons (see Appendix 7 for available country details). Bycatch that is discarded constitutes significant waste, but without information on current and potential use of sustainable bycatch (see Box 1), reducing discards remains a challenge. Information on impacts of trawl fishing on seabed and spawning grounds is generally limited in the project countries but in some areas where this impact has been investigated, management measures have been introduced, e.g. areas of juvenile crustaceans in the Gulf of Mexico are protected (Mexico national report, 2014).

Management of trawl fisheries in the region in general is not effective and there are few and sometimes poorly enforced management regulations, in particular with regard to bycatch and discards (see Table 1.3). Turtle excluding devices (TEDs) are mandatory in the shrimp/bottom trawl fisheries in all project countries but compliance is in many cases doubtful and the

necessary supporting management measures are often lacking. Conflicts between fleet segments are common particularly when zoning regulations are not enforced, e.g. larger trawlers encroaching on waters reserved for small-scale fishers. Moreover, juveniles of finfish species that are considered bycatch in the large-scale shrimp trawl fisheries may be targeted catch in the small-scale fisheries. Bycatch in one fleet segment may hence jeopardise the sustainability of other fishing operations and related livelihoods. Hence, one of the main threats to sustainable fishery resources, related livelihoods and biodiversity that the shrimp/bottom trawl fisheries pose, is inadequate management in particular with regard to bycatch.

Table 1.3: Examples of management measures implemented in project countries

Country	***Fishery***	***Management measures***
Brazil	Small- and large-scale shrimp trawl fisheries	TEDs; Temporal closures; Minimum mesh size; Distance from land
Colombia	Large-scale shrimp trawl fisheries	TEDs; Prohibited areas (the gulfs, estuaries, MPAs); Temporal closure on Pacific coast to protect spawning areas (January-February); Small-scale fisheries exclusive zone on north Pacific coast.
Trinidad and Tobago	Small-scale shrimp trawl fisheries in the west and south	Minimum mesh size; Minimum chafing gear coverage of codend; Distance from coast.

There are increasing and serious concerns regarding the sustainability of shrimp/bottom trawl fisheries in the region. Venezuela banned industrial trawl fishing. Among the project countries, Costa Rica is currently taking measures to phase out the large-scale subsector (decision by the Constitutional Chamber of the Supreme Court in 2013). In Trinidad and Tobago, discussions on a trawl ban are on-going. Banning trawling would have severe immediate consequences for livelihoods and incomes that would need to be mitigated. Alternatively, fishing practices would need to be modified or changed and different management measures and approaches should be considered (e.g. zoning and spatio-temporal closures) to avoid the current negative impacts.

Although bycatch may represent significant economic losses (especially to the large-scale trawl fishing industry), by slowing down their operations due to the time-consuming sorting of catch, causing inferior catch quality, and by increasing fuel consumption, there are often limited methods and incentives for fishers to avoid bycatch. Better information on solutions and their positive impact on fishing economy (e.g. better quality and price of catch, reduced sorting and fuel costs) combined with adequate encouraging regulations may create incentives for bycatch and discards reduction. In some fisheries and for some communities, bycatch may constitute an important contribution to incomes and food supplies. Therefore, measures for reducing bycatch need to be identified in close collaboration with stakeholders and be based on an understanding of livelihood options. However, the institutional and legal frameworks for fisheries management based on stakeholder participation (co-management) and an ecosystem approach to fisheries (EAF) are generally not in place in the project countries, hindering effective management both in the large and small-scale sectors.

The links between the different fleet segments as well as the utilisation of the bycatch, and its role in food security and income generation, need to be better understood. This understanding also needs to include better knowledge on the roles and situations of the different actors – both men and women – along the value-chain and of fisheries-based livelihoods in a broader

sense. If marine resources and habitats cannot sustain current fishing practices, enhancement and diversification may be required for ensuring sustainable and resilient livelihoods for the future. Climate change and adaptation needs also require attention.

The root causes of threats on biodiversity and livelihoods from unsustainable bycatch (see Box 1) and discards include the economic reality of the fisheries sector and the poverty context of the project countries, including population pressure, need for food and income, drivers such as global demand for fishery products, and the lack of capacity, information and knowledge to improve fisheries management and support sustainable livelihoods. While the project cannot easily change the macroeconomic context, it can address the barriers to better bycatch management and, in this way, support the development of the trawling sector and the people depending on and influenced by it. This includes:

- Ensuring that enabling institutional and regulatory frameworks are in place,
- Encouraging effective bycatch management through improved information, participatory approaches and appropriate incentives,
- Supporting enhanced and equitable livelihoods.

A portion of the finfish species taken as bycatch in these trawl fisheries are migratory and transboundary, and are largely shared by the project countries. There are also other wide range concerns; for example, the Caribbean Sea is considered a global biodiversity hotspot with the highest level of species diversity in the tropical Atlantic. Addressing the impacts of these threats to livelihoods, national economies and biodiversity require regional collaboration. Also for issues that may be of more local concern, there are likely to be great benefits from sharing experiences and solutions across the region and there are currently limited arrangements for doing so. There is a need to facilitate regional collaboration by finding institutional, technological and development solutions that are appropriate at the local level but that at the same time contribute to the creation of global environmental benefits in the region. Accordingly, the project will have a strong grounding at the local level and at the same time promote regional collaboration and a common strategy for bycatch management, including co-management arrangements.

c) Regional and national institutional and policy framework

Globally, there is increasing attention to the need for sustainable development and to take into account the three pillars of environmental, economic and social sustainability as expressed in the United Nations Conference on Sustainable Development Rio+20 outcome document *The Future We Want* (2012). Within this context, the Sustainable Development Goals (SDGs) that the conference agreed to develop will include a focus on oceans. During the last few decades, there has been progressive recognition of the need for ecosystem-based approaches, including attention to the human dimension, to oceans governance and fisheries management such as EAF and similar approaches. The 1995 Code of Conduct for Responsible Fisheries (CCRF) provides a basic framework for sustainable fisheries in an ecosystem context and this voluntary instrument is widely referred to in regional and national fisheries policies, including REBYC-II LAC project countries. From a more fundamental international legal perspective, it should be noted that five of the six countries participating in the REBYC-II LAC project have ratified the *United Nations Convention on the Law of the Sea (UNCLOS)*[1]. UNCLOS is the main binding global agreement dealing with conservation, utilization and management of

[1] Colombia is a signatory to the convention, but has not yet ratified.

living marine resources. All project countries are also parties to and have ratified the *Convention on Biological Diversity (CBD).* Moreover, four of the project countries (Colombia, Costa Rica, Mexico, Trinidad and Tobago) have ratified the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (WCR) (also called the Cartagena Convention) and are implementing various protocols under this convention, such as the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) in the Wider Caribbean Region (which entered into force on 18 June 2000) and the Protocol Concerning Pollution from Land-Based Sources and Activities (which entered into force on 13 August 2010).

The *International Guidelines on Bycatch Management and Reduction Discards (B&D Guidelines)*[1] were endorsed by the FAO Committee on Fisheries (COFI) in 2011. These guidelines aim to assist countries and regional fishery bodies (RFBs) and regional fisheries management organizations and arrangements (RFMO/As) in formulating and implementing appropriate measures for the management of bycatch and reduction of discards in the context of EAF and in line with the United National General Assembly (UNGA) resolution A/RES/64/72 on sustainable fisheries, which specifically mentions bycatch and discards.

Another recent international instrument with relevance to the trawl fisheries in the LAC region is the *Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines).*[2] These guidelines, complementing the CCRF, were endorsed by COFI in 2014 and provide a framework for enhancing the understanding of actions needed for small-scale fisheries governance and development. Considering the important role of small-scale fisheries in the region and its interactions with the large-scale trawl fisheries, the SSF Guidelines should be taken into consideration and be implemented.

There are several regional fishery bodies (RFBs) in the project region. The objective of the *Western Central Atlantic Fishery Commission (WECAFC)*, a FAO Article VI body, is to promote effective conservation, management and development of living marine resources in the area of competence of the Commission and to address common problems faced by member countries. It has a total of 34 members (including also the European Union, some European countries and the USA). All six project countries are members. WECAFC has its headquarters in Barbados, within the FAO Subregional office for the Caribbean (FAO-SLC), which will host the REBYC-II LAC Regional Project coordination Unit (RPCU) (see section 4.2).

Box 2: The Western Central Atlantic Fishery Commission (WECAFC)

FAO's Western Central Atlantic Fishery Commission (WECAFC) is the only RFB with a true regional coverage and membership of all countries in the wider LAC region. WECAFC, composed of the national fisheries authorities, has a good relationship with the fishing industry as well as with other key stakeholders such as the Caribbean Regional Fisheries Mechanism (CRFM), the Caribbean Large Marine Ecosystem (CLME) project, and the UNEP – Caribbean Environment Programme (CEP).

WECAFC has been assigned a lead coordinating role by its member countries for the establishment of a sub-regional ecosystem-based management arrangement and for management planning with respect

[1] The Bycatch Guidelines are available at http://www.fao.org/3/a-ba0022t.pdf.
[2] See http://www.fao.org/fishery/ssf/guidelines/en.

to shrimp and groundfish resources of the Guianas-Brazil shelf. This is an extension of a long-term commitment by the Commission to the sub-region and the management of its fishery resources. WECAFC has had a specific working group on shrimp since 1979(including also groundfish issues in 1984), which has generated scientific advice. In 2012, WECAFC issued Resolution WECAFC/14/2012/1 on Strengthening the implementation of international fisheries instruments, under which (amongst others) the members of the Commission agreed to take action to strengthen implementation of the 2011 B&D Guidelines. Recognizing the importance of shrimp and groundfish fisheries, the 15th session of WECAFC in 2014 re-established a WECAFC working group on this subject as a joint WECAFC/CRFM/IFREMER Working Group on shrimp and groundfish of the North Brazil Guianas shelf (see also Box 3).

Suriname and Trinidad and Tobago are members of the *Caribbean Regional Fisheries Mechanism (CRFM)*. The CRFM was established under the Caribbean Community (CARICOM) in 2003 and has 17 members. The objectives of the organization are to support management of marine and aquatic resources in member states, including promotion of cooperative agreements for shared, straddling or highly migratory resources. These RFBs already collaborate on shrimp and groundfish fisheries of the Guianas-Brazil Shelf within the context of the Caribbean Large Marine Ecosystem project (CLME and CLME+, see section 4.1). There is also a WECAFC/CRFM/IFREMER [1] Working Group on Shrimp and Groundfish[2].

The *Central America Fisheries and Aquaculture Organization (OSPESCA)*[3] has eight Central American countries as its members, including Costa Rica. OSPESCA promotes coordinated management of regional fisheries and aquaculture activities to help strengthen the Central American integration process.

Colombia is member of the four-state membership *Permanent Commission for the South Pacific (CPPS)* that promotes linkages between marine research and regional policies.

The global and regional policy and institutional arrangements described above provide a framework that will facilitate cooperation for improving shrimp/bottom trawl fisheries bycatch management at regional, national and local levels. CRFM, OSPESCA and WECAFC have recorded successes in having regional declarations and fishery management recommendations accepted by the countries in the region. The regional organisations hence constitute an important opportunity to connect with countries in the region beyond the project countries. The 14th session of WECAFC (2012) already promoted the implementation of the B&D Guidelines and issued a resolution in support of their implementation by the members at national level. However no regional implementation plan for the guidelines exists.

At the national level, the institutional structures for fisheries management include fisheries and environmental ministerial functions, research institutes and stakeholder associations. While the situation varies from country to country, capacities tend in general to be inadequate for addressing bycatch and discards problems and promoting participatory and consultative approaches in the context of enhanced co-management and EAF. Hence, efforts are needed to

[1] French Research Institute for Exploitation of the Sea.
[2] There are also other CRFM and WECAFC Working Groups – see Box 3). For more information, see http://www.fao.org/fishery/rfb/wecafc/en.
[3] Organización del Sector Pesquero y Acuícola del Istmo Centroamericano.

create national institutional structures allowing for improved management and sustainable development of the shrimp fisheries sector.

A summary of the institutional frameworks related to shrimp/trawl fisheries and co-management in project countries is presented below:

In Brazil, the legal mandate to manage the shrimp/bottom trawl fisheries primarily lies at the federal level with the Ministry of Fisheries and Aquaculture and the Ministry of the Environment with the Brazilian Institute for the Environment and Natural Renewable Resources (IBAMA) as the implementing agency. Throughout the Brazilian coast, there are fisherfolk organisations (e.g. fishing guilds and syndicates, cooperatives) and co-management arrangements (e.g. Forum of Patos Lagoon) that constitute official representation of fish workers. In order to allow for co-management of the shrimp sector at the federal level, the Standing Consultative Committee for the Management of the Shrimp Fishery (CPG-Camarões) was created in 2011 (with representatives from the government, civil society organizations, academia and NGOs) but it still needs to be made fully operational. There is also a need to carry out a legal review and implement the necessary amendments to allow for an EAF approach as current legislation does not, among other needs, provide for bycatch management.

In Colombia, the *Autoridad Nacional de la Acuicultura y Pesca* (AUNAP) is in charge of implementing and supporting policies of the Ministry of Environment and Sustainable Development with regard to the environment and renewable natural resources. The Directorate for Livestock, Fisheries and Aquaculture Value Chains (*Dirección de Cadenas Pecuarias, Pesqueras y Acuícolas*) of the Ministry of Agriculture and Rural Development also plays a role in policy and strategy formulation. The *Instituto de Investigaciones Marinas y Costeras* (INVEMAR) provides technical and research support. There are two main associations for stakeholders: one for small-scale fishers, la *Asociación Nacional de Pescadores Artesanales de Colombia* (ANPAC), and one for the industrial sector, *Asociación Colombiana de Industriales y Armadores Pesqueros* (Acodiarpe). However, institutional measures for co-management are not adequately covered in fisheries legislation and there are no legal provisions for co-management. In addition, the capacity of the fishers associations needs to be strengthened in order for them to effectively take part in co-management processes.

In Costa Rica, the *Instituto Costaricense de Pesca y* Acuicultura (INCOPESCA) is responsible for fisheries management and development in accordance with national legislation. Fishers and fish workers organizations and cooperatives include *Unión Independiente de Pescadores Camarone*s (UNIPESCA), *Cámara Puntarenense de Pescadores* (CAMAPUN) and *CoopeTarcoles*. It is recognized, however, that there is a need to further involve fishers and fish workers in management issues. Very few associations have been involved in co-management and there is only one example of successful collaboration between small-scale and semi-industrial fishers.

In Mexico, since 2001, the *Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación* (SAGARPA) is responsable for fisheries and aquaculture policy implementation. Its *Comisión Nacional de Acuacultura y Pesca* (CONAPESCA) coordinates with other authorities the promotion of sustainable fisheries and aquaculture development. CONAPESCA receives technical and research support from the *Instituto Nacional de Pesca* (INAPESCA). *Comité Nacional de Pesca y Acucultura* ensures the private sector involvement

in the discussions before management decisions are taken but further development of co-management mechanisms is needed. Existing fisheries management plans need to integrate bycatch aspects more effectively and strengthen industry participation in their implementation. Collaboration with the *Confederación Nacional de Cooperativas* (CONACOOP) is foreseen in the project.

In Suriname, the institutional and administrative frameworks for fisheries management include the Fisheries Department of the Ministry of Agriculture, Animal Husbandry and Fisheries (LVV), which manages the fisheries resources through its policy guidelines. In the context of the seabob trawl fisheries management plan (seabob fishery is certified by the Marine Stewardship Council, MSC), there are regular consultations with the key stakeholders. In general, however, institutional structures for stakeholder participation and co-management need to be reinforced. There are fishers' organizations (VISCO and Visserscollectief) in two communities that participate in an Advisory Committee on Sea Fisheries but their capacities need strengthening. Moreover, the Suriname Coast Guard was established only in 2013 and its functions with regard to fisheries control and surveillance are not yet reflected in the legal framework in the country.

In Trinidad and Tobago, the Ministry of Food Production, through the Fisheries Division, has central authority and responsibility for the management and sustainable development of the fisheries sector. There are numerous fisher/stakeholder associations but improved mechanisms for institutional collaboration and cooperation on fisheries management among government and non-government agencies is needed. Currently, stakeholder consultations take place on a project-by-project basis. There is a draft fisheries policy and a draft fisheries management bill from 2011 that have not yet been enacted. Further work is required on both legal and institutional baselines to allow for the future implementation of these documents.

In summary, there is a need to provide the enabling factors for improving management of bycatch through co-management arrangements at the local and national level. This would allow for a two-way process where improved knowledge on management solutions gained at the local and national level can be broached with a view to sharing and providing information for policy and decision-making at regional level. At the same time, sound policy and legal frameworks and specific commitments for shrimp/bottom trawl fisheries bycatch management are needed at the regional levels to provide frameworks for national and local actions and implementation. The REBYC-II LAC project will work towards the establishment of a regional policy framework for shrimp/bottom trawl fisheries bycatch management, which is anchored in the international arena and linked to other regions, at the same time as achieving tangible results at the national and local levels.

1.1.1 Rationale

a) Baseline projects and investments for the next 5-6 years addressing the need for sustainable bycatch management including main co-financing sources of the project

As described above, the shrimp/bottom trawl fisheries in the project countries constitute an important part of national and local economies. They are in several ways closely linked to other segments of the fisheries sector that also target shrimp or other species constituting bycatch in the shrimp/bottom trawl fisheries. The adverse impacts of bycatch on ecosystem health and other fisheries, described above, have been recognized in the project countries and

efforts are being undertaken to address these deficiencies. In the following baseline activities and initiatives taken are described in the case of each country.

In Brazil various actions aiming at the reduction of bycatch in shrimp fisheries are being implemented along the coast. These activities include: (i) evaluation of the effectiveness of bycatch exclusion device in trawl nets shrimp fisheries off Pernambuco and Alagoas States in north-eastern Brazil; and (ii) introduction of bycatch reduction devices (BRDs) in small-scale trawl fishing off the southern Brazilian coast in partnership with fishers. Similar projects have also been planned in the North and Southeast regions of Brazil. Through the bilateral cooperation between Brazil and Norway, three projects have been formulated to: (i) manage transboundary stocks in the Southwestern Atlantic Ocean; (ii) manage overexploited fish stocks in the Northeast Region of Brazil; and (iii) reduce discards and other waste in Amazon fisheries. These projects will also promote trilateral cooperation between Brazil, Uruguay and Argentina and will involve, besides Norwegian researchers, research institutions and universities from the three countries. In order to strengthen its institutional and regulatory arrangements, Brazil has taken measures with the creation of the CPG-Camarões (see above) in order to develop a better regulatory framework through co-management arrangements.. Different types of protected areas are being implemented as part of EAF and in this context gear modifications to avoid bycatch are being tested (in the APA1 Anhatomirim). In addition, spatial and temporal fishing closures, gear restrictions and no-take zones are implemented to manage the shrimp fishery along the coast. Brazil is also taking part in the working group on shrimp and groundfish of the CLME+ project (see section 4.1 and Box 5 below). The Brazilian Ministry of Fisheries and Aquaculture will provide an amount of USD 3 154 378 in co-financing for the REBYC-II LAC project. These funding covers activities mentioned above but also activities directly related to the REBYC-II LAC project in the form of technical coordination and support, national workshops and meetings, and workshop material and media products.

In Colombia, AUNAP has for several years worked with government and non-government partners to collect information on the status of shrimp stock and on the impact of trawl fisheries, including bycatch and discards. In addition, as part of the REBYC-I project (see section 1.1.4 below), several activities were implemented including: monitoring of shrimp trawling effort and catches, surveys on stock status and data collection of bycatch, testing of gear modifications and alternative fishing gears to reduce the environmental impact of trawl fishing. Co-management strategies are being put in place in some of the small-scale fisheries in the Caribbean Sea and there is recognition of the need to change the way fisheries are managed, including the introduction of rights-based approaches. There are also projects working to support sustainable livelihoods but they have generally not focused on finding alternative livelihoods in the context of shrimp/bottom trawl fisheries. Still, with regard to small-scale fisheries, work is being done to strengthen livelihoods through improving the value chain. For the next five years, Colombia plans to continue these initiatives as well as monitoring the implementation of fishing regulations. Scientific surveys will be conducted each year on the Pacific and Caribbean coasts to explore the status of stocks and other relevant issues. Colombia has also requested to be part of the working group on shrimp and groundfish under the CLME+ project and would like to use both projects' support to develop a sustainable shrimp fisheries. Colombia has committed USD 877 023 from AUNAP and USD 2 824 262 from INVEMAR to co-finance the REBYC-II LAC project, including these

[1] Area of Environmental protection as defined by the Brazilian National System of Conservation Units (SNUC)

initiatives as well as more direct contributions to the activities planned under the project, i.e. technical support and researchers, and infrastructural support including laboratories. *Universidad del Magdalena* and WWF will contribute in-kind co-financing through staff time and sharing of relevant study results. Likewise, in-kind contributions from the Colombian Association of Owner and Industrial Fishers (ACODIARPE) (USD 860 000) and the Tolu Colombian Fishing Company (Pestolu) (USD 150 000) in the form of time dedicated to project activities are foreseen.

In Costa Rica, the large-scale (industrial) shrimp/bottom trawl fisheries are under much pressure as there has been a court decision not to issue any new licences as an approach to phasing out this fishery. Costa Rica has projects on monitoring and data collection of its shrimp trawl fisheries, assessing the status of the target species, and evaluating the economic performance of these fisheries. Current management measures include the use of TEDs, spatio-temporal closures and no-take zones to protect spawning areas. Within the context of the national fisheries and aquaculture development plan, INCOPESCA is planning a number of actions related to bycatch reduction and of fishers' involvement. Since mid-2005, the civil society organizations (CoopeTárcoles R.L. and CoopeSoliDar R.L) are working towards strengthening local capacities of small-scale fishers through the creation of a fishing database that combines traditional knowledge with scientific knowledge to collect information about fishing effort, species caught, main fishing spots, etc. Participatory studies have been carried out in the small-scale fishing community of Tárcoles and the database produced was used to inform decision-making and spatial zoning of the community-based Marine Area for Responsible Artisanal Fishing of Tárcoles (MARAFT) created by the Government in 2009. Some of the positive impacts of the MARAFT, which directed trawlers and other industrial fisheries out of the one-mile zone, include an increase in the shrimp abundance in the Gulf of Nicoya area. Costa Rica is also dealing with the conflicts between the large-scale trawl fisheries and small-scale fisheries, and assessing the socio-economic impacts of a future trawl ban. INCOPESCA will contribute a total of USD 200 000 in co-financing through national projects and other activities related to REBYC-II LAC, including in-kind contributions for awareness-raising campaigns and workshops, legal and institutional reviews and amendments, establishment of a bycatch data and monitoring system, gear trials and research into sustainable alternative livelihoods. Likewise, in-kind contributions from the Puntarenas Fishers' Union (UNIPESCA) (USD 100 000) and from the Fisher's Chamber of Puntarenas (CAMAPUN) (USD 300 000) in the form of time dedicated to project activities are foreseen.

Mexico participated in the REBYC-I project that contributed to better bycatch management of the shrimp trawl fisheries in the Pacific mainly through gear technology advancements. Similar work is required for the Atlantic coast and should be conduced in close collaboration with the fishing industry. Several projects in Mexico have shown that bycatch management - through co-management - is a cost effective alternative. This suggests that management plans, which have already been developed, need to be implemented through co-management processes. Mexico has invested in a number of projects with the goal of minimizing the bycatch of non-targeted species and juveniles, and reducing fuel consumption in trawl fisheries. Current and future projects focus, among others, on: (i) the modernization of the shrimp trawling fleet in the Pacific coast; and (ii) development of an infrastructure and analytical basis for the evaluation of new technologies for the conservation and protection of marine resources and the environment, applied to the shrimp trawl fishery. There are currently four different shrimp management plans that have been developed by INAPESCA/SAGARPA in consultation with stakeholders. These plans will be implemented through improved co-management practices, including consultative meetings with the fishing

industry. INAPESCA also continues to work on monitoring bycatch and development of BRDs in the Pacific fisheries. More recently, INAPESCA has taken an interest in identifying alternative livelihoods for coastal communities. Mexico will contribute a total of USD 3 582 000 as co-financing for the REBYC-II LAC project, including data already collected, sea trials and observer programmes, and staff time for technical support to the project.

In Suriname, a working group is in place at the ministerial level to monitor the continued compliance of the MSC certified seabob (a shrimp species) fishery with applicable criteria and conditions. Several other activities related to the REBYC-II LAC project are also being carried out by the Fisheries Department of the Ministry of Agriculture, Animal Husbandry and Fisheries (LVV), including improvement of the fisheries data collection system, strengthening the collaborative management arrangements on coastal fisheries, updating fisheries management plans and the fisheries and aquaculture legal framework, setting up a training school for fishermen for data collection, provisions regarding fisheries activities, enhancing stakeholder awareness and participation. Suriname is participating in the demonstration pilot case of the policy cycle implementation for shrimp and groundfish fisheries carried out by the CLME+ project. NOAA is already providing support to Suriname to conduct evaluations of prototype bycatch reduction technology. This support will continue under the project implementation. FAO is currently providing support to a review of fisheries legislation[1]. The Suriname Government will contribute USD 1 685 000 in co-financing for activities complementing the REBYC-II LAC project, including staff time, studies and data, and workshops.

In Trinidad and Tobago, a new draft fisheries management policy is awaiting cabinet approval. The Fisheries Division continues to support different initiatives related to the assessment and management of the shrimp and groundfish fisheries that are shared with other countries on the north-eastern South American continental shelf. Trinidad and Tobago is part of the CLME+ project and contributes to the policy implementation of the shrimp and groundfish fisheries. The country participated in the REBYC-I project through which data collection and gear trials were carried out. Other specific activities developed in Suriname include the preparation of awareness materials and consultations with the industry. Additional projects will focus on the finalization of the draft Fisheries Management Act for Trinidad & Tobago and incorporation of fisheries concerns into Integrated Coastal Zone Management (ICZM). In the latter case the activities involve stakeholder consultations and representation of fisheries concerns with respect to the oil and gas production sector and negotiations for fisher folk compensation. Through a project on integrated coastal fisheries management, studies have been carried out on the role of fisheries in poverty alleviation which have increased the understanding of coastal livelihoods. With regard to climate change, Trinidad and Tobago is part of the "Climate Change Adaptation in the Eastern Caribbean Fisheries Sector" (GEF ID: 5667), a Special Climate Change Funds (SCCF) supported project with FAO as the GEF agency currently under development (see section 4.1). Trinidad and Tobago will contribute USD 1 365 828 in co-financing for the REBYC-II LAC project, including staff time, stakeholder consultations and workshops, data and studies.

[1] Updating Suriname's capture fisheries legal framework (TCP/SUR/Pipeline).

b) Remaining barriers to address trawl fisheries bycatch threats on global environmental benefits

As outlined above, there are a number of initiatives at the national level addressing the unsustainability related to the shrimp/bottom trawl fisheries sector. However, there are remaining barriers that need to be addressed in order to reach a situation of effective shrimp/bottom trawl fisheries and bycatch management, responsible practices and sustainable livelihoods:

Barrier 1: **Insufficient regional collaboration**
At the regional level, there are RFBs that already work on fisheries management framework development with regard to several transboundary fisheries and target species (e.g. queen conch, lobster, flying fish, billfish and shrimps). There are common concerns with regard to the insufficiencies of current shrimp/bottom trawl fisheries and bycatch management practices but there is no common management strategy or policy to address shared problems in the region in spite of the transboundary character of many resources.

Barrier 2: **Inadequate institutional and regulatory frameworks at the national level**
While government institutions and legal frameworks for fisheries management exist in project countries, they tend to be inadequate for ensuring effective EAF and co-management practices or for explicitly considering bycatch as part of management requirements (see section 1.1.c above). Regulatory frameworks allowing taking bycatch and discards into consideration are generally not in place. There is also a general lack of experience and capacity to implement EAF and co-management. At the national, institutional and local community levels, structures and processes are needed that ensure stakeholder participation. Fisher and community organisations – where they exist – generally have insufficient capacities to effectively participate in co-management and decision-making processes.

Barrier 3: **Lack of relevant information on bycatch and discards**
While most of the project countries have some information on bycatch from earlier and on-going surveys and projects, there is generally only limited data and no systematic and periodically updated data on the impact of shrimp/bottom trawl fisheries, including bycatch quantity and species composition, and potential seabed damage. Better information and monitoring systems at the national level and arrangements for sharing information among countries in the region are needed to support decision making and management processes.

Barrier 4: **Lack of knowledge on adoption of suitable solutions and management measures**
Bycatch management requires management measures that are, at the same time, dedicated to addressing the bycatch issue and integrated into the overall fisheries management system. Solutions exist in the form of gear modifications (BRDs), alternative gear or other management measures, such as spatio-temporal closures or capacity reductions. However, these gear and management measures need to be adapted to local conditions and accepted by local fishers to be effectively adopted and applied. Hence, in order to develop viable management options, close collaboration with fishers and fish workers – both in the small and large-scale subsectors – through public-private partnerships is imperative and the incentives for changing practices need to be understood and created as required. The focus should be on minimizing unsustainable bycatch and discards. Considering the likely importance of market drivers in this context, international and regional knowledge and collaboration could constitute a key contribution to this process.

Barrier 5: **Insufficient capacity and knowledge to promote enhanced livelihoods for men and women**

The limited existing information on bycatch and discards tends to focus on the harvesting part of the fishery system and very little is known about the rest of the value chain and the role of bycatch in livelihoods, food security and poverty alleviation. Women usually play an important role in the postharvest subsector but there is insufficient understanding of how different gender roles are affected by current bycatch and discards practices or how they could be affected if shrimp/bottom trawl fisheries management changes. Efforts to improve fisheries management tend not to consider livelihoods (and vice versa) but, especially in a poverty context and in small-scale fisheries, it is important to take the complexity of coastal livelihoods into account. Accordingly, in order to implement effective co-management, other livelihood dimensions need to be understood and addressed as well. Moreover, considering that resources tend to be overexploited, it would appear that livelihood enhancement and diversification strategies should be sought. However, the capacity to take an integrated and gender sensitive approach to fisheries and bycatch management and livelihoods development, and also effectively support fishing communities in finding alternative livelihood options, is limited in the project countries.

Barriers 1 and 2 will be addressed by project component 1, barriers 3 and 4 by component 2, barrier 3 also by component 3, and barrier 5 by component 3. The solutions, and hence the project components, are interrelated. There will also be a fourth component focusing on project monitoring and information dissemination and exchanges of experiences. Consideration of climate change in fisheries management plans and the need for climate change adaptation and increased resilience of coastal communities in this respect will together with gender be cross-cutting theme throughout the project. The project strategic approach and the components are further described in section 2 below.

c) Incremental reasoning: added value of the project and the GEF funding

The baseline scenario and 'business as usual' prospect in the six project countries would mean that shrimp/bottom trawl fisheries management would continue to be ineffective and with limited attention to bycatch and actual adoption of BRDs and co-management practices. Overexploitation of various shrimp and groundfish stocks would continue with the risk of depletion of these stocks. Shrimp and groundfish habitats for reproduction would continue to be threatened and inadequate trawling practices would further deteriorate these essential habitats. While various initiatives are already being implemented (see country baseline information above), there is currently not a focused enough effort taking all the different perspectives into consideration – policy, legal, institutional, technological and socioeconomic – to make a real difference to the way shrimp/bottom trawl fisheries and bycatch are managed. The REBYC-II LAC project provides the space and encouragement to make this difference and:

- Ensures that the necessary legal and institutional structures are in place providing the enabling environment necessary for long-term solutions for fisheries and bycatch management;
- Contributes to a reduction in discards and unsustainable bycatch, creating both global, environmental and socioeconomic benefits to ensure resources are used in a more effective manner with less detrimental biodiversity impact;
- Promotes equitable development and more resilient livelihoods by improving the understanding of how different stakeholder groups, including marginalized groups,

women and youth, are affected by shrimp/bottom trawl fisheries and the role bycatch play in their livelihoods.

The added value of the GEF financing will allow for a project that provides high-quality technical assistance and capacity building, and effective collaboration among countries, partners and stakeholders – creating national and regional synergies – in a cost effective manner. By addressing the barriers identified above and ensuring local-national-regional-international linkages as well as public-private partnerships, the REBYC-II LAC project will create significant incremental benefits above the 'non-project' (no GEF funding option) with respect to long-term solutions for environmentally, economically and socially sustainable resource utilization.

Under Component 1 – *Improving institutional and regulatory frameworks for shrimp/bottom trawl fisheries and bycatch co-management* – the GEF support will enable the development of institutional and legal frameworks that are designed to adequately take the requirements of EAF and co-management into consideration. Particular attention will be given to strengthening organizational structures of fishers and fish workers, including women and youth. The capacity and support required to achieve the necessary institutional and legal transformations are not readily available within the project countries but can be provided through the project. The project will also built on and strengthen existing regional collaboration leading to improved understanding of bycatch issues and common strategies for addressing the pressing unsustainability issues related to the shrimp/bottom trawl fisheries. Accordingly, a platform for effective shrimp/bottom trawl bycatch management, now and in the future, will be created building upon and strengthening existing structures and processes, in particular with regard to stakeholder participation, thanks to the additional GEF funding available.

Under Component 2 – *Strengthening bycatch management and responsible trawling practices within an EAF framework* - GEF's incremental investment will support the development and demonstration of cost-effective measures and practical tools for managing bycatch, reducing discards and hence limiting negative ecosystem impacts. The GEF funding will allow for improved data collection and promotion of standardised methods and arrangements across project countries and the region, which will facilitate information exchanges and allow for comparisons between countries. Through the regional and global linkages and expertise that the GEF funding will allow the project to provide, the identification and development of appropriate management measures and processes, including possible incentives to promote wider adoption of BRD and management measures, as well as monitoring of impacts of the measures promoted, will be facilitated.

Under Component 3 – *Promoting sustainable and equitable livelihoods through enhancement and diversification* – the GEF support will not only enable a better understanding of the impact of bycatch and discards on livelihoods but allow for taking a more holistic approach to livelihood enhancement and diversification, involving both men and women throughout the value chain, in particular in small-scale fishing communities. GEF incremental resources will facilitate the identification of factors of success as well as of the limitations and vulnerabilities of current livelihoods that will help define the needs for capacity building for creating enhanced and resilient livelihoods based on principles of decent work and sustainable bycatch management, increasing national and global environmental benefits. The SSF Guidelines will provide the basis for support and ensure an integrated approach to fisheries

management, food security and poverty alleviation in the context of shrimp/bottom trawl fisheries and bycatch management.

Accordingly, the proposed project builds on and complements the baseline scenario. The GEF-funded alternative will address the above constraints and barriers through regional concerted actions focusing on selected fisheries and pilot cases. The project intends to build on existing investments, institutions and learning processes, seeking to add incremental value and positive impact specifically through promoting stronger regional awareness and participation, skills in addressing bycatch management and livelihood issues. The cost-effectiveness of the project is expected to be high; direct and indirect economic values of sustainable resource utilisation and livelihoods are assumed to exceed GEF investment.

1.1.2 FAO's comparative advantages

Within the overall mandate of FAO to eradicate hunger and malnutrition, to eliminate poverty and to promote sustainable utilisation of natural resources, the FAO Fisheries and Aquaculture Department develops technical guidance, standards and instruments for a wide range of fisheries management and development issues. The Department provides technical inputs to the Committee on Fisheries (COFI), which is presently the only global inter-governmental forum where major international fisheries and aquaculture problems and issues are examined. COFI is also used as a forum in which global agreements and non-binding instruments are negotiated. The B&D Guidelines, are of particular importance to this project, together with the overarching framework provided by the CCRF and related guidance in the SSF Guidelines (see section 1.1.c above). FAO has led the work on implementing an ecosystem approach to fisheries and has produced codes of practice and standards related to product safety and responsible trade, including guidelines for the eco-labelling of fish and fishery products. The Organization provides these normative functions but also implements national, regional and international projects. In 2002-2008, FAO successfully implemented the global REBYC-I project. Since 2011, FAO is implementing another second phase of the REBYC project in the Coral Triangle Initiative area in Asia (REBYC-II CTI, see also below). With regard to regional approaches, FAO has a long history of support to the creation and strengthening of RFBs and RFMO/As and of providing technical support to GEF Large Marine Ecosystem (LME) programmes, including the CLME project. Hence, FAO has an acknowledged global mandate with competences in regard to the technical and developmental areas covered by the REBYC-II LAC project.

Gender equality is central to FAO's mandate to achieve food security for all by raising levels of nutrition, improving agricultural and fisheries productivity and natural resource management, and improving the lives of rural populations. FAO has launched the Policy on Gender Equality: Attaining Food Security Goals in Agriculture and Rural Development to attain this goal.

1.1.3 Participants and other stakeholders

This project draws together a large and diverse group of stakeholders at the local, national, regional and international levels. During project preparation, many of these stakeholders were involved through participation in national and regional meetings and workshops and the preparation of national subcomponent design reports.

Key project *partners* in the region include[1]:

National authorities responsible for fisheries management: The institutional set-ups vary from one country to another (see 1.1.c above) but the formal project co-executing partner in each country is the fisheries authority or institute as listed at the front page of this project document (see also section 4.2). Some countries may experience constraints in terms of infrastructure and capacity (as described above) and the intention of the project is to strengthen the capacities of the national authorities.

Civil society organizations (CSOs) and the private sector: Small and large-scale fishers and fish workers and related enterprises in both harvesting and accessory activities, such as postharvest processing and marketing, constitute a key group of stakeholders as they are directly concerned by the project and what the project is trying to achieve. Fishers, fish workers and communities tend to be organized in associations or civil society organizations (CSOs - for names of these organisations in each country, see section 1.1.c above). There is generally a need to strengthen these organizational structures and build capacity to allow actors to become effective partners in co-management.

The private sector is expected to take a lead role in project activities, including participating in gear trials, and will play a particularly critical role with regard to adopting and scaling up the approaches developed by the project. Communities and CSOs will also play an important role in the work on livelihoods and gender. This is inter-related with the work on co-management and an integrated approach should be taken, in particular in the context of small-scale fishing communities. Collaboration will also be required with commercial entities, i.e. with seafood trading companies, for identifying market incentives.

Private sector. The full involvement of the private fishing sector in the Project is the key to its successful implementation. At the international level it is expected that the Project team takes part among others in the 15th International Frozen Seafood Exhibition (CONXEMAR) to be held in Vigo in October 2015. This is an important event for the Seafood Processing Industry and for the marketing of seafood products. It is further expected that over the years the Project will facilitate various types of Industry Round Tables to discuss about sustainable bycatch utilization and alternative marketing channels. It is also envisaged that the Project will seek and promote potential ways to pilot in at least one participating country on alternative market to the sustainable bycatch products of the shrimp trawl fishery.

The project will also facilitate the creation of a network of key fishing industry partners at international, regional and national level. The participation in the CONXEMAR meeting will be the first significant effort towards this initiative.

Regional inter-governmental organisations: Key RFBs were mentioned above (see section 1.1.c) and include in particular the WECAFC and the CRFM who are formal partners and co-funders of the project. Over the years, collaboration has taken place

[1] Other partners may join the project during implementation. For example, the Norwegian Institute of Marine Research participated in the project preparatory workshop, held in Costa Rica on 1-4 July 2014, and expressed interest in collaborating on project elements relating to alternative fishing methods and gear. Also the University of Mérida in Mexico may collaborate closely with the project.

through, for example, the WECAFC working group on shrimp (see Box 3) and groundfish fisheries and, more recently, under the CLME project. The CRFM will collaborate with FAO in the delivery of the project, including such areas as data management, fisheries assessment, governance and management, implementation of participatory approaches, and public awareness-raising. The WECAFC is the regional project executing partner and will, in addition to technical collaboration with the project, host the RPCU (see section 4.2 below).

Box 3: Regional collaboration: Working groups on shrimp and groundfish and the WECAFC

The WECAFC/CRFM/IFREMER Working Group on Shrimp and Groundfish was originally set up in 1979 by countries on the North-Brazil Guianas shelf but it is now open to all WECAFC member countries and partner organizations. The Working Group is currently receiving some support from the Inter-America Development bank (IDB)/FAO project "Investing in ecosystem-based shrimp and groundfish fisheries management of the Guianas-Brazil Shelf". Collaboration with the REBYC-II LAC project will be mutually beneficial, providing project countries with access to knowledge and experience, and strengthening the Working Group as a vehicle for regional fisheries management collaboration.

Other important regional organizations and project collaborators include **OSPESCA** which also participated in the project preparatory phase. The regional organizations will play an important role in the project by disseminating project results in their member countries, linking the project to other regional initiatives and promoting the development of regional strategies and approaches.

NOAA: The National Oceanic and Atmospheric Administration (NOAA) is the primary US federal government agency charged with science and stewardship of living marine resources. It plays an active role in the provision of data, science and technical support to various regionally and globally important fisheries, including in the project region. The NOAA Fisheries Harvesting Systems Unit, based in Pascagoula Mississippi, has been actively involved in the development and evaluation of shrimp trawl bycatch reduction mitigation technologies in the Gulf of Mexico and Atlantic for more than 30 years. In this project, NOAA researchers will provide support by assisting in project activities related to the identification and development of bycatch mitigation technologies (BRDs).

Universities and research institutes in the region: Several universities and research institutes in the project region have relevant on-going research projects and a wide know-how of the fisheries management and livelihoods issues addressed by the project. The project intends to collaborate with the Centre for Resource Management and Environmental Studies (CERMES) of the University of the West Indies (UWI, Barbados) who provided important inputs into project design, in particular with regard to the livelihoods and gender aspects of Component 3, during project preparation. The project intends also to collaborate with Saint Mary's University (Canada), and particularly the International Community Conservation Research Network based there, specifically concerning interactions of fishery conservation initiatives, fishing community livelihoods and policy aspects. At the national level, it is expected that extensive collaboration will take place between project executing partners and relevant universities and research institutes throughout the project. Collaboration with universities and research institutes will be in the form of technical support to the project from faculty members (e.g. FAO visiting experts programme and experts for

technical cooperation), data and knowledge generation (e.g. support to the development of Master and PhD degrees that focus on the various components of the project, joint preparation of training course and manuals, scientific papers, etc.), creation of a platform for exchange among project partners (e.g. students and professionals, good practices, lessons learned from a wide-range of experience), resource mobilization (e.g. developing jointly new project proposals under the scope of the project), capacity development (e.g. study tours to project countries and sites, training courses, mentoring, etc.).

The project will be guided by principles of equitable development and will pay attention to gender. Bycatch issues and project interventions may impact men and women in different ways and this has to be understood and taken into consideration. In particular, special efforts will be devoted to the involvement of women and youth at the institutional level in organizational development efforts and capacity building and in respect of livelihood enhancement and diversification.

1.1.4 Lessons learned from past and related work, including evaluations

Experience from the 2002-2008 FAO/UNEP/GEF global project REBYC-I indicates that it is possible to markedly reduce bycatch and discards by working closely together with the private fishing sector. The REBYC-I project was implemented in 12 countries, including Colombia, Costa Rica, Mexico and Trinidad and Tobago[1], and had a focus on technology (gear development and capacity building in particular with regard to technical knowledge) but legislation and awareness-raising were also addressed. The project "produced outstanding results by generating valuable information, increasing knowledge and awareness, building capacities and fostering cooperation concerning bycatch management and reduction of discards"[2]. The terminal evaluation of the project strongly recommended a second phase of REBYC taking "a more holistic approach combining the gear technology aspects more effectively with management (through implementation of legislation and other forms of regulation), economic and socio-economic considerations, and knowledge management for enhanced dissemination of results and greater awareness"[3]. These lessons indicate the need for increased participation of fishers in planning and implementation of appropriate management measures and to create incentives and capacity to reduce bycatch and discards. There are also links to broader fisheries livelihoods aspects, especially in small-scale fishing communities. Coastal livelihoods tend to be diverse, including both men and women along the value chain, and be dependent on the marine resources and environment. Clearly, bycatch is a complex issue, requiring resource and biodiversity issues to be tackled alongside human needs, involving a mix of institutional, management and livelihood support measures.

As a follow-up to REBYC-I in the Asia region, "Strategies for trawl fisheries bycatch management" – REBYC-II CTI – was started in 2011. A mid-term review was carried out during the first half of 2014 and emphasized the need to focus more efforts on data collection,

[1] The participating countries were Bahrain (on own funding), Cameroon, Colombia, Costa Rica, Cuba, Indonesia, Islamic Republic of Iran, Mexico, Nigeria, Philippines, Trinidad and Tobago, and Venezuela.
[2] Page iv, R. Hermes. 2009. Terminal Evaluation of the UNEP/GEF project Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of Bycatch Reduction Technologies and Change of Management (REBYC), project Number UNEP GF/2731-02-4469 & GF/4030-02-04, FAO EP/GLO/201/GEF. UNEP Evaluation and Oversight Unit. June 2009. Available at ftp://ftp.fao.org/fi/DOCUMENT/rebyc/TerminalEvaluationFinal.pdf).
[3] Page vi, R. Hermes. 2009 (see footnote 2).

including socio-economic and gender-related information related to bycatch reduction. Furthermore, it was recommended that management plans should be formulated with a participatory approach, in order to be effective in addressing all the issues and providing solutions involving all stakeholders, including those that have not been customarily included. Strengthening of institutional arrangements necessary for management plan development and implementation should also be prioritized[1].

The lessons learnt from the two other REBYC projects have been taken into account in the design of the present REBYC-II LAC project and are reflected in the considerable emphasis on institutional strengthening (mainly Component 1) and the inclusion of a Component 3 dealing specifically with livelihoods and gender in addition to focusing on co-management and EAF in Component 2.

1.1.5 Links to national development goals, policies and plans as well as FAO and GEF strategic objectives

a) Alignment with national development goals, policies and plans

There is a general recognition of the need to improve shrimp/bottom trawl fisheries and bycatch management in the LAC region. This process of improved awareness has been facilitated and promoted by the RFBs (e.g. WECAFC) and supported by various NGOs (e.g. WWF) and regional programmes (e.g. the CLME and its continuation CLME+ - see Box 5).

The Thirty-third FAO Regional Conference for the LAC region, held in Chile on 6-9 May 2014, expressed its support for the work of WECAFC and the need to continue cooperating with "fisheries management, capacity-building support for fisheries and aquaculture data analysis and sharing, application of the 2009 FAO Agreement on Port-State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, and the drafting of recommendations to adapt the fisheries and aquaculture sectors to climate change"[2]. The REBYC-II LAC directly addresses some of these recommendations.

The regional priorities in bycatch management for the region were identified and specified during the Regional Workshop on Bycatch Management and Reduction of Discards held in Costa Rica in February 2010. The workshop produced the "Puntarenas Declaration" which: (i) expressed the growing concern on the impact of bycatch and discards on the sustainability of fisheries, maintenance of marine biodiversity and food security in the Caribbean and Latin America region; and (ii) demanded a call for support of a regional programme aimed at mitigating problems associated with bycatch and discards. The workshop was attended by representatives of the fisheries administrations of 12 countries from the region and of several RFBs (e.g. OSPESCA) and other stakeholders (e.g. WWF and NOAA).

The national priorities in bycatch management were identified and specified during the REBYC II LAC Project Inception and Log-Frame workshops on Sustainable Management of Bycatch in Latin America and Caribbean Trawl Fisheries held on 19-22 January 2014 in Paramaribo (Suriname) and on 1–4 July 2014 in Puntarenas (Costa Rica) respectively. Both workshops were attended by national coordinators and consultants (the country teams) from

[1] The REBYC-II CTI mid-term report is available at project website (http://rebyc-cti.org/)
[2] Page 8; the report is available at http://www.fao.org/docrep/meeting/030/mk390e.pdf.

the six project countries (Brazil, Colombia, Costa Rica, Mexico, Suriname, and Trinidad and Tobago). Other participants included representatives of the Caribbean Regional Fisheries Mechanism (CRFM), the US National Oceanic and Atmospheric Administration (NOAA), the Central America Fisheries and Aquaculture Organization (OSPESCA), the Western Central Atlantic Fishery Commission (WECAFC), the Centre for Resource Management and Environmental Studies (CERMES) at the University of the West Indies (UWI), the Centre for Development Cooperation in Fisheries (Institute Marine Research, Norway) and representatives of the Suriname and Costa Rican fisheries sector and civil society organizations. FAO was represented by officers from the Fishing Operations and Technology Service (FIRO), the FAO GEF Coordination Unit, the Regional Office for Latin America and the Caribbean (RLC), the Subregional Office for Mesoamerica (SLM) and the Subregional Office for the Caribbean (SLC). The alignment of the project with national priorities is reflected in:

Brazil is developing initiatives to strengthen the institutional and regulatory arrangements for the shrimp trawl fishery. They include creation of the Standing Consultative Committee for the Management of the Shrimp Fishery[1] and the formulation of the National Management Plan for the Sustainable Use of Marine Shrimps. The objective of the first was to allow for co-management, by giving both the fishing companies and fish workers' associations the opportunity to participate regularly in the decision-making process related to the management of the shrimp trawling fishery, together with all relevant government bodies. The second, in turn, aimed at creating the basis to guide the management process. Also Brazil has more than 30 years of experience in reducing mortality of sea turtles associated with various fishing activities, *inter alia*, the shrimp fishery. In addition, Brazil has several major policies and programmes that support and strengthen the artisanal fisheries sector.

Costa Rica is in the process of developing a new national development plan for 2015-2019. Currently, there are initiatives for civil society governance models, e.g. the Marine Areas for Responsible Fishing that are of interest to the REBYC-II LAC project in the context of co-management. Costa Rica has a strong track record in biodiversity protection with a large number of protected areas in place.

Colombia's national development plan, known as *Prosperidad para Todos 2010-2014*, aims to reduce poverty, increase incomes, generate employment opportunities, improve security and ensure the sustainable use of natural resources. The objectives include the promotion of competitive, equitable and sustainable strategies for agriculture, forestry and fisheries, and the fostering of a decentralized administrative system that encourages the full involvement of communities in development planning[2].

The national development plan 2013-2018 of Mexico establishes a clear strategy for the transformation of the country, based on sustainable development. It includes a component on the need to establish a productive agricultural and fisheries sector that contributes to food security and states the need for sustainable practices in the fisheries sector.

[1] The Standing Consultative Committee for the Management of the Shrimp Fishery locally known as CPG-Camarões was created in 2011 by the Interministerial Normative Instruction 3 (MPA/MMA), of January 28, 2011.

[2] From http://www.ruralpovertyportal.org/en/country/approaches/tags/colombia.

The principal aims of the Suriname fisheries policy are the conservation of the biological resources of the sea and their balanced exploitation on a lasting basis and in appropriate economic and social conditions, ensuring that the impact of fishing on marine ecosystems is reduced to a minimum. Specific aims of the policy include particular mention of the reduction of unwanted bycatch and of protected species, and increased stakeholder participation.

In Trinidad and Tobago, the government acknowledges the need to ensure sustainable use of the existing fishery resources, and is currently reviewing the fisheries management policy and legislation (see also the section on General context above). As a small-island developing state (SIDS), coastal communities are dependent on the aquatic environment for their livelihood. Resource management needs to take place by engaging local fisherfolk in such initiatives.

Colombia and Suriname have submitted post COP-10 National Biodiversity Strategies and Action Plans (NBSAPs) to the CBD Secretariat. The Colombian plan emphasises the need for integrated management of biodiversity and the ecosystem services it provides, with the view to maintaining and increasing the resilience of socioecological systems at the national, regional, local and transboundary levels. The NBSAP of Suriname promotes comprehensive stakeholder consultations, including co-management of protected areas, and the rights of the communities (Indigenous and Maroons)[1].

b) Alignment with GEF focal area

The REBYC-II LAC project is at the heart of the GEF International Waters (IW) mandate. Collective and catalysing transboundary actions are urgently needed in the LAC shrimp/bottom trawl fisheries to address multiple stresses and to move towards environmental, social and economic sustainability.

The project is specifically aligned with the objectives of the GEF5 IW Objective 2: "Catalyze multi-state cooperation to rebuild marine fisheries and reduce pollution of coasts and large marine ecosystems (LMEs) while considering climatic variability and change", i.e. outcome 2.2 "Institutions for joint ecosystem-based and adaptive management for LMEs and local ICM [2] frameworks demonstrate sustainability", and outcome 2.3 "Innovative solutions implemented for reduced pollution, rebuilding or protecting fish stocks with rights-based management, ICM, habitat (blue forest) restoration/conservation, and port management and produce measureable results". The project's strategic approach (further explained in Section 2 below) is based around institutional strengthening of co-management and EAF, identification of management measures and incentives, and support to enhanced livelihoods. Accordingly, the project is a critical component in the global efforts to reduce ecosystem impacts and increase the socio-economic benefits of the tropical and sub-tropical multispecies shrimp/bottom trawl fisheries. It is expected that the project will contribute to the achievement of GEF5 IW2 outcome indicators through the implementation of national and regional institutional reforms (indicator 2.1) and the promotion of sustainable fisheries (indicator 2.3).

All project countries are eligible for GEF funding. The project has been endorsed by the GEF Focal Points, on behalf of the governments.

[1] See http://www.cbd.int/nbsap/about/latest/.
[2] Integrated coastal management.

c) Alignment with FAO Strategic Framework and objectives

The project strives to address both the need for environmental sustainability and socioeconomic development in the short and long-term. These aims are of course mutually supportive in the longer term – coastal livelihoods depend on sustainable resources – but to avoid potential costly trade-offs in the short-term, a thorough understanding of local situations and participatory approaches needs to be combined with sound technical knowledge and an enabling environment. This balanced and holistic approach – with both people and the environment in focus – is very much in line with the FAO mandate and competencies.

The project relates specifically to FAO's strategic objective (SO) 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. Component 2 and 3 of the project will also contribute to SO 3 (Reduce Rural Poverty) and SO4 (Enable more inclusive and efficient agricultural and food systems at local, national and international levels). In particular the project will support:

- Making fisheries more productive and sustainable by addressing unsustainable fishing practices through EAF and at the same time promoting equitable distribution of benefits through enhanced understanding of the socioeconomic context of the shrimp/bottom trawl fisheries and bycatch subsectors (SO2; 201, 202[1]);
- Eliminating hunger by supporting policies and political commitments to this end and by improving the knowledge and information on the role of bycatch in food security (SO2, 202, 204);
- Promoting inclusive fishery systems by introducing or strengthening co-management arrangements and supporting the implementation of the SSF Guidelines (SO2, 20301[2]).
- Creating decent rural employment as part of "increasing access by the rural poor to decent farm and non-farm employment" (SO3[3]);
- By promoting the reduction of discards and utilization of sustainable bycatch the project will contribute to reducing food loss and waste (SO4[4]).

Member countries of the LAC region defined a number of priority areas for FAO´s attention, during the 33rd Regional Conference (2014). These areas include strengthening the integrated sustainable management of natural resources, including fisheries and strengthening sustainable fisheries and aquaculture. This project will contribute in particular to LAC Regional Initiative 3 (RI3) Agricultural and Food Value Chain Development: Improving food and feed systems. RI3 is aimed at revitalizing the food and agricultural sector (including fisheries) of the Caribbean region by addressing two fundamental problems. Firstly, the limited development and lack of inclusion along the entire selected agricultural product value chains. This requires addressing constraints that undermine participation, productivity, investment, value addition, competitiveness and trade. Secondly, low utilization of local products at the intermediate processor, hospitality and consumer levels. Addressing issues related to quality, standards, governance and promotion will result in increased market entry.

[1] Details on FAO's New Strategic Objectives can be seen at: http://www.fao.org/docrep/018/mi317e/mi317e.pdf
[2] Stakeholders are supported to participate in, update existing and develop new international (including regional) instruments and mechanisms under the auspices of FAO (SO2, 20301).
[3] The rural poor have greater opportunities to access decent farm and non-farm employment (SO3, 302)
[4] Agribusinesses and agrifood chains that are more inclusive and efficient are developed and implemented by the public and private sectors (SO4, 402).

Sustainable management of natural resources, including fishery resources, is generally included in the Country Programming Frameworks (CPFs) agreed between the governments of the six participating countries and FAO. Suriname specifically mentions collaboration with the WECAFC and the need for sustainable management of shrimp and groundfish.

SECTION 2 – PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT STRATEGY

The project will be grounded in the CCRF and its principles. EAF will be promoted as the basis for improved fisheries management (see **Error! Reference source not found.**). The project will take an inclusive approach with strong stakeholder participation and promotion of co-management (see Box 4) and also address livelihoods related to the shrimp/bottom trawl fisheries in a broader sense.

Box 4: The ecosystem approach to fisheries (EAF)

The EAF is an approach to fisheries management and development that strives to balance diverse societal objectives by taking into account knowledge and uncertainties regarding biotic, abiotic and human components of ecosystems and their interactions, and by applying an integrated approach to fisheries within ecologically meaningful boundaries. The purpose of EAF is to plan, develop and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems. Key elements in EAF are:

- Decentralize decision and action to the lowest appropriate level, while recognizing that there must also be mechanisms to ensure that management decisions and actions are consistent and coordinated at the higher levels required by EAF.
- Identify the fishery or fisheries to be addressed in each case and the geographic area to be addressed (matching fisheries management system boundaries with ecosystem boundaries).
- Establish appropriate, explicit and enforceable rights to ecosystems resources. Under EAF it needs to be recognized that access rights systems will frequently need to encompass other uses in addition to harvesting target resources.
- Establish effective conflict resolution and enforcement mechanisms.
- Recognize and identify the various direct and indirect uses and users of the ecosystem and involve all stakeholders in knowledge-sharing, decision-making and management.
- Translate the high-level policy goals for EAF into transparent and comprehensive operational objectives.
- Set management objectives for the short and long term and establish indicators and reference points for the agreed operational objectives in order to provide a framework for monitoring management performance.
- Consider transboundary impacts of fisheries on adjacent or other ecosystems.
- Governance for EAF should ensure both human and ecosystem well-being and equitable allocation of benefits.
- Understand and manage ecosystems in an economic context, including management of market drivers for overexploitation and incentives for sustainable management of resources.
- Conserve ecosystem biodiversity, structure and functioning, avoid irreversible ecosystem impacts from fisheries and reduce reversible, undesirable impacts (e.g. bycatch and discards).
- Conservation and management decisions for fisheries should be based on the best scientific information available, also taking into account traditional knowledge on the resources.
- Improving knowledge on the structure, components and functioning of the marine ecosystem under consideration, the role of habitat and the biological, physical and oceanographic factors affecting ecosystem stability and resilience; improve the

monitoring of by-catch and discards in all fisheries to obtain better knowledge of the amount of fish actually taken.
- Support research and technological development of fishing gear and practices to improve gear selectivity.

Source: FAO. 2003. Fisheries management. 2. The ecosystem approach to fisheries. 2.2. The human dimensions of the ecosystem approach to fisheries. FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2, Add. 2. Rome, FAO. 88 pp.

Box 4: Co-management

Co-management is typically defined as a partnership arrangement between government and the local community of resource users, sometimes also connected with agents such as NGOs and research institutions, and other resource stakeholders, to share the responsibility and authority for management of a resource. There are no standardised approaches, but rather a range of arrangements, levels of sharing of responsibility and power, and ways of integration of local management mechanisms and more formalised government systems.

The approach is gaining particular importance in small-scale fisheries, for which local management capacity and responsibility, combined with the support of formal legal frameworks and information/decision making systems may offer particular advantages. However, their potential depends on the existing policy and legal environment, local and national support for community-based initiatives, and the capacities of various partners.

Source: http://www.fao.org/fishery/topic/16625/en

The project will operate at various levels. Field activities will be carried out at local level for the identification, development and implementation of effective co-management measures, including technological solutions, focusing on reducing unsustainable bycatch and discards. Support will also be provided to enhanced livelihoods in selected fishing communities. Institutional and legal frameworks will be strengthened in the context of country-specific characteristics at national level. Strategies for long-term cooperation towards bycatch management and responsible fisheries will be developed at regional level. The project will also serve as a bridge, promote linkages with global initiatives and work on bycatch management in other regions. The dissemination of information and sharing of data and project outcomes will have a high priority. The project will contribute to increased awareness of the importance of bycatch management and to the development of capacity for co-management and livelihoods enhancement, at local, national and regional levels.

Field activities (Components 2 and 3) will take place in selected geographic areas, fisheries and fishing communities in the six project countries. All countries will focus on shrimp trawl fisheries, except Suriname where a finfish trawl fleet segment is also included. The fisheries include small-scale fisheries (SSF) as well as medium-sized or semi-industrial (SIF) and large-scale (LSF) fleet segments[1]. The pilot geographic areas and fisheries are:

[1] During project preparation, it was noted that different classifications for the fleets are used in different countries. Here the categories as used by each individual country are used.

- Brazil: 7 locations: Pará State (LSF) and Pernambuco State (SSF) in the north and northeast; São Paulo State/MPA in the southern area (SSF and SIF) and in the southeast; and Paraná State/Pontal de Paraná (SSF), Santa Catarina/MPA Anhatomirim (SSF and SIF), Rio Grande do Sul (SSF), and Santa Catarina/Itajaí/Rio Grande do Sul/Rio Grande (LSF) in the south.
- Colombia: 4 locations: Puebloviejo/Magdalena (SSF) and Tolú/Sucre (LSF) on the Caribbean coast, and Punta/Buenaventura Bay (SSF) and Punta/Buenaventure Port (LSF) on the Pacific coast.
- Costa Rica: Golfo de Nicoya (SSF) and outside the Golfo de Nicoya (SIF) on the Pacific coast.
- Mexico: Gulf of Mexico / Campeche zone.
- Suriname: Paramaribo and fishing communities in Commewijne and Coronie
- Trinidad and Tobago: Orange Valley (SSF and LSF) and Otaheite (SSF).

Not all countries will do exactly the same activities and the focus of the project may vary from one country to another according to national priorities identified during the project design phase in national consultations where local and national key areas of action were also identified together with tangible results and targets. The objectives and outcomes, described below, will however be relevant to all project countries and experiences will be shared so that results gained in one country can also benefit other project countries as well as other countries in the region.

The need for climate change adaptation and gender will be considered throughout the project as cross-cutting themes. In addition, Component 3 has a special focus on gender.

2.2 PROJECT OBJECTIVES

The **Global Environment Objective** of the project is:

To reduce negative ecosystem impact and achieve more sustainable shrimp/bottom trawl fisheries in the Latin American and Caribbean region (LAC) through implementation of an ecosystem approach to fisheries (EAF), including bycatch and habitat impact management.

The project **Development Objective** is:

To strengthen resilience of coastal communities through promotion of responsible fishing practices and livelihood enhancement and diversification, contributing to food security and poverty eradication.

2.3 EXPECTED PROJECT OUTCOMES

The achievements expected by the project in the longer term are expressed in the following end-of-project outcome indicators (see also the Results Matrix in APPENDIX 1):

Outcome 1.1: Strengthened regional collaboration on shrimp/bottom trawl fisheries and bycatch management.
Targets:

- The CRFM/WECAFC/IFREMER working group is functional and actively promoting the implementation of the regional bycatch/discards strategy (output 1.1.2), including collaboration beyond the initial working group membership.

- Best practices identified by the project are shared through OSPESCA, CRFM and WECAFC established mechanisms.

Outcome 1.2: Improved legal and institutional frameworks in the project countries for shrimp/bottom trawl fisheries and bycatch co-management and EAF.
Target:

- At least three project countries have their legal and institutional frameworks revised (or draft legislation in the process of being approved) as necessary for implementation of co-management and EAF management plans developed under Component 2.

Outcome 2.1: Selected key shrimp/bottom trawl fisheries in the region are successfully co-managed through EAF (including bycatch/discards considerations).
Targets:

- Discards have been reduced by at least 20% in at least five project pilot fisheries.
- At least five shrimp/bottom trawl fisheries management plans (in project pilot sites), taking the B&D Guidelines into consideration, are under implementation.

Outcome 2.2: An enabling environment created including incentives and promoting responsible practices by trawl operators.
Target:

- Trawl operators/fishers in at least five project pilot sites benefit from at least one type of positive incentive in relation to changes in trawl fisheries bycatch management (e.g. reduced fuel or labour costs, and/or market-based incentives such as price premiums or niche markets).

Outcome 3.1: Capacities and opportunities for enhanced sustainable and diverse livelihoods created and gender equality promoted.
Targets:

- New income generating opportunities for men and women through the value chain, adding value to sustainable bycatch products and other alternatives explored and generating local benefits in at least three project pilot sites.

Outcome 4.1: Project implementation based on results-based management and application of project findings and lessons learnt in future operations.
Target**:**

- The project has achieved its expected outcomes and outputs and lessons learnt are widely disseminated regionally and internationally.

2.4 PROJECT COMPONENTS AND OUTPUTS

To achieve the objectives and expected outcomes indicated above, the project has been structured into four components and various subcomponents with their respective outputs as presented in Table 2.1 and described in more detail below.

Table 2.1: Components and Sub-components of the project *Sustainable management of bycatch in Latin America and Caribbean trawl fisheries (REBYC-II LAC)*

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

1.1.1 Regional dissemination of bycatch best management practices
1.1.2 Regional strategy for shrimp/bottom trawl fisheries and bycatch management
1.2.1 National legal frameworks
1.2.2 Institutional structure for EAF and co-management

Component 2: Strengthening bycatch management and responsible trawling practices within an EAF framework
2.1.1 Bycatch information and monitoring systems
2.1.2 BRD technologies and other management measures
2.1.3 Co-management plans based on an EAF
2.2.1 Drivers of bycatch and discard practices and incentive mechanisms
2.2.2 New products and markets

Component 3: Promoting sustainable and equitable livelihoods through enhancement and diversification
3.1.1 Value chain analysis
3.1.2 Livelihood alternatives
3.1.3 Strengthening of community organizations for livelihood changes

Component 4: Project progress monitoring, evaluation and information dissemination and communication
4.1.1 Project progress monitoring system and reporting
4.1.2 Project evaluations
4.1.3 Dissemination of best practices and lessons learned

The components are interrelated and activities and outputs of one component may also support the activities and outcomes of another component.

As mentioned above, not all project countries will implement exactly the same activities and some outputs may be more relevant to some countries than to others. Each country has prepared a national results matrix and work plans will be developed specifying expected results and activities at country level. The project regional results matrix including indicators and targets (APPENDIX 1a) and the project's work plan (

APPENDIX 2) take these differences into account and include expected results and key activities at the aggregated regional level. The description of the components below also focuses on the aggregate regional level. A summary of each country's expected results (outcome targets), products (output targets) and current baselines are included in APPENDIX 1b *(Country level Results Matrix – outputs, baselines and end-of-project targets).*

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

This component focuses on the overarching institutional and legal arrangements at national level and collaboration at regional level. At national level, in order to address shrimp/bottom trawl fisheries bycatch concerns, it is imperative to have an enabling framework with appropriate provisions for co-management processes and EAF. Without such a framework, long-term solutions will be difficult to sustain. Institutions – within governments, at the stakeholder level and in the form of multi-level and multi-sectoral committees or similar – need to be in place for effective co-management and EAF to be implemented.

A potentially important complement to co-management is the rights-based fisheries management approach. This needs to be appropriate for the particular context and also include community-based rights systems, based on customary rights when applicable. The SSF Guidelines provide a framework for the need to apply a human-rights based approach to development, including establishing clear rights to the resources that small-scale fishing communities depend on, paying particular attention to vulnerable and marginalised groups. To apply these principles may require new thinking with regard to collaboration and processes and the project will support this avenue of development.

The institutional structures required for co-management and EAF need to be supported by a suitable legal framework. In order to ensure that bycatch and discards are covered in EAF management plans for the shrimp/bottom trawl fisheries, regulatory arrangements should explicitly spell out this requirement for management planning. The B&D Guidelines provide a framework in this respect as well as on many other aspects of bycatch management. The project will assist countries to implement the B&D Guidelines within a regional context and to assess their national legal frameworks.

At regional level, considering the transboundary nature of the marine environment and resources and that many of the issues and concerns with respect to shrimp/trawl fisheries bycatch are shared, collaboration will not only be desirable but necessary. Well-tested and effective solutions will be of benefit for the whole region. With the help of RFBs – in particular CRFM, OSPESCA and WECAFC – regional cooperation that allows for experience-sharing and mobilisation of political support for action will be promoted. There are already initiatives in this respect that the project will build on. The 14th session of WECAFC (2012) promoted the implementation of the B&D Guidelines and issued a resolution in support of implementation by the members at national level. However, implementation at national level is still generally lacking.

Component 1 will delivered through the following outputs and activities:

Output 1.1.1: Best bycatch management practices in line with B&D and SSF Guidelines disseminated to all countries in the region.
Targets:

a) At least three media products (documentary, brochure, etc.) on best management practices in line with B&D and SSF Guidelines produced for dissemination to project and non-project countries.

Awareness raising, both at national and regional levels, with regard to the principles and contents of existing international policy frameworks will be an important strategy for ensuring implementation of the B&D Guidelines and the SSF Guidelines. To support this process, best bycatch management practices, lessons learned and results achieved will be identified among project stakeholders, and **media products** will be produced by the project countries for use both nationally and regionally. The media products will be developed with contributions from all project countries and RFBs/donors/international agencies involved in project.

Output 1.1.2: Regional strategy for shrimp/bottom trawl fisheries and bycatch management agreed and under initial implementation.

Targets:

a) *A regional bycatch management policy/strategy including regional level recommendations for harmonized regulations on shrimp/bottom trawl bycatch in line with regional priorities, B&D Guidelines and the CLME SAP has been agreed by at least one RFB (hence including endorsement of both project and non-project countries).*
b) *At least five non-project countries have participated in at least one project regional workshop on shrimp/ bottom trawl bycatch issues including the implementation of the regional policy/strategy.*

With support of the RFB partners of the project, including the CRFM/WECAFC/IFREMER working group, work on **drafting a regional strategy** for shrimp/bottom trawl and bycatch management will start early on in the project. The draft will be informed by lessons learned generated by the project and include recommendations for harmonized regulations. The draft will be submitted to **consultations** with project partners and with other countries in the region as appropriate.

The draft strategy will be discussed in a **regional workshop**. This workshop, which will also incorporate activities of outputs 1.2.1 and 2.1.1, is planned for year 4 of the project allowing time to **finalise the document** before project closure. The project's RFB partners and the CRFM/WECAFC/IFREMER working group, will play a key role in ensuring an agreement on the strategy – among project countries and more broadly in the region. Costa Rica, as a member of OSPESCA, will also facilitate the update of the strategy among OSPESCA's membership.

Output 1.2.1: National legal frameworks for shrimp/bottom trawl fisheries and bycatch co-management reviewed and amended.

Targets:

a) Institutions responsible for fishery law and regulations in at least three project countries have received training on and have applied the FAO legal assessment tool to evaluate the appropriateness of their legal frameworks for:

- *Bycatch management and EAF in accordance with the B&D Guidelines.*
- *Co-management, including rights-based approaches in accordance with the SSF Guidelines.*

b) Revisions and adjustments in the legal framework proposed in at least three project countries.

Initially, project countries will **review the current status** of their policies, regulations and institutional frameworks, fisheries management plans and other guiding instruments to assess to what extent the B&D Guidelines and other relevant international instruments, in particular the SSF Guidelines, are taken into account. These reviews will allow for identifying gaps that need to be addressed both in the legal framework under this output and in institutional structures under output 1.2.2 below.

FAO has developed a **draft legal assessment tool** to facilitate the review of national legal frameworks in relation to international instruments. This tool will be updated so that it can be used in the context of the B&D Guidelines. The tool will be applied in the countries interested (at least three) to review the legal frameworks and identify gaps with the help of an international legal specialist who will also provide **on-the-job training** of national counterparts in the use of the tool. The gap analysis will also refer to the suitability of the legal framework for implementing EAF, co-management and rights-based approaches.

Based on the identification of gaps, **recommendations** will be formulated for legal amendments, as appropriate. The lessons learnt from the legal review and amendment process will also feed into recommendations at regional level for harmonisation of legal frameworks as part of the regional bycatch management policy/strategy (output 1.1.2). A **regional workshop** will be organised (jointly with activities under outputs 1.1.2 and 2.1.1) with the purpose of promoting such harmonisation with the assistance of the project's RFB partners.

Output 1.2.2: Institutional structures for EAF and co-management of shrimp/bottom trawl fisheries and bycatch in place.

Targets:

a) Functional institutional structures, including multisectoral committees involving both men and women, for shrimp/bottom trawl fisheries and bycatch co-management exist in at least three project countries.

The issue of appropriate institutional structures is closely related to the legal framework as institutions and processes are required to implement legal provisions, at the same time as these institutions and processes need to have a legal basis. The review of the national legal frameworks under output 1.2.1 is hence expected to be closely coordinated with a **review of existing institutional structures** and their adequacy for ensuring effective implementation of co-management in the shrimp/bottom trawl fisheries including bycatch considerations.

While the existing institutional structures vary between the different project countries, there appears to be a common gap with regard to fisher organisations or – where these already exist – their capacity and access to participate effectively in decision-making processes with regard to co-management. Accordingly, special efforts will be made to work with sector stakeholders to **develop improved organisational structures** that include representation of fishers and fish workers, in particular for the purpose of co-management. The work under this output is closely related to the activities under output 3.1.3 on strengthening community organisations, but in Component 1 the focus will be on national level institutional structures to support co-management.

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

This component will focus on local level and pilot activities for specific fisheries. Using the enabling frameworks (policy, legislation and institutions) and capacities developed under Component 1, EAF and co-management plans will be developed and implemented through participatory processes in selected fisheries (see pilot areas listed under the Project Strategy section 2.1 above). These processes will include both men and women and will be linked to the work under Component 3, in particular with regard to small-scale fisheries taking on board the notion that there needs to be an integrated approach to resource management and development in fishing communities.

Under this component, one important element that will be addressed is the need for improved information on bycatch and discards, and on monitoring arrangements that allow for systematic collection and analysis of relevant data, including also traditional and local knowledge. Information is needed at local and national levels to support bycatch management and co-management of shrimp/bottom trawl fisheries, but it should also be shared at regional level. In some of the project countries and targeted fisheries, critical bycatch species are already known whilst it will be necessary to investigate these in others. Harmonised systems for data collection and analysis will be promoted to allow for regional comparisons and assessments contributing to joint actions. The RFBs, in particular the WECAFC/CRFM/IFREMER working group (see Box 3), constitute important vehicles and project partners for this work. Moreover, standardization of data collection and analysis systems with other non-project countries sharing the same transboundary stocks/resources is possible through active participation in the working group.

In order to include bycatch management effectively in the shrimp/bottom trawl fisheries management plans, there is a need for more work on identifying – and developing or adapting – suitable technologies and/or management measures. This will also include looking into alternative fishing methods for catching shrimp, i.e., non trawling techniques, used in other parts of the world. The feasibility of introducing such methods will be assessed in a selected number of pilot sites and experiences shared among project countries and the wider region.

For the development of shrimp/bottom trawl fisheries and bycatch management plans, participatory processes and co-management will be promoted. The adjustments in the legal framework and the institutional structures strengthened under Component 1 (output 1.2.1 and 1.2.2 respectively) are a prerequisite for this. Moreover, there is a need to develop the capacity (knowledge and human resources) within the institutional structures for implementing co-management and EAF, and the project will provide specific training in this respect.

Compliance with management regulations once they are in place and proper use of improved gear modifications will be supported by the identification of possible incentives. These incentives could be of different types such as, for example, market advantages (price premiums or access to niche markets) or cost savings (e.g. lower fuel consumption). The project will work closely with fishers, fish workers, industry representatives and seafood trading companies to identify and test possible incentive packages in pilot fisheries.

The focus of bycatch management is to reduce unsustainable bycatch and discards. Discards are considered a particularly wasteful practice. Using the discards to the extent possible would be better than throwing them back in the sea (if not surviving). The project will therefore also look into improved use of currently discarded bycatch by exploring new products and new

ways of using those products. It is however recognised that care has to be taken not to promote the use of unsustainable bycatch but only species and sizes that can be sustainably fished.

Climate change is a reality in the LAC region as elsewhere and fisheries management planning needs to take climate change into consideration. As mentioned above, Trinidad and Tobago is participating in the FAO-SCCF CCA fisheries project; coordination between this project and REBYC-II LAC will be ensured (see also section 4.1 below).

Collaboration with international partners will be important under this component, in particular with regard to technological solutions, investigation of alternative fishing methods and training in EAF, co-management and related topics. At national level, activities will be an integral part of existing efforts and project teams will work closely with government research institutes and other partners as required.

The following outputs and activities are planned under Component 2:

Output 2.1.1: Information on bycatch (species, volumes, bottom impacts) and monitoring systems improved in selected fisheries (both small and large-scale) in project areas, supporting EAF and co-management, and information shared among countries.
Targets:

a) Critical bycatch species are known or identified in at least five project pilot sites.
b) Bycatch data monitoring systems are improved according to local needs and provide information for shrimp/bottom trawl fisheries and bycatch management in at least three project countries.
c) Information is shared in a harmonised and efficient way through the WECAFC/CRFM/IFREMER working group and the need for a regional DSS (as defined in the CLME SAP) has been evaluated.

The information available on bycatch and other impacts by shrimp/bottom trawling vary between the different project countries, but data collection and monitoring systems are generally weak or non-existent. An initial activity will hence be to **review the information available and the performance of existing systems** and identify gaps to address.

The project will support **data collection** activities both with regard to bycatch information (species, volumes) and bottom impacts. While the data collected will be important in itself – for feeding into project activities and support bycatch management actions – the overarching aim is to identify a limited number of key **indicators** for improving bycatch management and applying an ecosystem approach to shrimp/bottom trawl fisheries management and to set up more **permanent monitoring systems**. These monitoring systems should take most scientific and traditional and local knowledge into account, and also consider information on bycatch utilisation and value generated under output 3.1.1.

Exchange of information at regional level and harmonisation of data are essential ingredients of a common approach to shrimp/bottom trawl and bycatch management. A **regional workshop** will be held towards the end of the project (year 4; combined with outputs 1.1.2 and 1.2.1) to allow for exchange of experiences and, with the assistance of the project's RFB partners and the WECAFC/CRFM/IFREMER working group, to promote harmonisation of data collection in the region. The need for a regional DSS (as defined in the CLME SAP) will also be discussed and a preliminary design of such a system agreed on, if appropriate.

Output 2.1.2: Alternative fishing methods, BRD technologies and other management measures identified and adopted by fishers.

Targets:

a) Management measures for decreasing bycatch have been analyzed in all project countries (in project pilot sites) and recommendations formulated and presented to competent authorities.

b) At least half of the project countries have benefited from NOAA BRD testing assistance.

c) The feasibility of alternative fishing methods has been tested in at least one project pilot sites and outcomes of these activities are documented and evaluated (including economic viability and level of acceptance by fishers.

d) Testing results and recommendations shared among all other project countries.

e) National recommendations for management measures (including modified and/or alternative gears) available in at least four project countries.

f) Capacities built in the project countries for application of trawling technologies (e.g. pulse trawling) that are more economical, reduce bycatch and less destructive for bottom habitats.

The introduction of improved management measures, including gear modifications and alternative gear, needs to be done through a participatory process directly involving fishers. Accordingly, current **measures, gear and practices will be assessed,** and modifications and new approaches considered in **consultation** with small and large-scale operators, as appropriate.

With regard to gear modifications and alternative gear, **sea trials and testing** will be carried out in direct collaboration with fishers. The testing of modified gear and BRDs will be carried out in all project sites, in some cases with the assistance of NOAA. The introduction of new alternative gear is likely to be only considered in one or a limited number of sites. The experience from this exercise will be shared with all other project countries. The need and feasibility of **other management measures** (e.g. spatial and temporal closures) will be also addressed in consultation with fishers.

Results from the testing will be shared and **evaluated both nationally and regionally**. A **workshop** with all project countries will be organised (together with output 2.1.3) in year 3 to allow for exchange of experiences and lessons learnted. Based on these activities, **national recommendations** on the use of gear and management measures will be formulated and implementation started. The experiences will also feed into the regional strategy developed under output 1.1.2.

Output 2.1.3: EAF training provided and participatory management planning process operational.

Targets:

a) Government officials and technical staff and fisher representatives have been trained in co-management principles and EAF in all six project countries.

b) EAF shrimp/bottom trawl fisheries co-management plans including bycatch are developed through participatory approaches including both men and women and are under implementation in at least five project pilot fisheries.

c) Information on the EAF participatory processes is shared amongst the countries and at regional level (through workshops and/or via reports and website).

Building on project countries' current awareness of the principles of EAF and knowledge on the need for holistic approaches, acquired by some countries through, for example, the CLME project, the project will provide training in EAF, co-management and related topics. To ensure that the training addresses existing needs of different stakeholder groups (including both government officials and fishers/fish workers men and women), different **training curricula will be developed**, as required. The **training** may take place through training courses or workshops and in collaboration with partner organisations, as appropriate.

The training will be an integral part of the efforts to promote **participatory management planning** and the establishment of effective co-management processes. On the basis of the provisions of legal and institutional structures for co-management with an EAF (outputs 1.2.1 and 1.2.2), **shrimp/bottom trawl fisheries and bycatch management plans will be established or amended,** as required, to ensuring that fisheries management plans include EAF principles and sustainable management of bycatch. Management planning will take place through a participatory process involving relevant stakeholders in project pilot sites. These management plans will also take into account lessons learned on gear and management measures under output 2.1.2 and information generated under output 2.1.1.
A **regional workshop** will be held in year 3 to share experiences. This workshop will be combined with the workshop on gear and management measures under output 2.1.2.

Output 2.2.1: Drivers of bycatch and discard practices investigated and understood and potential incentives identified for bycatch management.
Targets:

a) Bycatch and discard drivers are analyzed through collaborative research with fishers/industry in at least five project pilot sites, and SWOT and feasibility analyses carried out of potential incentives.
b) Potential incentive packages are tested in at list two project pilot sites.

To form the basis for potential actions in project country pilot sites, a **desk study** will be carried out investigating bycatch and discard drivers and incentive experiences in the region and globally. This work will be followed by **local investigations and research** in project pilot sites with a view to clearly understand what drives bycatch and discards in the project countries. This research will also identify – together with fishers, fish workers and other stakeholders – **potential incentives** for a more sustainable management of bycatch including the reduction of discards. As the incentives could include market related elements, collaboration with market actors and partners with good knowledge of consumer preferences in different markets will be important.

These potential incentives will be **further analysed** (SWOT and feasibility studies) and tested. The results of the research and practical experience will form the basis for **recommendations** to be shared at national and regional levels.

Output 2.2.2: New products tested, using sustainable bycatch, with a view to reducing discards.
Targets:

a) New products and markets using current discards tested in at least one project pilot fishery, results evaluated and recommendations formulated for potential application in other fisheries in the region.

The possible introduction of new products to reduce discards is closely related to the activities on investigating and introducing incentives (output 2.2.1). However, promoting the use of bycatch, even when the purpose is to reduce discards, has to be done with great care so that the end result is not an increase of unsustainable bycatch (because it now has a higher value). The investigation into new products – and testing of these – will therefore only take place in one or a limited number of pilot sites where knowledge is available on the sustainability of different bycatch components.

A **desk study** of experiences from the region and other parts of the world on bycatch utilisation will be the starting point, followed by **local research and testing**. The analysis of the results and **recommendations** will be shared among project countries so that possible uptake in other areas can be considered.

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

This component addresses livelihood issues related to the shrimp/bottom trawl fisheries sector. The logic behind including this component is that if changes are made in bycatch management that reduce bycatch, there will be a potentially negative impact on those who previously used the bycatch and their incomes and/or food security. Likewise, if improved management of the sector leads to a reduction of the shrimp/bottom trawl fleet capacity, alternative employment for fishers and fish workers needs to be sought. To be able to address these issues, a better understanding of who is using bycatch and how, is needed. Value chain analyses will be carried out with a view to improving this understanding of the value and role of bycatch for different actors (men and women) giving particular consideration to vulnerable groups and individuals.

While addressing these socio-economic aspects, the component will also take a broader approach working with fishing communities in pilot areas to improve their resilience and the sustainability of their livelihoods, not necessarily only focusing on trawl fisheries related issues. This will include consideration of threats from climate change and disaster risks.

Gender will be given special emphasis in this context. It is well-known that women are often involved particularly in post-harvest activities – processing and marketing – but they tend to be ‘invisible’ and very little information exists on the different gender roles. Women are rarely made part of decision-making processes regarding resource management or development and hence not consulted on issues that are of their direct sphere of interest.

This component will include an analysis of current livelihoods and identify strengths and opportunities that can be built on to enhance sustainability. Diversification of livelihoods away from non-fisheries related employment might be difficult in coastal communities where there is a strong cultural identity with the sea and in remote areas with little alternative employment. Still, opportunities will be investigated through participatory processes, and enhanced or complementary livelihoods may be realistic diversification options where complete alternative livelihoods are difficult to achieve. Special attention will be given to finding options for decent employment for youth.

Work under this component will also link to Component 1, andits institutional strengthening as community organisations and their capacity will be supported. The work will promote the implementation of the SSF Guidelines and link to FAO's work on decent rural employment, including the importance of youth.[1]

Not all countries have the expertise and capacity, especially not within their fisheries agencies, to effectively address livelihoods and gender issues. The project will provide support in this respect, including from CERMES/UWI, and collaboration with national partners outside the fisheries agencies will be strongly encouraged.

The following outputs and activities are foreseen:

Output 3.1.1: Value chain analysis with focus on the utilisation of bycatch and the roles of gender and vulnerable groups carried out.

Targets:

a) The utilisation of bycatch investigated and its economic and social value understood at different steps in the value chain.

b) Gender roles in the shrimp trawl fisheries value chain and in households investigated in at least two project pilot sites.

c) Men and women who are particularly vulnerable to changes in shrimp/bottom trawl fisheries management (e.g. changes in employment and catch/bycatch volumes) are identified and supported, as required and appropriate.

Terms of reference for the value chain and gender analysis will be drawn up for the different pilot sites where this work is going to be carried out, paying attention to local differences and information needs but also ensuring that the end results will allow for regional comparisons. The **studies will be carried** out including identification of possible **follow-up activities** for supporting marginalised groups and youth, and promoting gender equality, which will be implemented under output 3.1.2.

The information on bycatch utilisation and value will be an important complement to other bycatch data collected under output 2.1.1 and will feed into the monitoring systems designed under that output. A special **report on gender** in shrimp/bottom trawl fisheries will be also prepared.

Output 3.1.2: Existing and potential non-fisheries livelihood alternatives for both men and women identified along the value chain, and capacity building support provided accordingly, including promotion of decent work.

Targets:

a) Increased knowledge on current livelihood strategies and options for enhancement/diversification improved in at least three project pilot sites (communities).

b) Support interventions have been carried out in at least three pilot sites.

[1] See http://www.fao-ilo.org/ilo-dec-employ/en/.

The process of **identifying alternative livelihood options** will be participatory and firmly anchored in the local context in the pilot sites where this activity will be carried out. It will include an analysis of strengths and weaknesses of current livelihoods and identify capacity building and training needs that can subsequently be supported by the project. A **regional workshop** will be held (combined with output 3.1.3) fairly early on the process to allow for exchange of experiences and ideas that can enhance the efforts in the different pilot sites.

The implementation of **capacity building and training activities** to facilitate the take up of alternative income-generating activities will be combined with **awareness-raising on decent work** in line with FAO and ILO guidance in this area. Special attention will be paid to gender and youth and the information generated under output 3.1.1 on the roles of different actors in the value chain will also inform the activities under this output.

Output 3.1.3: Community organisations strengthened, allowing for participatory processes (at household and enterprise level) leading to desired livelihood changes.
Targets:

a) Fisherfolk associations/cooperatives are in place and contribute to enhanced livelihoods in at least three project pilot sites (communities).

- *Where no fisher organisations exist, formation of at least one fisher/fish workers organisation at such site.*
- *Where fisherfolk associations/cooperatives exist, delivery of minimum of one training workshop to increase capacity to contribute to enhanced livelihoods.*

This output is closely related to output 1.2.2 on strengthening national institutional structures. However, under this output 3.1.3, the focus will be on community level organisations, which are essential building blocks for ensuring appropriate representation at the national level and for inclusive local level decision-making processes.

At the pilot sites where activities under this output will be implemented, a **review of existing organisations** will be carried out, identifying their strengths and weaknesses. A **regional workshop** (combined with output 3.1.2)**,** inviting selected community organizations and national level fisherfolk organizations, will be held to exchange ideas on needs for capacity building, further organizational structures (including associations and platforms) and training. Following the recommendations from the local-level analysis and the regional workshop, **support activities in respect of organizational strengthening** will be carried out. According to the needs identified, these could also include support to setting up new organizations, or supporting government extension services to be able to provide continued assistance to community organizations.

Component 4: Project progress monitoring, evaluation and information dissemination and communication

The objective of this component is to ensure systematic progress monitoring of the project's outcomes and outputs, including its annual goals, as established in the Project's Results Framework (Appendix 1). Furthermore, the purpose is to broadly disseminate lessons learned and good practices that can be used in the wider regions and in other regions with shrimp/bottom trawl fisheries or other trawl fisheries with bycatch issues. Sections 4.5 and 4.6 below include a detailed description of M&E activities and the project monitoring and evaluation plan, including assignment of responsibilities.

Output 4.1.1: Project monitoring system operational, providing systematic information on progress in achieving Project outcomes and outputs.
Target: *Eight (8) semi-annual Project Progress Reports (PPR).*

Output 4.1.2: Mid-term and final evaluations.
Target: *Two (2) evaluation reports.*

Output 4.1.3: Project-related "best-practices" and "lessons-learned" published and disseminated in all project countries.
Target: *Good practices and lessons learned reports from project countries posted on Project website.*

2.5 GLOBAL ENVIRONMENTAL BENEFITS (GEB)

The project constitutes a unique opportunity to address some of the pressing issues with regard to ineffective fisheries management and resource unsustainability in the LAC region, building on earlier experiences as well as on existing and planned national and regional processes and actions. By addressing the barriers described above, the expected main global benefits that will be created include[1]:

- A strengthened enabling institutional and regulatory framework at both national and regional levels, allowing for regional collaboration on shrimp/trawl and bycatch management, reducing discards and unsustainable bycath in the wider region. The relevant RFBs will be in a position to promote regional coherence and broad-based collaboration, also outside the project countries themselves, based on knowledge generated and support provided by the project.
- A reduction of unsustainable bycatch and discards, in particular in pilot fisheries (20% reduction in five pilot fisheries), but also laying the ground for improvements of the sustainability of other shrimp/bottom trawl bycatch fisheries in the region, as the project will be able to demonstrate good practices and share lessons learned. This reduction of negative environmental impacts will be possible through the identification of suitable management measures and technological solutions, such as gear modifications or change of fishing methods, combined with incentive packages and private-public partnerships. The capacity to implement EAF, taking into account the reduction of trawl fisheries adverse impacts on ecosystems, will be strengthened and co-management arrangements promoted, including rights-based approaches as appropriate.

By creating these global benefits, the project will contribute to the environmental, social and economic sustainability of fisheries and related livelihoods in the LAC region. Through

[1] For GEF IW, 4 GEBs are defined: (i) Multi-state cooperation to reduce threats to international waters;
(ii) Reduced pollution load in international waters from nutrient enrichment and other land based stresses;
(iii) Restored and sustained freshwater, coastal and marine ecosystems goods and services, including globally relevant biodiversity and ecosystems as well as capacity to absorb carbon to reduce global warming; and
(iv)Reduced vulnerability to climate variability and climate-related risks, and increased ecosystem resilience through catalyzing multi-state cooperation to balance surface and groundwater use across sectors. This project contributes to two of these: (i) and (iii).

participatory approaches, livelihoods enhancement and diversification, and gender consideration, benefits will accrue to coastal populations – now and in the future.

2.6 COST EFFECTIVENESS (ALTERNATIVE STRATEGIES AND METHODOLOGIES CONSIDERED)

The project strategy of taking a holistic and integrated approach to shrimp/bottom trawl fisheries and bycatch, working closely with fishers and other stakeholders and also explicitly addressing the need for sustainable livelihoods and gender considerations, was selected after considering the following alternatives:

- *Relying solely on gear modifications and technological solutions*
  The REBYC-I project had a relatively strong focus on fishing technology and development of trawl modifications that are more selective. While the project generated significant results, the experience showed that more was needed to successfully address the complex issues related to bycatch reduction. Gear modifications are important but they are not always the most appropriate tool or they may need to be combined with other management measures. Gear modification solutions also need to be supported by appropriate legal and incentive frameworks to become effective and actually adopted by fishers. Moreover, the socioeconomic drivers behind bycatch and livelihoods and poverty context need to be understood and considered. Shrimp/bottom trawl fisheries are closely linked to other parts of the fisheries sector and livelihoods. In many cases, coastal livelihoods are vulnerable and in need of strengthened resilience – both in general and with regard to possible changes in fisheries systems. To address shrimp/bottom trawl fisheries and bycatch management concerns, it is hence imperative to also include livelihood aspects and the human dimension in order to achieve sustainable and equitable results – both for local populations and the global environment. While initially the selected holistic approach may be more costly and require more efforts than a more technology focused approach, it is cost-effective in the longer-term because of the sustainability of the results.

- *Developing more selective gear and identifying other management measures through a research based approach, and supporting their implementation mainly through conventional centralised management approaches ('command and control').*
  Ecosystem-friendly fishing gear can be developed through controlled experiments and management measures selected on a scientific basis. A research based approach can be extremely useful and provide fundamental data and knowledge, but experience from REBYC-I shows that management solutions need to be tested under and adapted to real conditions. These conditions can vary between different fisheries or even between different vessels. The project will hence build on existing information and experiences (from research and other field activities) and ensure that the identified solutions are tested and adapted to local practices and conditions, that fishers know how and why to use new or modified gear, and that management measures are accepted by concerned stakeholders. To ensure compliance with regulations and uptake of recommendations for changes in fishing practices to promote more responsible fisheries, both positive and negative incentives are needed. The project will hence focus its efforts on developing positive incentive packages and promoting participatory and collaborative management approaches. In addition, the overall livelihoods context will be considered to ensure that changes in management and fishing practices are not

disruptive and that fishing based livelihoods are sustainable. The close involvement of stakeholders from the beginning will increase the acceptance of the proposed measures and hence increase the probability of compliance and reduce the costs for surveillance and control activities.

- *Focusing on implementing a limited number of gear modifications and/or management measures broadly in all project countries.*
  If only one or a limited number of management measures – for example a particular type of BRD – were selected for implementation in all trawl fisheries in the project countries, certain economies of scale could apply and more data on the efficiency and effects of the selected management measure could be collected. However, there would be a lack of flexibility with regard to taking local and fleet specific circumstances into consideration. It would also be difficult to have a close and participatory working relationship with fishers and stakeholders because of their large numbers, or resources beyond the means of the project would be required. The project design is instead based on identifying management and development solutions in a selected number of areas and fisheries in close collaboration with the fishers and fishing communities in these locations, and sharing results and lessons learned widely. In this way, suitable solutions are implemented at local level and a broad-based set of experiences becomes available in a cost-effective way. The information management and communication component of the project will ensure that the data and results generated are available for parallel and future initiatives. Moreover, the work on policies, strategies and institutional structures will provide the mechanisms for scaling up the approach and implementing results more widely in the project countries and region, also after project completion.

The project will build as far as possible on existing investments in institutional frameworks and processes. Cost effectiveness has also been considered in relation to project execution and it is believed that the most cost-effective arrangement is to have the PSU hosted by the FAO Subregional Office for the Caribbean at the offices of the WECAFC Secretariat. It is expected that the cost-effectiveness of the project will be high; the direct and indirect environmental and livelihood benefits created by the project are expected to exceed GEF investment.

2.7 INNOVATIVENESS

As described above (see section 1.1.4), earlier experiences from other shrimp/bottom trawl bycatch management projects, including REBYC-I, have shown how unsustainable bycatch can be reduced. While REBYC-I was focused on technology development and (biological) data collection, the ongoing REBYC-II CTI in Southeast Asia takes a greater interest also in other management measures and promotes a more holistic approach to fisheries management. The REBYC-II LAC project takes this integrated approach yet one step further and includes a livelihoods component that will not only improve the understanding of the role of bycatch (for food and incomes) but also allow for addressing livelihoods sustainability issues in fishing communities in a broader sense. This approach is based on a recognition that the human dimension needs to be understood and considered in order to ensure sustainable management of resources.

Another innovative element of the REBYC-II LAC project is the planned pilot activities with regard to identifying alternative non-trawl gear for shrimp fishing, i.e., the assessment of the possibility of using more environmentally friendly non-trawl gear. Earlier efforts to reduce

bycatch have focused on modifying trawl gear (or management measures such as closed areas) but have not included changing the gear type altogether. While other gear (e.g. pots and gillnets) for shrimp fishing have been tested and are in some cases also used in other parts of the world, the possible switching of fishing methods for selected fleets in project pilot areas is a rather bold undertaking that could require considerable investments in new equipment in addition to the necessary technical feasibility assessments. Still, this possibility is considered an important option, and reaching a good understanding of the technical potential of different gear types and their acceptance by fishers as well as economic viability would be considered a major achievement by the project.

SECTION 3 – FEASIBILITY (FUNDAMENTAL DIMENSIONS FOR HIGH QUALITY DELIVERY)

3.1 ENVIRONMENTAL IMPACT ASSESSMENT

In line with the "Environmental impact assessment (EIA) guidelines for FAO field projects"[1], projects dealing with 'international water management' tend to fall into category B of projects and require an EIA assessment. However, considering the objectives and content of the REBYC-II LAC project, with its main intention to address existing environmental concerns, this Project is classified as category C in FAO´s environmental and social impact categorization and mitigation system. The project will not produce negative environmental impacts and an EIA is not needed. Environmental risks and mitigation measures are integral parts of the project itself and included in the risk analysis below. See also appendix 8 Environmental and Social Review Form.

3.2 RISK MANAGEMENT

3.2.1 Risks and mitigation measures

The project design builds on a number of key assumptions. These have been identified by component but some are more general and applicable across project components. The key assumptions include:

- Component 1:
  - There is political support for establishing a regional bycatch policy/strategy and to amend national institutional and regulatory frameworks as required for bycatch management, EAF and co-management.
  - There is sufficient capacity to implement the potential changes needed to allow for EAF and co-management.
- Component 2:
  - Private sector/fishers are willing to participate and appreciate the long-term benefits of more responsible fishing.
  - Collaboration among different stakeholder groups, e.g., across fleet segments, is possible and potential conflicts can be avoided or resolved.
  - Management and technical measures are available and can be identified and adapted to local needs and be accepted by fishers.
  - There are incentives (economic, social, etc.) that promote responsible practices.
  - There is sufficient capacity in countries to carry out participatory processes and implement EAF and co-management.
- Component 3:
  - Fishing communities are willing to work with the project, and increased knowledge and awareness can be turned into positive action leading to enhanced livelihoods.
  - Effective collaboration among different government authorities is possible so that the fisheries knowledge of the authorities involved in the project can be combined with other competencies required to address livelihoods and gender issues in a holistic manner.
- Component 4:
  - Funding and partnerships materialise as planned.

[1] Available at http://www.fao.org/docrep/016/i2802e/i2802e.pdf.

- Other projects (e.g. CLME+) start also in 2015 which make it possible to actively collaborate and increase the scope and coverage of the project impacts.

There are a number of risks related to these assumptions, which exist at local, national and regional levels. Project risks have been identified and analysed. During the full project preparation and mitigation phase, measures were incorporated in the project design. The Project Coordination Unit (RPCU) will be responsible for the day-to-day management of these risks and the effective implementation of mitigation measures. The RPCU will also be responsible for monitoring the effectiveness of mitigation measures and adjusting mitigation strategies as needed and identify and manage any eventual new risks not foreseen during project development in dialogue with LTO/LTU and other concerned project partners. In key risks, their perceived ratings (low, medium or high) and risk mitigation measures undertaken during project design and implementation are explained (see also Appendix 4).

Table 2: Project risks, their rating and mitigation measures

Risk type	**Risk level (H**igh, **M**edium, **L**ow)	**Mitigation measures**
Lack of political support for the project, e.g., a change in key policy and decision-makers or other events beyond the control of the project leading to changes in policies and/or support for bycatch management and the project.	L-M	Project priorities are in line with overall local, national and regional concerns and are hence strongly anchored in existing policies. Through stakeholder participation, local, national and regional ownership was already established at the project design stage, and this broad-based support will be promoted also during implementation.
There is insufficient capacity to support management changes proposed by the project, e.g. with regard to human resources and monitoring systems.	M	The scope of the project has been agreed with relevant authorities. During implementation local, national and regional stakeholders will decide on what management measures should be adopted and hence what is feasible within existing capacities. Moreover, capacity building will be available from the project as required.
Fishers and other private sector actors are reluctant to collaborate with the project.	M-H	By applying a participatory approach and providing capacity building for stakeholders to effectively take part in the project, it will address issues that are of concern to stakeholders ensuring that fishers, fish workers and other private sector actors will be interested in its activities. The work on incentives under Component 2 and on livelihoods under Component 3 will provide opportunities for a broader engagement by the private sector and communities. Stakeholders have been involved and showed interest in participation during the preparation of the project (national consultations and in the project wide workshops in Suriname and in Costa Rica in 2014).
Disagreements or conflicts among resource users, different government agencies/ departments – or central-local levels – or other stakeholder groups	L	A wide range of stakeholders have been consulted and participated in project design and different viewpoints have hence already been identified. As part of project implementation, institutional arrangements and processes will be set up for co-management of the shrimp/bottom trawl fisheries. These arrangements will

with regard to project priorities and implementation mechanisms.		include provisions for conflict resolution as appropriate. Project implementation will be guided by principles of equitable development and gender equality.
Technical and management solutions (gear modifications, alternative gear and management measures) are not available that provide the desired environmental and sustainable fishing effects and, at the same time, are acceptable to fishers and other stakeholders in the context of current livelihoods, food security and poverty.	M	Through FAO, information is available on the variety of BRDs, gear modifications and management measures that exist around the world. By working closely together with fishers and other stakeholders, those measures that are most suitable in the particular local situations can be selected, developed and/or adopted as required. The project recognises the potential (short-term) implications on incomes by reducing bycatch, and that immediate livelihood needs and improved management requirements must be reconciled. The project does not aim at eliminating bycatch but to make it part of an effective fisheries management plan.
Market-based incentives are difficult to identify and implement because of a lack of demand and niche markets. Incentives, based on cost-savings, are not technologically feasible or attractive enough.	M	As a large share of the shrimp caught in the project countries is exported to markets (e.g. USA and EU) where demand for environmentally friendly products is growing, the project will work closely with fishers, seafood trading companies and other stakeholders to assess and access these markets. Cost-saving technologies exist generally; they need to be identified and adapted to the local situation. International advice and assistance will be provided by the project in this respect and all technological development will be made in close collaboration with fishers and the industry.
Fishing communities are not interested or do not feel able to pursue alternative livelihoods, or it is not possible to find viable options for diversification.	M	It is recognised that many fishers and fish workers see their profession as something more than a way of earning a living – it is a way of life. This makes it difficult to shift the livelihood basis from fisheries to other income generating activities. The project will work closely with fishers and fish workers and take their perceptions into consideration when suggesting livelihood alternatives. Whenever possible, the focus will rather be on enhancing existing livelihoods and finding complementary income-generating activities than changing everything.
Government agencies and other potential partners outside the fisheries sector do not have the interest, time, resources or capacity to engage in the project to provide the necessary non-fisheries inputs (especially important for Component 3).	L	Different partners at the national level were already involved in the project preparation phase. National project teams will set up processes for collaboration with relevant government agencies and other partners at the beginning of the project building on already existing working relationships as appropriate. The project also intends to provide regional/international technical assistance with regard to livelihoods and gender which may be beneficial also to non-fisheries agencies.
Co-funding from partners and collaboration do not materialise as planned and the project experiences budget shortcomings.	L	The project design will not contain expected results or activities for which funding has not been confirmed. In accordance with GEF requirements, all co-funders must confirm their contributions in writing. Regular reviews of project progress together with financial monitoring during project implementation will ensure that

		corrective actions can be taken if and as needed.
Climate change is a long-term risk factor but is not likely going to have any measurable impact on shrimp and fish stocks in the project region during the lifetime of this project. Nonetheless, in the long run climate change is likely to have a very significant impact on the stocks and critical habitats, and thereby also on the fisheries.	L	The management measures and tools developed under this project will at least to some extent be applicable in addressing also the impacts of climate change because these measures are adaptive to changes. In case the distribution range of target species changes dramatically due to climate change, the whole structure of the fisheries in the project countries is likely to change. The project design recognizes the need for climate change adaptation. Increased resilience of coastal communities will be the cross-cutting theme throughout the project implementation.

SECTION 4 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

a) General institutional context and responsibilities

The project will be technically coordinated and executed by WCAFC through a collaborative arrangement between the relevant government authorities in project countries(FAO, which will be responsible for the financial and operational execution), co-financiers and other partners, including in particular RFBs, NOAA (see also section 1.1.3). Figure 4.1 gives a schematic overview of the execution arrangements and the roles. Inputs and responsibilities of the project executing partners are described in section 4.2 below.

It should be noted that while the fisheries authorities are the national co-executing partners of the project, the ministries in charge of the environment are the GEF Operational Focal Points and responsible for the coordination of all GEF activities in their respective countries. Coordination and collaboration between the fisheries authorities and the GEF Focal Points will be ensured through the project implementation arrangements in the countries supported by the Regional Project Coordination Unit (RPCU).

With regard to the involvement of fishers, fish workers and their communities, special efforts will be made to ensure that the participation of stakeholders is effective. At the pilot sites, especially where local co-management arrangements will be supported (under Component 2) and livelihoods support provided (under Component 3), project 'champions' will be selected. Accordingly, it is suggested that educated and aware fishers or other community members (at least one man and one woman) be trained at each pilot site to act as project representatives in the National Working Groups (see section 4.2 below) and in this way contribute to effective communication. Moreover, comprehensive communications, education and public awareness programmes will be prepared and executed, targeting key stakeholders involved in the project, primarily focusing on fishers and fishing communities to increase support for project activities.

b) Coordination with other ongoing and planned related initiatives

FAO, WECAFC, and the National Co-executing Partners will coordinate and collaborate with implementing and executing agencies on a range of ongoing initiatives and projects related to fisheries governance and management in the region so as to identify opportunities and facilitate mechanisms for achieving synergies with other relevant GEF-supported projects, as well as with projects supported by other donors. This will also include other FAO activities in the region, to ensure that best practices are incorporated into the project's approaches. This collaboration will include: (i) informal communication between GEF agencies and implementing partners in other programmes and projects; (ii) exchange of information and outreach material among projects; (iii) participation in fora and RFB meetings covering Shrimp/bottom trawl fisheries, with representatives from regional and national institutions, private sector, and civil society organizations. With a view to guaranteeing coordination and collaboration among the different initiatives, specific coordination functions have been included in the TOR of the Regional Project Coordinator (see Section 4.2), the results of which must be explicitly included in the project's progress reports.

Coordination with the CLME+ project (GEF ID: 5542), which is in its final stage of development (see Box 5), will be of particular importance. CLME+ will assist the Wider Caribbean Region in improving the management of their shared Living Marine Resources through an EBM (ecosystem based management) approach. The SAP (Strategic Action Plan) for the "*Sustainable Management of the Shared living Marine Resources of the Caribbean Large marine Ecosystem and Adjacent Regions*" was developed under the first phase of the CLME. The SAP describes the shared and commonly-agreed vision of the participating countries with regard to the priority interventions, reforms and investments required for ensuring the sustainable provision of goods and services from living marine resources in the Wider Caribbean Region (WCR). As described above, there is a shrimp and groundfish component in the CLME+ that is of particular relevance to coordination and collaboration with the REBYC-II LAC project.

Box 5: CLME+ project and shrimp and groundfish

The "Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems" (CMLE+) Project is in final stage of develoment based on the Strategic Action Programme (SAP) and agreed under the first phase of the CLME (Caribbean Large Marine Ecosystem) project. Building on information obtained during the transboundary diagnostic analysis (TDA) and through the Case Study on the Shrimp and Groundfish Fishery along the Guianas-Brazil Shelf, the SAP includes a strategic focus (Strategy 6) for *Implementing EBM[1]/EAF of the Guianas-Brazil continental shelf with special reference to the shrimp and groundfish fisheries*. The aim is to develop an EAF regional management plan for the shrimp and groundfish resources on the North Brazil Shelf. The REBYC-II LAC project countries that will be involved in this CLME+ Demonstration Project include Brazil, Suriname and Trinidad and Tobago. Colombia, Costa Rica and Mexico although participating in the overarching CLME+ Project will not be part of this specific demonstration project.

More information on the CLME SAP can be found at http://clmeproject.org/sap/.

In the Gulf of Mexico, the project will coordinate with the fisheries component of the Strategic Action Programme of the Gulf of Mexico Large Marine Ecosystem project (GEF ID: 6952). Likewise, the "Climate Change Adaptation in the Eastern Caribbean Fisheries Sector (CCA)" project (GEF ID: 5667), currently under development[1], will generate studies and a better understanding of CC vulnerabilities of the fisheries sector in the Caribbean which will be useful for the REBYC- II LAC project.

Through the close involvement of WECAFC in the FAO Subregional Office for the Caribbean in Barbados (FAO-SLC), links and coordination with other regional initiatives and projects will be ensured. One of the most promising projects in terms of shrimp and groundfish management, with which collaborative arrangements should be made, is the IADB/FAO project on "Supporting Ecosystem-Based Fisheries Management in The North Brazil-Guianas Shelf Large Marine Ecosystem", which also contributes to the WEAFC/CRFM/IFREMER Working Group activities.

[1] Ecosystem Based Management.

[1] Full project is expected to start in 2015. For more information, see http://www.thegef.org/gef/project_detail?projID=5667.

Project findings and recommendations will be shared with the relevant RFBs (WECAFC, CRFM and OSPESCA) for region-wide dissemination, adoption and implementation (if relevant). By ensuring participation of project members in the WECAFC/CRFM/IFREMER Working Group on shrimp and groundfish, the available regional level arrangements for bringing scientific advice and findings from research to policy-makers and managers can be used effectively and successfully, generating region-wide uptake of successful project results.

Outside the region, the project will collaborate with its ongoing 'sister project', REBYC-II CTI, in Southeast Asia (GEF ID: 3619), which also has FAO as the GEF agency (see section 1.1.4).

Finally, FAO and other project partners will promote linkages with international initiatives as appropriate such as the ones listed in Box 7.

Box 7: FAO international initiatives relevant to the REBYC II LAC Project

NEPAD-FAO Fish Programme (NFFP) – GCP/RAF/463/MUL: One of the important current programmes in Fisheries and Aquaculture in Africa is the NEPAD-FAO Fish Programme (NFFP), which runs from 2011 to 2015. The NFFP's objective is to support regional efforts to attain the Millennium Development Goals (MDGs) and related sustainable development objectives by enhancing the contribution of fisheries and aquaculture to poverty alleviation, food and nutrition security, and equitable economic growth. The Programme supports the strengthening of regional capacities in respect of governance, as well as the development of approaches, tools, methods, information and knowledge that can influence policy formulation. The technical work of the Programme focuses on the application of the ecosystem approach to fisheries and to aquaculture (EAF/EAA) – including sustainable development of aquaculture businesses and postharvest sector aspects – and on disaster risk management (DRM) and climate change adaptation (CCA).

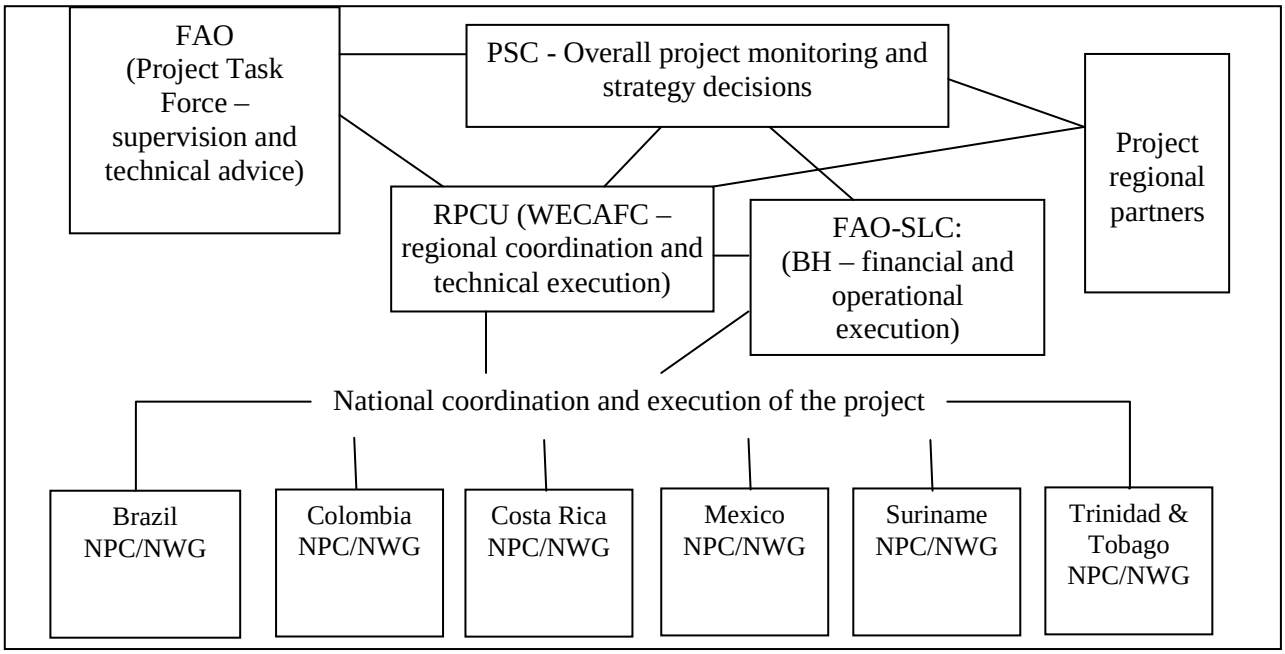
The EAF-Nansen Project: The EAF-Nansen Project "Strengthening the Knowledge Base for Implementing an Ecosystem Approach to Marine Fisheries in Developing Countries" (GCP/INT/003/NOR) is an initiative to support the implementation of the ecosystem approach in the management of marine fisheries. The aim is to promote sustainable utilization of marine living resources and improved protection of the marine environment. Nationally, the project started in December 2006 and has a five-year time frame. The project is executed by FAO in close collaboration with the Institute of Marine Research (IMR) of Bergen, Norway, and funded by the Norwegian Agency for Development Cooperation (Norad). The EAF-Nansen Project is set to strengthen regional and country specific efforts to reduce poverty and create conditions to assist in the achievement of food security through development of sustainable fisheries management regimes and specifically through the application of the ecosystem approach to fisheries in a number of developing countries. The initial focus of the project is on Sub-Saharan Africa. The project is a means to achieve the Millennium Development Goal (MDG) related to eradication of poverty and hunger while simultaneously ensuring environmental sustainability.

4.2 IMPLEMENTATION ARRANGEMENTS

The Food and Agriculture Organization of the United Nations (FAO) will be the GEF agency responsible for supervision and provision of technical guidance during project implementation. As requested by the six participating countries during project preparation, FAO will also be responsible for the financial execution and operation of the project. The project's main technical and coordination executing partner will be WECAFC and national

co-executing partners, in close collaboration with other RFB and project partners including private sector fisheries associations. A regional Project Steering Committee (PSC) will be set up to supervise and support the coordination of project implementation. In addition, National Project Committees will be set up in each country to supervise and coordinate the implementation of national project activities. The institutional set up for project implementation is illustrated in figure 4.1 and a detailed description of roles and responsibilities follows below.

Figure 4.1: Project implementation structure



a) Roles and responsibilities of executing partners

WECAFC will be the regional technical executing partner responsible for coordination and the overall technical execution of the project in close collaboration with national co-executing partners. This will include the following responsibilities: (i) technical implementation of regional project activities and support to the national co-executing partners in the execution of national activities; (ii) the daily management of the project; (iii) monitoring of day-to-day project progress and achievement of results; and (iv) financial management and planning of the procurement of goods, minor works and services, by FAO. WECAFC will prepare and send to the FAO project task force (see below), six-monthly Project Progress Reports (PPR), as well as a detailed Annual Work Plan and Budget (AWP/B), and all the necessary documentation for preparing the annual Project Implementation Review (PIR) (see section 4.5.3 below).

A Regional Project Coordination Unit (RPCU) will be set up in WECAFC. Following PSC guidance and decisions, the main duty of RPCU will be to ensure project coordination and execution through rigorous and efficient implementation of AWP/Bs. RPCU will act as Secretary to the PSC and will coordinate work and closely follow up on the execution of project activities, manage daily project work and requirements, coordinate project interventions with other ongoing activities, and ensure a high level of collaboration among

participating institutions and organizations at all levels (regional, national, and local). It will follow up on project progress and ensure timely delivery of inputs and outputs. Under FAO standards and procedures in accordance with this project document and the AWP/B, RPCU will plan procurement and contracting processes and select providers of small goods, and hiring of services, request the FAO Budget Holder (BH-see below) to process contracts and carry out procurement and payments. With the support from the FAO Lead Technical Officer (LTO - see below) the RPCU will supervise and evaluate consulting services and their outputs (which will be the basis for payments). It will organize workshops and annual meetings for monitoring project progress and prepare AWP/Bs, making sure to collect all activity planning information from the six countries and submit the advanced draft to the FAO Project Task Force (see below) for comments and to the PSC for their approval. The RPCU will also be responsible for implementing the project's monitoring and evaluation plan, managing the monitoring system and the project's communication programme, preparing PPRs, and facilitate access to all information needed for the PIRs and the mid-term and final evaluations. It will submit PPRs and AWP/Bs to the PSC together with financial statements of expenditure reports (the latter prepared by the FAO BH).

RPCU will have a part-time administrative officer and a part-time administrative clerk funded through WECAFC co-financing. Furthermore, the RPCU will have a full-time Regional Project Coordinator and an Operational and Finance officer will be supporting the FAO BH, both financed by GEF Funds (see Terms of Reference (TOR) in Annex 6).

The **Regional Project Coordinator (RPC)** will be responsible for the day-to-day management and technical supervision of the project which includes the following: prepare AWP/Bs and assign tasks to RPCU staff; draft TOR and technical requirements for regional consulting services as well as technical specifications for procurement of material and equipment; review and provide guidance to national co-executing partners on TOR and technical requirements for national consultancies and Letters of Agreements (LoAs); technically supervise consultants, institutions and organizations executing regional project activities, and monitor and supervise the national deliveries under the LoAs with National Co-executing Partners; carry out field supervision visits and provide on-site advice to technical staff of national co-executing partners and other national and local partners involved in the project; coordinate and maintain daily contacts with all experts, organizations, and institutions working for or collaborating with the project; and collect project progress and risk management information from national co-executing partners; prepare PPRs and annual reports on invested co-financing and provide inputs for PIRs. Furthermore, he/she shall ensure a close relationship and collaboration on project activities with other relevant regional activities and partners including RFBs and the partners behind the projects mentioned above under section 4.1. Finally he/she shall contribute to the effective dissemination of lessons learned at the national and regional levels (see detailed draft TORs for the RPC in Appendix 6).

The national fisheries authorities in the project countries will be the **National Co-executing partners** directly responsible for technical implementation of national project activities, day-to-day monitoring and financial management (in accordance with FAO rules and procedures) of the GEF resources provided to them under the LoAs to be signed with FAO covering the services to be delivered to execute national project activities. The National Co-executing Partners will prepare a national AWP/B for national project activities to be submitted to the RPCU in close collaboration with all partners, including partners involved in the pilot sites. Likewise they will prepare six-monthly national PPR including progress in achieving national project outcomes and outputs, and any risks and risk management measures. Finally they will

report on invested co-financing on an annual basis. A **National Project Coordinator (NPC)** will be appointed by each National Co-executing Partner to lead the project execution and support the National Co-executing Partner in all the above-mentioned tasks.

The NPC will work in close collaboration with the **local fishers' organizations** in the project pilot sites to guarantee the genuine involvement of relevant stakeholders in the project implementation. The local organizations will appoint a representative to take part in the **National Working Groups (NWG)** that will be created in each country. The NWGs will support the NPC to overlook the technical implementation of national project activities and working plans. This project recognizes that the engagement of local stakeholders (e.g. fishers and fish workers) is essential to the success of the project and will be fundamental to achieve the project's expected outputs and outcomes. The project is applying a participatory approach to effectively involve and ensure a full engagement of fishers, fish workers and other private sector actors in the project activities. A participatory approach was used during the PPG phase and is the methodological basis for the project implementation.

In additional to the NWGs, institutional arrangements and processes will be set up for co-management of the shrimp/bottom trawl fisheries in the pilot areas of each project country. In each project country, the NWGs will collaborate| with the existing co-management and community-based arrangements in place. The organizations listed below have been already identified as potential members of the NWGs and they will facilitate the dialogue and interaction with relevant stakeholders at the local and national level in each country.

- CAMAPUN and CoopeTárcoles, Costa Rica
- Forum of Patos Lagoon and CPG-Camarões, Brazil
- ANPAC and Acordipe, Colombia
- CANAINPESCA and the confederation and federation of cooperatives, Mexico
- VISCO and Visserscollectief, Suriname, and
- Fisheries associations in Trinidad and Tobago.

Although the composition of the NWGs and their Terms of References will be decided in Year 01 of the project, in each country the relevant CSOs, fishers and their organizations, local universities and NGOs have been identified during the PPG phase. It has been agreed by all countries that in each pilot site co-management arrangements should be strengthened and operationalized, although their *modus operandi* will vary. A thorough analysis will be conducted in consultation with the relevant groups using the above mentioned arrangement as a vehicle to build effective public participation and conflict resolution in the project. This will be done, among others, through local workshops and focus groups with relevant stakeholders. This is a critical part of the NWGs strategy to implement the project activities. Capacity development of stakeholders (government, NGOs, CSOs and fishers) to effectively take part in the project is part of the activities to effectively achieve Outcomes 1.1; 2.1; 2.2 and 3.1.

In all countries, national consultations were held during the PPG phase with CSOs, indigenous peoples, small-scale fishing communities and large-scale fishing industries, local universities and NGOs. During these consultations, the needs and priorities, and the local and national key areas of action of the project, were identified together with the participating stakeholders. In addition, a large number of CSOs, NGOs, fishers and fish workers from Suriname and Costa Rica participated in the inception and log-frame workshops conducted in these countries. Through this intensive national stakeholder participation the local, national

and regional ownership was established at the project design stage and this broad-based support will be promoted during project implementation.

b) FAO's role and responsibilities as the GEF agency and fund administrator

The Food and Agriculture Organization of the United Nations (FAO) will be the GEF agency for this project. FAO will provide overall supervision and technical guidance services during project implementation. The administration of the GEF resources will be carried out in accordance with the rules and procedures of FAO, and in accordance with the agreement between FAO and the GEF Trustee.

As a GEF agency for this project, FAO will:

- Manage and disburse funds from GEF in accordance with the rules and procedures of the FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities of the project;
- Carry out at least one supervision mission per year; and
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review on project progress and provide financial reports to the GEF Trustee.

Roles and responsibilities of FAO as the GEF fund administrator

At the request of the six countries participating in this project, in addition to being the GEF implementing agency, FAO will be the administrator of the GEF resources and will be in charge of the financial execution, procurement and contracting of goods and services, following rules and procedures stipulated in the FAO manual (mainly in the sections No. 502 and 507). The RPCU, in line with PSC guidance, will request FAO to execute payments for the implementation of products and services delivered by consultants and contract holders.

As administrator of the GEF resources, FAO will submit semi-annual financial statements of expenditures to the RPCU and the PSC to report progress of financial delivery in accordance with the project document, the AWP/B and the Procurement and Travel Plan. FAO will perform budget revisions to keep the budget updated in the financial system of FAO (FPMIS) and will communicate revised budgets to the RPCU and the PSC so as to facilitate Project planning and execution. In collaboration with RPCU and the PSC, FAO will participate in the planning and realization of contracting and procurement processes including selection of providers and consultants and issuing of contracts. FAO will also pay for products and services delivered after approval by the RPCU.

Roles and responsibilities of FAO as the GEF agency and administrator of the GEF resources, including FAO internal arrangements.

The **FAO Sub-Regional Coordinator of the FAO Sub-Regional Office for the Caribbean (FAO-SLC)** in Barbados, will be designated as the **Budget Holder (BH)** of the project and will be responsible for the management of the GEF resources. In coordination with the FAO LTO, LTU (see below), the BH will be responsible for timely operational, administrative and

financial management of the project. The BH will, in particular, be responsible for: (i) submitting semi-annual financial statements of expenditures of the project to RPCU and the PSC; (ii) procurement of goods and contracting of services for project activities, in accordance with FAO rules and procedures, at the request of RPCU and in accordance with the approved AWP/B; (iii) payments for goods and services delivered after approval by RPCU; and (iv) preparing budget revisions for their clearance by the LTO and approval by the FAO-GEF Coordinating Unit at least once a year or when necessary, ensuring that the FAO budget in the system is up to date.

The BH will, in consultation with the FAO LTO and LTU and the FAO-GEF Coordination Unit, give no objection to the AWP/Bs submitted by the RPCU, as well as PPRs, which must be approved by the LTO of the project. The BH will submit PPR to the FAO-GEF Coordination Unit for their final clearance and integration into FPMIS.

As a first step in the project start-up the BH will call for a meeting of the FAO multi-disciplinary **Project Task Force,** which will be chaired by the BH and will guide the implementation of the project. The Project Task Force will include representatives of the BH office, the FAO Regional Office for Latin America and the Caribbean (RLC) the FAO Sub-Regional Office for Mesoamercia (SLM), Marine and Inland Fisheries Service (FIRF)/FIR, the Fisheries and Aquaculture Policy and Economics Division (FIP), the FAO Development Law Service (LEGN), the FAO-SLC Fishery and Aquaculture Officer, the Fishing Operations and Technology Service (FIRO), and the FAO-GEF Coordination Unit in TCI as the Fund Liaison Office.

The **FAO Lead Technical Units (LTU)** for the project will be the Fishing Operations and Technology Service (FIRO) and the Fisheries and Aquaculture Resources Use and Conservation Division (FIR) of the Fisheries and Aquaculture Department in FAO Headquarters. The LTU will appoint a FAO Lead Technical Officer (LTO), with experience in shrimp/bottom trawl fisheries and bycatch management, who will provide technical guidance and support to the project responding to requests from the RPCU and the National Co-executing Partners on specific technical issues during the implementation of the project. Specifically, the LTO, supported by the LTU, when so required, will be responsible for:

- reviewing and ensuring clearance by the relevant FAO technical officers of all the technical Terms of Reference (TOR), LOAs, and contracts to be performed under the project, CVs, and technical proposals short-listed by the RPCU and National Co-executing Partners for key project positions, goods, minor works, and services to be financed by GEF resources;
- reviewing and ensuring clearance by the relevant FAO technical officers of final technical products delivered by consultants and contract holders financed by GEF resources, before the final payment can be processed;
- assisting with review and provision of technical comments to draft technical products/reports on request of the RPCU and National Co-executing Partners during project execution;
- reviewing and approving PPRs submitted by RPCU to the Project Task Force via the BH in coordination with the FAO-GEF Coordination Unit;
- supporting the BH in reviewing, revising and giving no-objection to AWP/B submitted by RPCU and to be approved by the PSC;
- preparing the annual Project Implementation Review (PIR) report, supported by the RPC together with inputs from the National Co-executing Partners, to be submitted for clearance and completion by the FAO-GEF Coordination Unit which will subsequently

submit the PIR to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The LTO must ensure that RPCU and National Co-executing Partners have provided information on co-financing invested during the course of the year for inclusion in the PIR;

- fielding annual (or as needed) project supervision missions;
- reviewing and revising TORs for the mid-term evaluation, participate in the mid-term evaluation workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation supported by the RPC.
- reviewing and revising TORs for the final evaluation, and participate in the final project closure workshop with all key project stakeholders; development of and follow up on recommendations on how to insure sustainability of project outputs and results after the end of the project.

The **FAO-GEF Coordination Unit** will monitor PPRs and financial reports, and approve budget revisions. The Coordination Unit will review and clear the annual PIR and undertake supervisory missions if considered necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the GEF Coordination Unit. The GEF Coordination Unit will also participate in the mid-term and final evaluations and the development of corrective actions in the project implementation strategy, if required, to mitigate eventual risks affecting the timely and effective implementation of the project. The GEF Coordination Unit will, in collaboration with the FAO Finance Division, request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

The **FAO Finance Division** will provide annual Financial Reports to the GEF Trustee and, in collaboration with the GEF Coordination Unit, call for project funds from the GEF Trustee on a six-monthly basis.

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c) Project, technical, coordination and steering committee

The Project Steering Committee (PSC) will be set up as a political-technical structure for planning and consensus-building in support of project execution and coordination. The PSC members will be a representative from WECAFC Secretariat and competent officers designated by the participating governments and stakeholder representatives, the FAO BH and LTO. The PSC will take decisions on the overall management of the project and will be responsible for maintaining the strategic approach of the project's specific operational tasks. Its functions include the following: (i) general supervision of the progress of the project and the achievement of expected results through the semiannual PPR; (ii) decision-making with regard to the organization, coordination and execution of the project; (iii) facilitate cooperation among National Co-Executing Partners, FAO, RFB and other institutions and organizations participating in the project; (iv) bring to the attention of RPCU other activities underway or planned to facilitate the collaboration between the project and other programmes, projects and initiatives related to bycatch management in shrimp/bottom trawl fisheries; (v) ensure co-financing is provided in a timely and efficient manner; (vi) review semi-annual PPRs and financial reports, and approve AWP/Bs; and (vii) provide comments on TORs for the mid-term and the final evaluations and the draft evaluation reports as well as decide on and support actions to be taken to follow up on recommendations. The RPC will act as Secretary to the PSC. The PSC will normally meet once a year, although exceptional meetings (e.g. during the first year of start-up, if required) could be called. The host country for the

PSC meeting will change annually (with no country repeating) and the host country for the meeting will provide a Chairperson.

Analogous to the PSC at national level**, National Working Groups (NWG)** will be established to support the NPC and guide project implementation. In addition to the national fisheries authorities, the NWG membership will include representatives of other national partners and stakeholders, in particular stakeholders from the pilot sites.

4.3 FINANCIAL PLANNING AND MANAGEMENT

4.3.1 Financial plan (by component, outputs and co-financier)

Total project costs will amount to USD 22 998 491, out of which USD 5 800 000 will be funded by a GEF grant, and USD 17 198 491 from counterpart contributions committed during the project's design phase. Table 4.1 shows costs by component, output and funding source. Table 4.2 shows sources and type of confirmed co-funding. FAO, as the GEF agency, shall solely be accountable for the implementation of the GEF resources and FAO co-financing.

Table 4.1. Project Costs by component, output and funding source.

Component/output	Gov. of Mexico	WECAFC	Gov. of Trinidad and Tobago	Gov. of Costa Rica	Private sector Costa Rica	Gov. of Suriname	Gov. of Colombia	Private Sector Colombia	Gov. of Brazil	FAO	NOAA	Total Co-financing	% Co-financing	GEF	% GEF	Total
Component. 1: Improving institutional and regulatory frameworks	**555,000**	**490,000**	**73,008**	**16,000**	**32,000**	**310,000**	**640,136**	**-**	**473,157**	**60,000**	**-**	**2,649,301**	**79%**	**684,777**	**21%**	**3,334,078**
O 1.1.1: Best bycatch management practices in line with B&D and SSF Guidelines disseminated in the region	555,000	-	-		-							555,000		229,084		**784,084**
O 1.1.2: Regional strategy for shrimp/bottom trawl fisheries and bycatch management	-	-	73,008		-	180,000						253,008		91,663		**344,671**
O 1.2.1: National legal frameworks for shrimp/bottom trawl fisheries and bycatch co-management amended.	-	-	-		-	95,000						95,000		179,322		**274,322**
O 1.2.2: Institutional structures for EAF and co-management of shrimp/bottom trawl fisheries and bycatch in place.	-	-	-		-	35,000						35,000		184,708		**219,708**
Component 2: Strengthening bycatch management	**2,706,000**	**350,000**	**1,009,393**	**100,000**	**250,000**	**1,195,000**	**2,105,558**	**410,000**	**2,365,784**	**50,000**	**450,000**	**10,991,735**	**77%**	**3,353,381**	**23%**	**14,345,116**
O 2.1.1:Information on bycatch and monitoring systems improved	1,533,592	-	672,204		-							2,205,796		1,377,085		**3,582,881**
O 2.1.2: Alternative fishing methods, BRD technologies and other management measures identified and adopted by fishers.	1,172,408	-	337,189		-							1,509,597		1,247,685		**2,757,282**
O 2.1.3: EAF training provided and participatory management planning process operational.	-	-	-		-							-		411,612		**411,612**
O 2.2.1: Drivers of bycatch and discard practices investigated and understood and potential incentives identified	-	-	-		-							-		202,231		**202,231**

O 2.2.2: New products tested, using sustainable bycatch, with a view to reduce discards.	-	-	-		-							-		114,768		**114,768**
Component 3: Promoting sustainable and equitable livelihoods through enhancement and diversification	**321,000**	**80,000**	**283,427**	**80,000**	**100,000**	**180,000**	**686,765**	**600,000**	**315,438**	**40,000**	**-**	**2,686,630**	**78%**	**750,873**	**22%**	**3,437,503**
O 3.1.1: Value chain analysis with focus on the utilisation of bycatch and the roles of gender and vulnerable groups carried out.	321,000	-	283,427		-	40,000						644,427		159,140	20%	**803,567**
O 3.1.2: Existing and potential non-fisheries livelihood alternatives for both men and women identified along the value chain, and capacity building	-	-	-		-	100,000						100,000		466,565	82%	**566,565**
O 3.1.3: Community organisations strengthened	-	-	-		-	40,000						40,000		125,168	76%	**165,168**
Component 4:Ensuring project progress monitoring and information dissemination and communication	**-**	**70,000**	**-**	**4,000**	**18,000**	**-**	**268,826**	**-**		**50,000**	**-**	**410,826**	**39%**	**631,062**	**61%**	**1,041,888**
O 4.1.1: Project monitoring system												-		**296,994**		**296,994**
O 4.1.2:Mid-term and final evaluation												-		**183,142**		**183,142**
O 4.1.3: Project-related "best-practices" and "lessons-learned" published and disseminated.												-		**150,926**		**150,926**
Project Management		**260,000**	**-**		**-**					**200,000**		**460,000**	**55%**	**379,907**	**45%**	**839,907**
Total Project	**3,582,000**	**1,250,000**	**1,365,828**	**200,000**	**400,000**	**1,685,000**	**3,701,285**	**1,010,000**	**3,154,378**	**400,000**	**450,000**	**17,198,491**	**75%**	**5,800,000**	**25%**	**22,998,491**

Table 4.2 Source and type of confirmed co-financing

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount ($)
National government	Autoridad Nacional de Acuicultura y Pesca (AUNAP, Colombia)	Cash	744,567
National government	Autoridad Nacional de Acuicultura y Pesca (AUNAP, Colombia)	In-kind	132,456
Research institute	Instituto de Investigaciones Marinas y Costeras (INVEMAR, Colombia	In-kind	2,824,262
National government	Ministerio de Pesca e Aquicultura Gabinete do Ministro (Brazil)	Cash	1,577,189
National government	Ministerio de Pesca e Aquicultura Gabinete do Ministro (Brazil)	In-kind	1,577,189
National government	Ministry of Land and Water Resources (Trinidad and Tobago)	Cash	102,344
National government	Ministry of Land and Water Resources (Trinidad and Tobago)	In-kind	1,263,484
National government	Instituto Costarricense de Pesca y Acuicultura (INCOPESCA, Costa Rica)	In-kind	200,000
National government	Ministry of Agriculture, Animal Husbandry and Fisheries (Suriname)	Cash	355,000
National government	Ministry of Agriculture, Animal Husbandry and Fisheries (Suriname)	In-kind	1,330,000
National government	Instituto Nacional de Pesca, Secretaria de Agricultura Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA, México)	Cash	407,000
National government	Instituto Nacional de Pesca, Secretaria de Agricultura Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA, México)	In-kind	3,175,000
Private sector	Camara de Pescadores de Puntarenas (CAMAPUN, Costa Rica)	In-kind	300,000
Private sector	Union de Pescadores de Puntarenas (UNIPESCA, Costa Rica)	In-kind	100,000
Private sector	Asociación Colombiana de Industriales y Amadores Pesqueros (ACODIARPE, Colombia)	In-kind	860,000
Private sector	Empresa Colombiana Pesquera de Tolú S.A. (Pestolú, Colombia)	In-kind	150,000
National government	National Oceanic and Atmospheric Administration (NOAA, USA)	In-kind	450,000
Regional Fishery Body	Western Central Atlantic Fishery Commission (WECAFC)	Cash	630,000
Regional Fishery Body	Western Central Atlantic Fishery Commission (WECAFC)	In-kind	620,000
GEF Agency	FAO	In-kind	400,000
Total Co-financing			**17,198,491**

4.3.2 GEF inputs

The GEF grant resources, totalling USD 5 800 000 over the five-year life of the project, will be used to generate the incremental global environmental benefits (see section 2.5) by complementing the co-financing of the countries participating in the project, FAO and other partners. The resources will be allocated primarily for the provision of technical assistance, capacity building and training, gear trials and assessment of management measures,

information generation, and to support knowledge and experience sharing. The types of inputs the GEF funds will finance include: (i) local and international consultants for technical support and project management; (ii) inputs for implementation of activities at pilot sites, (iii) LoAs/contracts with research institutions and service providers supporting the delivery of specific project activities; (iv) travel, expendable and non-expendable office equipment; and (v) training and awareness-raising material.

4.3.3 Government inputs

The governments of the six project countries have confirmed co-financing of USD 13.7 million. The contributions will mainly refer to in-kind co-financing from the central fisheries authorities but also include inputs from provincial and local governments and state universities and research institutes in accordance with the institutional set-up in each country. Staff time and office facilities will be provided for project management at national level. Moreover, as project activities complement already planned government activities with regard to shrimp/bottom trawl fisheries management, governments will ensure integration of the GEF-funded activities into existing programmes and the creation of synergies and cost effectiveness. Government inputs will hence also include this overall framework and coordination for implementation of project activities.

4.3.4 FAO inputs

FAO will provide USD 400 000 in in-kind co-financing covering staff time and travel, in addition to what is covered by GEF agency fees, for project technical assistance, particularly with regard to training and support to the implementation of the EAF, B&D Guidelines, and the SSF guidelines.

FAO-SLC/WECAFC will provide USD 620 000 in-kind co-financing covering office space for the Regional Project Coordination Unit, meeting rooms for regional meetings, statisticsand other information, and salaries of the staff working in the support of the project execution. In addition, FAO-SLC/WECAFC will provide USD 630 000 in cash contribution for regional workshops and meetings of the WECAFC Working Group on Shrimp and Groundfish and related WECAFC studies to be done, travel and DSA costs of staff, experts and consultants working for the next five years on shrimp and groundfish issues in the region.

4.3.5 Other co-financiers inputs

Other co-financers include partners as listed in Section 1.1.3. Private small and large-scale sectors will contribute their own and vessel time for gear trials, capacity development and other activities. The RFBs will provide support with regard to information dissemination, networking across the wider region and development of regional policy and strategic advice. NOAA is a key partner for some of the technical work on gear trials and identification of alternative fishing methods. The other project partners have confirmed co-financing of USD 3.1 million.

4.3.6 Financial management of and reporting on GEF resources

Financial management and reporting in relation to the GEF resources will be carried out in accordance with FAO’s rules and procedures and the Financial Procedures Agreement between FAO and the GEF Trustee. In accordance with the project budget, FAO will carry out the operations for disbursement, procurement and contracting for a total of USD 5 800

000 of GEF resources.FAO will maintain a separate account in US dollars for the GEF resources of the project, showing all income and expenditure.

FAO will sign LoAs with the National Co-executing Partners in each project country for the transfer of the amounts established in the detailed budget in Appendix 3 of this Project Document. The National Co-executing Partners will provide execution services for these funds in accordance with their own rules, regulations, and procedures, and in accordance with the rules and regulations of FAO (mainly FAO Manual Sections 502 and 507) and the fiduciary standards of GEF, as will be described in the Agreement, in order to ensure an adequate management and use of project funds. National Co-executing Partners shall maintain a bank account in US dollars for the funds received from FAO, in accordance with accepted accounting standards (showing income and expenses).

Financial statements and reporting

All the financial reports shall be in US dollars and shall be prepared by FAO with inputs from National Co-executing Partners. Within ten working days from the end of each semester, i.e. before 10 July and 10 January each year, the BH shall deliver six-monthly statement of expenditures of GEF resources to the RPCU and the PSC. The financial report must be made on the basis of FAO regulations (Manual Sections 502 and 507).

FAO shall prepare the following financial reports on the use of GEF resources using FAO's FPMIS analysis:

1. Details of project expenditures on an output-by-output basis, reported in line with the project budget codes, as set out in the project budget included in the Project Document **APPENDIX 3** as at 30 June and 31 December each year.
2. An annual budget revision in accordance with the expenses incurred and the AWP/B approved by the PSC. The revision shall be prepared in accordance with FAO guidelines, standards and procedures and shall be cleared by the LTO and the BH and approved by the FAO GEF Coordination Unit.
3. A final statement of accounts in line with the project budget, included in the Project Document **APPENDIX 3**, reflecting actual final expenditures under the project, when all obligations have been liquidated.

Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the Financial Procedures Agreement with the GEF Trustee and submitted by FAO's Finance Division.

Disbursement of funds to National Co-executing Partners as service porviders

The agreed amounts to be transferred to the National Co-executing Partners will be transferred in instalments as outlined in the AWP/B for implementation of national activities. The first instalment shall be advanced to the National Co-executing Partners within two weeks following signature of the LoA and the submission to FAO of a first semester work plan for the execution of the GEF-financed project activities under their responsibility as described in this Project Document.

Disbursement of subsequent instalments will be subject to satisfactory reporting on funds already received in terms of financial statements of expenditures. The FAO BH should certify that reporting requirements under the terms of the LoA have been met and that project progress reports for the activities completed have been submitted to and accepted by FAO as

showing satisfactory management and use of GEF resources. Likewise the first instalment, and subsequent instalments, are subject to the submission to FAO by the National Co-executing Partner of a detailed work plan and budget for the following six months. All reports form the National Co-executing partners should be posted on the FAO FPMIS

Responsibility for cost overruns

The BH will be responsible for the use of GEF funds in strict compliance with this Project Document. FAO will be authorized to make variations not exceeding 20 per cent on any total output budget line or any cost category line of the project budget, provided that the total allocated for the specific budgeted project component is not exceeded and the reallocation of funds does not have an impact the achievement of any project outputs. Any variations exceeding 20 per cent on any total output budget line or any cost category line, that may be necessary for the proper and successful implementation of the project, shall be subject to prior consultations with, and approval by the FAO GEF Coordination Unit, to confirm the budget revision will not impact on the overall design and scope of the project (including an impact on the achievement of project outputs and outcomes). If this cannot be confirmed, the FAO GEF Coordination Unit shall consult with the GEF Secretariat prior to the eventual adoption of the budget revision. Under no circumstances can spending higher than that approved by GEF take place. Cost overruns will be the sole responsibility of the budget holder.

Audit

The project shall be subject to the internal and external auditing procedures provided for in FAO's financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the Governing Bodies of the Organization and reporting directly to them, and an internal audit function headed by the FAO Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management and, furthermore, has report to the governing bodies. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

4.4 PROCUREMENT

Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a "Best Value for Money" basis, and in accordance with FAO's Rules and Regulations O. It requires an analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects follow FAO's Rules and Regulations for the procurement of supplies, equipment and services (i.e. Manual Sections 502 and 507). *Manual Section 502*: "Procurement of Goods, Works and Services" establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Appendix A – Procurement Not Governed by Manual Section 502. *Manual Section 507* establishes the principles and rules that govern the use of Letters of Agreement (LoA) by FAO for the timely acquisition of services from eligible entities in a transparent and

impartial manner, taking into consideration economy and efficiency to achieve an optimum combination of expected whole life costs and benefits ("Best Value for Money").

As per the guidance in FAO's Project Cycle Guide, the BH will prepare an annual procurement plan for major items which will be the basis of requests for procurement actions during implementation. The first procurement plan will be prepared at the time of project inception. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.

The procurement and contracting activities to be undertaken in the framework of the LoAs with National Co-executing Partners (project countries) will be subject to the following monitoring procedure:

a. All consultant contracts for an amount exceeding USD 20 000 will require the involvement of FAO in the selection process, and prior authorization of the recruitment procedure, terms of reference and the curriculum vitae (CV).
b. All subcontracts with private institutions or non-governmental organizations will require prior approval of FAO of the recruitment process, terms of reference and technical proposals
c. No direct purchase of individual goods (non-expendable) of an amount exceeding USD 20 000 will be authorized. Procurement of goods shall be based on technical specifications and price comparisons offered.
d. All documentation relating to purchases of expendable goods and procurement of services (except consultancies) related to training, workshops and events carried out under the Agreement will be subject to a review by FAO, along with the financial reports.

4.5 MONITORING AND REPORTING

Monitoring and Evaluation (M&E) of progress in achieving project results and objectives will be done based on the targets and indicators established in the project Results Matrix (**APPENDIX 3**1) and in accordance with the descriptions of Components 1-3 in sections 2.3 and 2.4. Component 4 contains the activities related to M&E and, within this framework, the project's M&E plan has been budgeted at USD 489 950 (see table 4.3 below). Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The monitoring and evaluation system will also facilitate learning and mainstreaming of project outcomes and lessons learned in shrimp/bottom trawl fisheries and bycatch management.

4.5.1 Oversight and monitoring responsibilities

The monitoring and evaluation tasks and responsibilities, described in the summery of the Project Monitoring Plan (see section 4.5.4 below) will be achieved through: (i) day-to-day monitoring and supervision of project progress (RPCU and NPCs); (ii) technical monitoring of the indicators on the status of implementing an enhanced framework for bycatch management and achievements in terms of implementation of the B&D Guidelines and the SSF Guidelines, actual reductions in unsustainable bycatch, and alternative income generation for men and women (RPCU and NPCs); (iii) the implementation of monitoring plans for each shrimp/bottom trawl fisheries including bycatch management plans in each pilot site (NPC as well as stakeholders participating in the implementation of the management plans at the pilot

sites); (iv) mid-term and final evaluations (independent consultants and FAO Evaluation Office); and (iv) continual oversight, monitoring and supervisory missions (RPC and FAO).

At the initiation of implementation of the GEF Project, the RPCU will set up a project progress monitoring system coordinated with subsystems, as appropriate, in each participating country. Participatory mechanisms and methodologies for systematic data collection and recording will be developed in support of outcome and output indicator monitoring and evaluation. During the inception workshop (see section 4.5.3 below), M&E related tasks to be addressed will include: (i) presentation and clarification (if needed) of the project's Results Framework with all project stakeholders; (ii) review of the M&E indicators and their baseline and identification of immidiate actions to be taken to collect eventual missing baseline information; (iii) drafting the required clauses to include in consultants' contracts to ensure they complete their M&E reporting functions (if relevant); and (iv) clarification of distribution of M&E tasks among the project's different stakeholders. One of the main outputs of the inception workshop will be a detailed monitoring plan agreed to by all stakeholders based on the preliminary M&E plan summary presented in section 4.5.4 below.

The RPCU and NPCs will be in charge of the day-to-day monitoring of project implementation, guided by the preparation and implementation of the AWP/B and followed up through semi-annual PPRs. Preparation of the semi-annual PPRs and AWP/B will result from a unified planning process among the main project stakeholders including fisheries communities in the pilot sites. As a tool for results-based management, AWP/Bs will indicate proposed actions for the following year and will offer the necessary details on the output targets to be achieved and related activities to monitor these targets. Contributions to AWP/Bs and PPRs will be prepared via a participatory progress review and planning system with all stakeholders, coordinated by the RPCU and NPCs and facilitated through project progress review and planning workshops, within the framework of the NWGs (national activities) and the PSC (regional activities). These inputs will be consolidated by the RPCU in the draft AWP/B and PPR. An annual project progress review and planning (eventual virtual) meeting will be held with the participation of FAO, RPCU and NPCs so as to complete the AWP/B and PPR. Once completed, the AWP/B and PPR will be submitted to the PSC for their approval (AWP/B) and review (PPR) and to FAO for approval. AWP/Bs will be prepared in line with the Results Framework (Appendix 1) to ensure appropriate fulfillment and monitoring of project outputs and outcomes.

After project approval, for the first year of project implementation, the AWP/B will be adjusted (either reduced or extended in time) to synchronize it with an annual reporting calendar. In subsequent years, the AWP/B will follow an annual planning and reporting cycle as specified in section 4.5.3 below.

4.5.2 Indicators and information sources

To monitor the project's achievement of outputs and outcomes contributing to global environmental benefits and the development objective, specific indicators have been established in the Results Matrix (see Appendix 1). These indicators will allow for the monitoring of both project performance and impacts. Following FAO's monitoring procedures and progress reporting formats, data collected will be of sufficient detail to be able to track specific outputs and outcomes and flag project risks early on. Output target indicators will be monitored on a six-monthly basis and outcome target indicators will be monitored on an annual basis, if possible, or as part of the mid-term and final evaluations.

Project output and outcome indicators have been designed to monitor biophysical and socio-economic impacts and effectiveness in progress in building and consolidating regional and national capacities for shrimp/bottom trawl bycatch management with a co-management and EAF approach.

On-the-ground biophysical and socioeconomic impact indicators will monitor:

a) Levels of reduction of discards in project pilot fisheries
b) Reduction in fuel and lobour costs from adoption of BED and other sustainable bycaatch management measures in pilot sites
c) Increase in the generation of local benefits (alternative income) for men and women from adding value to sustainable bycatch products.

Indicators on capacity building will monitor:

a) The extent to which the WECAFC/CRFM/IFREMER Working Group is functioning and actively promoting the implementation of the regional bycatch/discard strategy developed based on the project's experiences
b) The number of countries that have their legal and institutional frameworks revised for enabling the implementation of co-management and EAF management plans
c) The capacities built and demonstrated by different stakeholders in the implementation of EAF shrimp/bottom trawl fisheries, EAF-based management plans in project pilot sites, including taking into account the B&D Guidelines
d) Incentives identified and implemented to reduce discards and promote sustainable management bycatch in Shrimp/bottom trawl fisheries.

The main sources of information to support the M&E programme will be: (i) national and regional policy, strategy and legal documents, and management plans for specific fisheries; (ii) data generated from monitoring systems that have been set up or strengthened by the project; (iii) specific project assessments; (iv) workshops with partners and beneficiaries and visits to project pilot sites; (v) PPRs, PIRs and financial reports with inputs from all project stakeholders; (vi) impact assessments and mid-term and final evaluations carried out by independent consultants; and (vii) technical support/backstopping and FAO supervision mission reports.

4.5.3 Reporting schedule

Specific reports will be prepared under the M&E programme. Some of these have already been mentioned above and include: (i) Project Inception Report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) annual Project Implementation Review (PIR); (v) Technical Reports; (vi) Co-financing Reports; and (vii) Terminal Report. In addition, assessment of the GEF International Waters (IW) monitoring Tracking Tool against the baseline (completed during project preparation) will be required at mid-term and final project evaluation.

Project Inception Report. Immediately after the inception workshop the RPCU will prepare a project inception report in consultation with the LTO, BH and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities, and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B and a detailed project monitoring plan based on the

monitoring and evaluation plan summary presented in section 4.5.4 below. The draft inception report will be circulated to the FAO Project Task Force and PSC for review and comments before its finalization, no later than six months after project start-up. The report shall be cleared by the FAO BH, LTO and the FAO GEF Coordination Unit, and uploaded in FPMIS by the BH.

Results-based Annual Work Plan and Budget (AWP/B). The draft of the first AWP/B will be prepared by the RPCU in consultation with the Project Task Force and be reviewed at the project Inception Workshop. The inception workshop inputs will be incorporated and the RPCU will submit a final draft AWP/B to the BH. In subsequent years, the draft AWP/B should be circulated for comments to FAO BH (who will circulate it to the Project Task Force) and National Co-executing Partners no later than 10 January. When comments have been incorporated, the final AWP/B will be submitted to the FAO BH and LTO for final clearance and subsequently to the PSC for approval. The AWP/B must be linked to the project's Results Framework indicators so that the project's work is contributing to the achievement of the indicators. The AWP/B should include detailed activities to be implemented by project output and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervisory activities required during the year. The AWP/B approved by the PSC should be uploaded in FPMIS by the BH.

Project Progress Reports (PPR): PPRs will be prepared by the RPCU based on progress reports from the national executing partners and on the systematic monitoring of output and outcome indicators identified in the project's Results Matrix (Appendix 1). The purpose of the PPR is to identify constraints, problems or bottlenecks that impede timely implementation, and to take appropriate remedial action in relation to any project risks in a timely manner. The RPCU will submit the PPR to the BH no later than 10 July (covering the period January through June) and 10 January (covering the period July through December). The BH and LTO will review the progress reports and circulate them to the FAO Project Task Force, the PSC and GEF Coordination Unit for comments and clearance. When comments have been duly incorporated, the RPCU will re-submit the PPR to the LTO for final approval and to the GEF Coordination Unit for final endorsement before the BH uploads it in FPMIS.

Annual Project Implementation Review (PIR): The LTO, supported by the RPCU and BH, will prepare an annual PIR covering the period July (the previous year) through June (current year) to be submitted to the GEF Coordination Unit for review and approval **no later than 15 July**. The FAO GEF Coordination Unit will clear and upload the final PIR in FPMIS and submit it to the GEF Secretariat and GEF Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The BH will, via the FAO Representations in participating countries, send the final PIR to the government GEF Focal Points for information. The GEF Coordination Unit will provide the updated format when the first PIR is due.

Technical Reports: Technical reports will be prepared as part of project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the RPCU to the BH who will share it with the LTO. The LTO will be responsible for ensuring appropriate technical review and clearance of the said report. The BH will upload the final cleared reports in FPMIS. Copies of the technical reports will be distributed to project partners and the PSC as appropriate.

Co-financing Reports: The PRCU, with support from the NPCs, will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by all co-financing partners included in Table 4.2 above as well as other partners not foreseen at the time of project design. The report, which covers the period 1 July through 30 June, is to be submitted on or before 10 July to the FAO BH and will be incorporated into the annual PIR. The format and tables for reporting on co-financing can be found in the PIR.

GEF-5 IW Tracking Tool: Following GEF policies and procedures, the tracking tool for the IW focal area will be submitted in three stages: (i) with the project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the project's terminal evaluation or final completion report. At project mid-term and end, the tracking tool will be completed by the RPCU in close consultation with National Co-executing Partners and the LTO.

Terminal Report: Within two months before the end date of the project, the RPCU will submit to the FAO BH a draft Terminal Report, which the BH will circulates to the Project Task Force. The main purpose of the Terminal Report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the project, and to provide the donor with information on how the funds were utilized. The Terminal Report is accordingly a concise account of the main products, results, conclusions and recommendations of the project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for ensuring sustainability of project results. Work is assessed, lessons learned are summarized, and recommendations are expressed in terms of their application to ongoing work on shrimp/bottom trawl and bycatch management and coastal livelihoods initiatives and possibilities for upscaling and replication. This report will specifically include the findings of the final review/evaluation. A final project review meeting should be held to discuss the draft Terminal Report before it is finalized by the RPCU and approved by the FAO LTO and the FAO GEF Coordination Unit.

4.5.4 Monitoring and Evaluation Plan Summary

Table 4.3 presents a summary of the main M&E activities, reports, responsible parties and timeframe.

Table 4.3. Summary of main monitoring and evaluation activities

Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
Inception Workshop	RPCU and FAO (BH with the support of the LTO/LTU and the GEF Coordination Unit)	Within two months after the project has become operational	40,000
Project Inception Report	RPCU and BH approved by the LTO and the GEF Coordination Unit	Immediately after the inception workshop	USD 2,550 (one week of the RPC's time)-

Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
Supervision visits and rating of progress in PPRs and PIRs	RPCU and LTO/LTU (and FAO GEF Coordination Unit as needed)	Annual or as required	The visits of the FAO LTO and the GEF Coordination Unit will be paid by GEF agency fee. The visits of the RPCU will be paid from the project travel budget
Impact monitoring "in the field"	National Co-executing Partners (NPCs) and other project participants	Continuously	Financed by co-financing in terms of time of the NPCs and local stakeholders participating in the implementation of EAF management plans
Supervision and validation visits of project progress reported in PPRs and PIRs	RPCU, National Co-executing Partners (NPCs); FAO (BH, LTO, FAO-GEF Coordination Unit)	Annually or as required	USD 71,500 (5 months of the RPC's time and travel costs). In addition the co-financing will be paying for the participation of NPCs and cost of FAO visits will be paid from GEF agency fees
Project Progress Reports (PPRs)	RPCU, with inputs from NPCs and other partners	Six-monthly	USD 15 400 (1.5 months of the RPC's time)
Project Implementation Review report (PIRs)	LTO supported by the RPCU and BH and cleared and submitted by the GEF Coordination Unit to the GEF Secretariat	Annual	Paid by GEF agency fee
Project Planning and progress monitoring meetings and Project Steering Committee meetings (annually)	RPCU, National Co-executing partners, and FAO (LTO/LTU and BH)	Annual	USD 180 000
Co-financing Reports	RPCU, National Co-executing partners, and FAO BH	Annual	USD 20 500 (1.5 months of the Operational and Administrative Officer's time)
Mid-term Evaluation	External consultants, FAO Evaluation Office (OEDD) in consultation with the Project team	At mid-point of project implementation	80,000
Final evaluation	External consultant, FAO Evaluation Office (OEDD) in consultation with the project team	At the end of project implementation	80,000
Terminal Report	RPCU, National Co-exe cutting Partners, FAO (BH, LTO, FAO GEF Coordination Unit, TCSR Report Unit)	At least two months before the end date of the project	-
Total Budget			**USD 489,950**

4.6 PROVISION FOR EVALUATIONS

Thirty-five months after the project becomes operational an independent Mid-Term Evaluation (MTE) will be undertaken by consultants and under the overall responsibility of the FAO Evaluation Office (OED). The objective of the MTE is to review progress and effectiveness of implementation in terms of achieving project objective, outcomes and outputs. Findings and recommendations of this review will be shared and discussed in a mid-term evaluation workshop and will be instrumental for bringing about improvements in the overall project design and execution strategy for the remaining period of the project's term, if necessary. FAO will arrange for the MTE in consultation with the RPCU and the National Co-executing Partners. The evaluation will, *inter alia:*

(i) review the effectiveness, efficiency and timeliness of project implementation;
(ii) analyse effectiveness of partnership arrangements;
(iii) identify issues requiring decisions and remedial actions;
(iv) propose any mid-course corrections and/or adjustments to the implementation strategy, as necessary; and
(v) highlight technical achievements and lessons learned derived from project design, implementation and management.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. Under the overall responsibility and guidance of FAO's Office of Evaluation, the FE would aim to identify the project's impacts and sustainability of project results, and the degree of achievement of long-term results. This Evaluation would also have the purpose of indicating future actions needed to sustain project results, expand on the existing Project in subsequent phases, mainstream and upscale its products and practices, and disseminate information to fisheries management authorities to ensure continuity of the processes initiated by the project.

Some of the critical elements that the MTE and FE must pay special attention to are the following:

d) The degree of participation of men and women as well as vulnerable groups in shrimp/bottom trawl fisheries bycatch co-management activities with an EAF approach in pilot fisheries, and the livelihood benefits created for different social groups disaggregated by gender;
e) The level of understanding of bycatch impacts and management measures and sustainable management incentives within an EAF framework (including the B&D Guidelines) among regional and national policymakers, national and local regulatory decision-makers and extension services, the private fisheries sector and fisheries communities;
f) the degree to which the B&D Guidelines and the SFF Guidelines are taking into account in national policy, legal and institutional frameworks;
g) The level of improvements of information on bycatch, discards and the environmental and socioeconomic impacts of shrimp/bottom trawl fisheries and the sharing of this information at regional level.

4.7 COMMUNICATITON AND VISIBILITY

High visibility of the project, and ensuring effective communication of project results and impacts from national to global levels, are addressed in a number of activities that have been incorporated into its design. Component 4 deals specifically with dissemination of

information and sharing of project results (in addition to progress monitoring), including the setting up of a project website, publication of best practices and lessons learned, and support to GEF IWLEARN activities.

In addition, the other components have elements of communication, especially at regional level. Component 1 includes outreach to non-project countries in the wider LAC region and close collaboration with the RFBs to strengthen regional cooperation on shrimp/bottom trawl fisheries and bycatch management, with a focus on policy aspects. Specifically, a role is foreseen for the WECAFC/CRFM/IFREMER Working Group on Shrimp and Groundfish in terms of communicating and increasing the visibility of the project outcomes. Component 2 promotes exchanges of experiences on technical and management measures for reducing bycatch and discards and of harmonisation of data collection practices and information systems with a view to improving the mechanisms for regional collaboration on fisheries management. In Component 3, the communication and regional aspects are more implicit as activities focus on the local level, but exchanges of experiences and lessons learned will be shared through project mechanisms and the regional partners involved.

SECTION 5 – SUSTAINABILITY OF RESULTS

5.1 SOCIAL SUSTAINABILITY

The different dimensions of sustainability are interlinked. In accordance with the United Nations Conference on Sustainable Development (Rio+20) outcome document "The future we want", there is a need for considering economic, social and environmental sustainability at the same time. Hence, social sustainability depends on environmental sustainability, especially in the longer-term, and the global environmental benefits created by the project will form the basis for social sustainability for generations to come by contributing to the safeguarding of the aquatic resources that constitute an important basis for food security.

In the context of project implementation, social sustainability will be achieved through the participatory project implementation strategy that applies to all project components. In addition, Component 3 addresses livelihoods and gender considerations more specifically with a view to contributing to enhanced and sustainable livelihoods, a key prerequisite for social sustainability. It is recognised that, in particular in a poverty context and with regard to small-scale fisheries, resource management and social and economic development need to be addressed in parallel. The project will support the implementation of the SSF Guidelines that provide a framework for governance and development of small-scale fisheries within a context of sustainable resource utilisation and human rights. Principles of equitable development and gender equality guide project implementation and decision-making.

EAF and co-management will be promoted by the project as best practices. Co-management will apply to both small and large-scale fisheries, and management arrangement may include both small and large-scale fishers. The possibility of conflicts between different resource users and fleet segments is recognized and will be investigated, monitored and addressed, as required, in the institutional arrangements for co-management implementation.

Specific actions to be taken by the project for strengthening participatory management processes through mobilizing stakeholders to play key roles in the bycatch management include:

- Capacity building of resource users and local government authorities for data collection, monitoring, control and collective decision-making actions.
- Testing EAF to involve local stakeholders through co-management decisions on bycatch reduction and utilization.
- Training local stakeholders, by supporting the establishment and strengthening of associations and organizations, which will enable increased and meaningful participation in management, planning and monitoring activities in the selected pilot sites.
- Developing partnerships with the private sector in the pilot sites.
- Developing sustainable economic alternatives to alleviate pressure on shrimp while simultaneously ensuring livelihoods of local communities and reducing resource use conflicts.
- Working with fishers, women and youth to develop sustainable economic alternatives in case of trawl fishery bans.

5.2 ENVIRONMENTAL SUSTAINABILITY

The main thrust of the project is about introducing more environmentally sustainable fishing practices. The improvements to shrimp/bottom trawl fisheries and bycatch management included in Component 2 will be supported by sound and adequate institutional and legal frameworks, developed as required under Component 1, and by enhanced livelihoods for both men and women under Component 3. This comprehensive approach lays the ground for sustainable results. Accordingly, project mechanisms for ensuring environmental sustainability include:

- Improvements in shrimp/bottom trawl fisheries and bycatch management introduced by the project in the field are supported by appropriate policy, legal and institutional structures at local, national and regional levels. Close linkages between field experiences and the work on national and regional frameworks and strategies will ensure that no disconnection exists between the local reality and the political scene.
- Support is provided to enhancing livelihoods and identifying alternative livelihoods. By ensuring secure livelihoods, responsible fishing practices that have been introduced are more likely to be maintained and hence contribute to environmental sustainability.
- Development and introduction of gear modifications and management measures take place in close collaboration with fishers and other concerned stakeholders to ensure that the solutions are appropriately accepted and contribute to the reduction of pressure on sensitive habitats and stocks of overexploited species.
- Best practices and lessons learned with regard to management solutions introduced by the project in pilot sites will be shared among project countries and also in the wider region through collaboration with RFBs. This will promote sustainability and will lead to scaling-up more broadly in the region.
- The project approach is grounded in the principles of the CCRF and EAF, and guided by the B &D Guidelines. By implementing the project within a framework of internationally recognised policies and practices, coherence of continued efforts is ensured which would support sustainability.

5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

The financial and economic sustainability refers to two main aspects: the sustainability of fishing operations and related livelihoods, and the sustainability of institutional arrangements – often supported by governments – needed to implement improved management practices and responsible fishing practices.

The long-term economic and financial sustainability in relation to fishing operations is closely linked to the overall project objectives and to environmental sustainability. Ineffective management practices contribute to risk and uncertainty, and changing these is crucial for long-term sustainability. Already now, many fishers in the project countries and region report difficulties in maintaining profitability because of decreasing catches (in volume and/or value) and/or increasing operational costs. Better management of fishery resources and related ecosystems is hence a requirement for the existence of sound and profitable fisheries in the future.

In the short- and medium-term, there is a risk that fishing incomes will decrease if the capture of (economically valuable) bycatch is reduced. There may also be effects on the livelihoods of fish workers, communities and consumers who currently benefit from bycatch. The development of incentive packages included in project design will play a crucial role in this

respect. A win-win situation could be created if bycatch is reduced at the same time as the value of the retained catch is increased or fishing costs are reduced. With regard to livelihoods, the support foreseen in Component 3 will address these issues and also take a broader approach to addressing the sustainability of coastal livelihoods.

With regard to the financial sustainability of institutional arrangements and the funding of these – in particular after project completion – a key project approach will be to build on existing structures and develop these rather than creating new ones. National authorities have been closely involved in project design, and the project addresses national priorities. The work planned by the project is well integrated into existing government programmes and this will also support the longer-term sustainability of project results.

The project will promote investments by public and private partners in sustainable fishing gears, vessels and better management approaches, and assist the project partners to find interested investors.

5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED

The project will assist in building both institutional structures and capacity in various forms. Support will be provided to, among other things, legal and institutional assessments and training in EAF. Institutional arrangements promoted by the project for EAF and co-management will build on existing structures where such exist. New structures and organizational development will be based on stakeholder analyses and institutional assessments and take an inclusive and participatory approach.

Through private-public partnerships with existing local, national and regional organizations, government agencies, NGOs and other structures, projects results are absorbed and utilized broadly. Existing institutional structures and capacity will be strengthened through these new linkages and knowledge, and a broad base for continued action is created.

The sharing of information during the course of the project will entail that knowledge is held by a range of countries and partners in the region. In this context, the project will set up a website, which could be maintained in the longer term by WECAFC and hence continue to be a vehicle for information-sharing in the region.

5.5 APPROPRIATENESS OF TECHNOLIGIES INTRODUCED

The project will identify, adapt and develop all management measures and gear technologies in close collaboration with those who will use it – the fishers and private sector will be partners in project implementation. The project will have support from NOAA and other gear technology expertise, including from FAO. All gear modifications and alternative fishing methods will be field tested in direct collaboration with fishers. Combining the local knowledge with international experiences and expertise will ensure the appropriateness of the technologies introduced.

5.6 REPLICABILITY AND SCALING UP

The project will support replicability and scaling up by: (i) supporting institutional development, amendments of legal frameworks to support bycatch management, EAF and co-management, and capacity building for shrimp/bottom trawl fisheries and bycatch management through EAF and co-management that will form a basis for effective fisheries

management in a broader sense, including management of other fisheries; (ii) implementing field activities in the selected project areas (fisheries and communities) in the six participating countries, representing relatively modest investments but including a variety of possible managerial measures and livelihood enhancement opportunities with a high potential for replication throughout the countries and region; and (iv) working closely with RFBs through which best practices and lessons learned can be shared and disseminated throughout the LAC region with a view to increasing uptake by non-project countries that share the same resources and have a larger impact.

APPENDIX 1: RESULTS MATRIX

1a: Overall Results Matrix

Project outcomes and impacts:

Objective/ Impact	Baseline	Outcome indicators	Assumptions
Global Environmental Objective: To reduce negative ecosystem impact and achieve more sustainable shrimp/bottom trawl fisheries in the Latin American and Caribbean (LAC) region through implementation of an ecosystem approach to fisheries (EAF), including bycatch and habitat impact management. Project Development Objective: To strengthen resilience of coastal communities through promotion of responsible fishing practices and livelihoods enhancement and diversification contributing to food security and poverty eradication.	Component 1: 1.1. Regional fishery bodies (RFBs) in the region include OSPESCA, CRFM and WECAFC, of which the latter includes all project countries. The RFBs have recorded successes in having regional declarations accepted by the countries in the region but no regional shrimp/bottom trawl fisheries bycatch strategy or policy exist. 1.2 The legal and institutional frameworks in the project countries tend not to include sufficient provisions for bycatch management, co-management (including rights-based approaches) and EAF.	Component 1: **Outcome 1.1:** Strengthened regional collaboration on shrimp/bottom trawl fisheries and bycatch management. Targets: • The CRFM/WECAFC/IFREMER working group is functional and actively promoting the implementation of the regional bycatch/discards strategy (output 1.1.2), including collaboration beyond the initial working group membership. • Best practices identified by the project are shared through OSPESCA, CRFM and WECAFC established mechanisms. **Outcome 1.2:** Improved legal and institutional frameworks in the project countries for shrimp/bottom trawl fisheries and bycatch co-management and EAF. Target: • At least 3 project countries have their legal and institutional frameworks revised (or draft legislation in the process of being approved) as necessary for implementation of co-management and EAF management plans developed under Component 2.	Component 1: There is political support for establishing a regional bycatch policy/strategy and to amend national institutional and regulatory frameworks as required for bycatch management, EAF and co-management. There is sufficient capacity to implement the potential changes needed to allow for EAF and co-management.
	Component 2: 2.1 Bycatch is generally not managed, and only limited knowledge on incidence and volumes of bycatch and discards exists although it is acknowledged that resources are wasted in this way. The EAF principles are accepted and promoted in all project countries but experience and capacity are limited. 2.2 Incentives are not actively used as a management strategy and there is no or limited information on potential positive incentives.	Component 2: **Outcome 2.1:** Selected key shrimp/bottom trawl fisheries in the region are successfully co-managed through EAF (including bycatch/discards considerations). Targets: • Discards have been reduced by at least 20% in at least 5 project pilot fisheries. • At least 5 shrimp/bottom trawl fisheries management plans (in project pilot sites), taking the B&D Guidelines into consideration, are under implementation.	Component 2: Private sector/fishers are willing to participate and appreciate the long-term benefits of more responsible fishing. Collaboration among different stakeholder groups, e.g., across fleet segments, is possible and potential conflicts can be avoided or resolved. Management and technical measures are available and can be identified and adapted to local needs and be accepted by fishers. There are indeed incentives that promote responsible practices. There is sufficient capacity in countries to carry out

		Outcome 2.2: An enabling environment created including incentives and promoting responsible practices by trawl operators. Target: • Trawl operators/fishers in at least 5 project pilot sites benefit from at least one type of positive incentive in relation to changes in trawl fisheries bycatch management (e.g. reduced fuel or labour costs, and/or market based incentives such as price premiums or niche markets).	participatory processes and implement EAF and co-management.
	Component 3: 3.1 Fishers and fish workers are generally not equipped (education, skills, training) to take advantage of existing or alternative livelihoods or diversification options. Gender is not taken into account in shrimp/bottom trawl fisheries management planning. Gender segregated data on trawl fisheries are generally not available.	Component 3: **Outcome 3.1:** Capacities and opportunities for enhanced sustainable and diverse livelihoods created and gender equality promoted. Targets: • New income generating opportunities identified in at least 3 project pilot sites. • Gender disaggregated data on employment are available in at least 3 project pilot sites (i.e. information on the number of men and women employed in the value chains of selected fisheries is available).	Component 3: Fishing communities are willing to work with the project and increased knowledge and awareness can be turned into positive action leading to enhanced livelihoods. Effective collaboration among different government authorities is possible so that the fisheries' knowledge of the authorities involved in the project can be combined with other competencies required to address livelihoods and gender issues in a holistic manner.
	Component 4: 4.1 Project results matrix exists with baseline information and outcome and output indicators and targets.	Component 4: **Outcome 4.1:** Project implementation based on results-based management and application of project findings and lessons learnt in future operations. Target**:** • The project has achieved its expected outcomes and outputs and lessons learnt.	Component 4: Funding and partnerships materialise as planned.

Obs: Baselines and targets will be revisited and further developed during the initial year of project implementation when co-management pilots have been precisely designed.

Project outputs and outcomes:

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Component 1: *Improving institutional and regulatory frameworks for shrimp/bottom trawl fisheries and bycatch co-management*									
Outcome 1.1 Strengthened regional collaboration on shrimp/ bottom trawl fisheries and bycatch management.	Regional fishery bodies (RFBs) in the region include OSPESCA, CRFM and WECAFC, of which the latter includes all project countries. The RFBs have recorded successes in having regional declarations accepted by the countries in the region and collaborate on regional fisheries issues, including shrimp and groundfish management (CRFM/WECAFC/IFREMER Working Group on shrimp and groundfish of the North-Brazil Guianas shelf exists).	a) The CRFM/WECAFC/IFREMER working group is functional and actively promoting the implementation of the regional bycatch/discards strategy (output 1.1.2), including collaboration beyond the initial working group membership. b) Best practices identified by the project are shared through OSPESCA CRFM and WECAFC established mechanisms.		a) The CRFM/WECAFC/IFREMER Working Group is functional and discussing proposed regional bycatch/ discards strategy. b) Best practices shared through OSPESCA CRFM and WECAFC established mechanisms.		a) The CRFM/WECAFC/IFREMER Working Group is promoting the implemen-tation of the regional bycatch/ discards strategy beyond the initial working group members b) Best practices shared through OSPESCA CRFM and WECAFC mechanisms.	a) The CRFM/WECAFC/IFREMER Working Group is promoting the implemen-tation of the regional bycatch/ discards strategy beyond the initial working group members b) Best practices shared through OSPESCA CRFM and WECAFC mechanisms.	PPRs. Minutes from CRFM/WECAFC/IFREMER Working Group and OSPESCA, CRFM and WECAFC meetings. Midterm and final evaluations.	
Output 1.1.1 Best bycatch management practices in line with the B&D and SSF Guidelines disseminated to all countries in the region.	The concerns of bycatch and discards in shrimp/bottom trawl fisheries are shared by the project countries and they are aware of the B&D Guidelines. The 14th session of WECAFC (2012) promoted the implementation of the guidelines and issued a resolution in support of	a) At least 3 media products (documentary, brochure, etc.) on best management practices in line with B&D and SSF Guidelines produced for dissemination to project and non-project countries.		At least one media product prepared and disseminated.	At least two media products prepared and disseminated.	At least three media products prepared and disseminated.		Project reports. Media products.	PRC & NPCs.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
	implementation by the members at national level. However, implementation at national level is still generally lacking.								

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Output 1.1.2 Regional strategy for shrimp/bottom trawl fisheries and bycatch management agreed and under initial implementation.	The concerns of bycatch and discards in shrimp/bottom trawl fisheries are shared by many countries in the LAC region, as is evidenced by the CLME SAP, OSPESCA studies, and WECAFC and CRFM working groups. However, the awareness of the exact problems and their potential solutions is limited and no common regional policy or strategy exists.	a) A regional bycatch management policy/strategy including regional level recommendations for harmonized regulations on shrimp/bottom trawl bycatch in line with regional priorities, B&D Guidelines and the CLME SAP has been agreed by at least one regional fishery body (RFB) (hence including endorsement of both project and non-project countries). b) At least 5 non-project countries have participated in at least one project regional workshop on shrimp/ bottom trawl bycatch issues including the implementation of the regional policy/strategy		a) Draft strategy document proposed and discussed in RFBs	a) Strategy agreed by at least one RFB	b) Regional workshop carried out. (combined with outputs 1.2.1 & 2.1.1).		Strategy document. Workshop minutes.	RPCU & RFBs

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Outcome 1.2 Improved legal and institutional frameworks in the project countries for shrimp/bottom trawl fisheries and bycatch co-management and EAF.	The legal and institutional frameworks in the project countries tend not to include sufficient provisions for bycatch management, co-management (including rights-based approaches) and EAF.	a) At least 3 project countries have their legal and institutional frameworks revised (or draft legislation in the process of being approved) as necessary for implementation of co-management and EAF management plans developed under Component 2.				a) At least 3 project countries have their legal and institutional frameworks revised (or draft legislation in the process of being approved)		PPRs. Project evaluations. Revised legislation.	
Output 1.2.1 National legal frameworks for shrimp/bottom trawl fisheries and bycatch co-management reviewed and amended.	Legal frameworks in all project countries include obligatory use of TEDs (in semi-industrial/industrial fisheries) but there are generally insufficient provisions for implementation of other bycatch related measures for shrimp/bottom trawl fisheries. Draft legal assessment tool has been developed by FAO. At the regional level, recommendations/ resolutions are being produced by the RFBs that have legal implications for the member countries and relate to a wide range of subjects.	a) Institutions responsible for fishery law and regulations in at least 3 project countries have received training on and have applied the FAO legal assessment tool to evaluate the appropriateness of their legal frameworks for: • Bycatch management and EAF in accordance with the B&D Guidelines. • Co-management, including rights-based approaches in accordance with the SSF Guidelines. b) Revisions and adjustments in the legal framework proposed in at least three project countries.	a) FAO legal assessment tool updated for use in relation to co-management and bycatch and B&D Guidelines	a) FAO legal assessment tool applied in at least three project countries.	b) Recommen-dations for national legal amendments proposed for at least three project countries	Regional workshop carried out (combined with outputs 1.1.2 & 2.1.1).		Assessment tool documentation. Project reports. Workshop minutes. Legal adjustment proposal	RPCU, NPCs & RFBs.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Output 1.2.2 Institutional structures for EAF and co-management of shrimp/bottom trawl fisheries and bycatch in place.	Government institutions for fishery management are defined in all project countries. There are also fishers/industry associations but their capacity and current involvement in management appear in most cases limited. The CLME SAP identifies the need to "strengthen the FAO-WECAFC-CRFM sub-regional arrangement for the management of shrimp and groundfish fisheries, and establish a decision-making capacity for policy formulation and management".	a) Functional institutional structures, including multisectoral committees involving both men and women, for shrimp/bottom trawl fisheries and bycatch co-management exist in at least 3 project countries.		National institutional reviews carried out.		National consultations carried out.		Project reports.	RPCU & NPCs.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Component 2: *Strengthening bycatch management and responsible trawling practices within an EAF framework*									
<u>Outcome 2.1</u> Selected key shrimp/bottom trawl fisheries in the region are successfully co-managed through EAF (including bycatch/discards considerations).	Bycatch is generally not managed. Only limited knowledge on incidence and volumes of bycatch and discards exists, although it is acknowledged that resources are wasted in this way (the discard baseline will be established for project pilot fisheries in project year 1). The SAP of the CLME project includes a dedicated strategy (No 6) aiming to "Implement EBM/EAF in the Guianas-Brazil continental shelf with special reference to shrimp and groundfish fishery".	a) Discards have been reduced by at least 20% in each of at least 5 project pilot fisheries. b) At least 5 shrimp/bottom trawl fisheries management plans (in project pilot sites), taking the B&D Guidelines into consideration, are under implementation.			a) Discards have been reduced by at least 5% in each of at least 5 project pilot fisheries. b) At least 5 shrimp/bottom trawl fisheries management plans (in project pilot sites) have been prepared and agreed among co-management partners		a) Discards have been reduced by at least 20% in each of at least 5 project pilot fisheries. b) At least 5 shrimp/bottom trawl fisheries management plans (in project pilot sites), taking the B&D Guidelines into consideration, are under implemen-tation	PPR. Information from byctach monitoring systems. Project evaluations.	

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Output 2.1.1 Information on bycatch (species, volumes, bottom impacts) and monitoring systems improved in selected fisheries (both small and large-scale) in project areas, supporting EAF and co-management, and information-sharing among countries.	Most countries have limited data on bycatch and the information that does exist tends to come from earlier surveys or projects (e.g. REBYC-I) and not from systematic monitoring. Impacts on sea floors and spawning areas are even less well known. The CLME, FAO/WECAFC and CRFM work in recent years confirms this gap and the CLME SAP includes a proposed action to "operationalise and further enhance an interlinked, sub-regional Decision Support System (DSS) for sustainable fisheries and environmental protection in the Guianas-Brazil continental shelf" (relevant for BRA, SUR and TTO). FIRMS–WECAFC partnership was formalized at the 15th session of WECAFC (2014) and collaborative status of OSPESCA and CRFM established. OSPESCA has carried out various studies in the past that provide baseline information on bycatch management.	a) Critical bycatch species are known or identified in at least 5 project pilot sites. b) Bycatch data monitoring systems are improved according to local needs and provide information for shrimp/bottom trawl fisheries and bycatch management in at least 3 project countries. c) Information is shared in a harmonised and efficient way through the WECAFC/CRFM/ IFREMER Working Group and the need for a regional DSS (as defined in the CLME SAP) has been evaluated.		a) Critical bycatch species are known or identified in at least 5 project pilot sites. b) National reviews of existing data and monitoring systems carried out, as required, and gaps identified in at least three project countries.	a) Data collection in process in selected pilot sites. b) Bycatch data monitoring systems are improved and provide information for shrimp/bottom trawl fisheries and bycatch management in at least 3 project countries.	c) Regional workshop carried out. (combined with outputs 1.1.2 & 1.2.1) and the need for a regional DSS (as defined in the CLME SAP) has been evaluated.	c) Information is shared in a harmonised and efficient way through the WECAFC/ CRFM/ IFREMER Working Group	Project reports. Minutes of WECAFC/CRFM/IFREMER Working Group meeting. Workshop minutes.	RPCU.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Output 2.1.2 Alternative fishing methods, BRD technologies and other management measures identified and adopted by fishers.	Four project countries participated in REBYC-I (COL, CRI, MEX and TTO), which had a focus on technology and testing of BRDs. TEDs are mandatory in semi-industrial/industrial shrimp fisheries in all project countries (all vessels with mechanical trawl retrieval system – US requirement for imports). Other general management measures exist for shrimp/ bottom trawl fisheries in all project countries but not necessarily with a focus on bycatch. NOAA (USA) is conducting test trials of BRD technologies as assistance to some of the project countries (e.g. SUR). Alternative fishing methods (non-trawl) for catching shrimp have generally not been investigated by project countries but, at a global level, stationary gear (pots, gillnets) for shrimp and other crustaceans are widely used; thus alternatives to shrimp trawling exist.	a) Management measures for decreasing bycatch have been analyzed in all project countries (in project pilot sites) and recommendations formulated and presented to competent authorities. b) At least half of the project countries have benefited from NOAA BRD testing assistance. c) The feasibility of alterative fishing methods has been tested in at least one project pilot site and outcomes of these activities are documented and evaluated (including economic viability and level of acceptance by fishers). d) Testing results and recommendations shared among all project countries e) National recommendations for management measures (including modified and/or alternative gear) available in at least four project countries f) Capacities built in the project countries for application of trawling technologies (e.g. pulse trawling) that are more economical, reduce bycatch and less destructive for bottom habitats.		a) Management measures for further testing and investigation identified in all project countries/pilot sites. b) At least half of the project countries have benefited from NOAA BRD testing assistance.	c) Feasibility of alterative fishing methods has been tested in at least one project pilot site, outcomes documented and evaluated. d) Regional workshop carried out (combined with output 2.1.3).	e) National Recommendations for management measures (including modified and/or alternative gear) available in at least four project countries.	f) Capacities built in the project countries for application of trawling technologies (e.g. pulse trawling) that are more economical, reduce bycatch and less destructive for bottom habitats.	PPRs. Testing reports. Recommen-dation documents. Workshop minutes.	RPCU.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Output 2.1.3 EAF training provided and participatory management planning process operational in all six project countries.	The EAF principles are accepted and promoted in all project countries but experience and capacity are limited. The level of participatory management varies between the project countries but there is a general recognition of the need to promote co-management and involve fishers/industry in management more effectively. FAO/CRFM assessments, supported by the CLME project, indicated lack of capacity to manage fisheries sector in a holistic manner. Capacity development at the local level is being provided by development partners (eg. CANARI, UWI, FAO) in some project countries (SUR, TTO), including the use of ICT tools for sharing of information and experiences trough CRFM.	a) Government officials and technical staff and fisher representatives have been trained in co-management principles and EAF. b) EAF shrimp/bottom trawl fisheries co-management plans, including bycatch developed through participatory approaches including both men and women, and are under implementation in at least 5 project pilot fisheries. c) Information on the EAF participatory processes is shared amongst the countries and at regional level (through workshop and/or via reports and website).	a) Training curriculum and plan prepared.	a) 30% of training plan implemented. b) EAF shrimp/bottom trawl fisheries co-management plans developed for 2 project pilot fisheries.	c) Regional workshop carried out. (combined with output 2.1.2). b) EAF shrimp/bottom trawl fisheries co-management plans developed for at least 5 project pilot fisheries and two plans under initial implemen-tation	a) 100% of training plan implemented. b) EAF shrimp/bottom trawl fisheries co-management plans under implementation for at least 5 project pilot fisheries	b) EAF shrimp/bottom trawl fisheries co-management plans under implemen-tation for at least 5 project pilot fisheries	PPR. Training completion evaluation reports (number of people (men and women) trained) Co-management plans. Documents. Workshop minutes.	RPCU.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Outcome 2.2 An enabling environment created including incentives and promoting responsible practices by trawl operators.	Incentives are not actively used as a management strategy and there is no or limited information on potential positive incentives.	a) Trawl operators/fishers in at least 5 project pilot sites benefit from at least one type of positive incentive in relation to changes in trawl fisheries bycatch management (e.g. reduced fuel or labour costs, and/or market based incentives such as price premiums or niche markets).			a) Trawl operators/ fishers in at least 2 pilot sites benefit from at least one type of positive incentive.		a) Trawl operators/ fishers in at least 5 pilot sites benefit from at least one type of positive incentive.	Survey among operators/ fishers in pilot sites. PPRs. Mid-term and final evaluation.	
Output 2.2.1 Drivers of bycatch and discard practices investigated and understood and potential incentives identified for bycatch management.	While some drivers for bycatch and discards are known (e.g. it is not cost effective to use limited storage on board for anything but shrimp), there is a lack of information on the perceptions of fishers and industry and how incentives can be changed to decrease unsustainable bycatch and discards. Except for one SUR seabob fleet that is MSC certified, certification schemes are not used in the shrimp/ bottom trawl fisheries in the project countries.	a) Bycatch and discard drivers are analyzed through collaborative research with fishers/industry in at least 5 project pilot sites and SWOT and feasibility analyses carried out of potential incentives. b) Potential incentive packages are tested in at list 2 project pilot sites.		a) Initial desk study on drivers and existing incentives finalised.	a) SWOT and feasibility analysis carried out.	b) Potential incentive packages tested in at least 2 project pilot sites.		PPR. Driver study report. Visits to pilot sites..	RPCU.
Output 2.2.2 New products tested, using sustainable bycatch, with a view to reducing discards.	Limited efforts have been made to increase the use of sustainable bycatch in order to decrease discards.	a) New products and markets using current discards tested in at least one project pilot fishery, results evaluated and recommendations formulated for potential application in other fisheries in the region.		Initial desk study on potential products and markets finalised.	New product(s) prototype available.	Recommendations (for pilot site and the region) available.		PPR. Desk study reports. Field visits. Recommen-dation document.	RPCU.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Component 3: *Promoting sustainable and equitable livelihoods through enhancement and diversification*									
<u>Outcome 3.1</u> Capacities and opportunities for enhanced sustainable and diverse livelihoods created and gender equality promoted.	Fishers and fish workers are generally not equipped (education, skills, training) to take advantage of existing or alternative livelihoods or diversification options. The lack of livelihood alternatives increases the pressure on the resources but fishers tend not to see the need to stop fishing but could potentially consider 'alternative' activities as additional sources of income. The CLME SAP identifies a need to "develop and implement initiatives for sustainably enhancing livelihoods by identifying and building capacity for diversification, viable alternative sources of decent work/improved incomes and creating added value for current catches". Gender is not taken into account in shrimp/bottom trawl fisheries management planning. Gender segregated data on trawl fisheries are generally not available.	a) New income generating opportunities for men and women through the value chain adding value to sustainable bycatch products and other alternatives explored and generating local benefits in at least 3 project pilot sites (the indicators and targets for local benefits (increased income for how many people –gender disaggregated - and work opportunities) will be set in the case of each pilot site in project year one with local participating stakeholders).					a) New income generating opportunities for men and women through the value chain adding value to sustainable bycatch products and other alternatives explored and generating local benefits in at least 3 project pilot sites		

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Output 3.1.1 Value chain analysis with focus on the utilisation of bycatch and the roles of gender and vulnerable groups carried out.	Value chain analyses do generally not exist in the project countries. While women tend to be important actors in the postharvest sector, specific support and training generally do not exist in the project countries.	a) The utilisation of bycatch investigated and its economic and social value understood at different steps in the value chain. b) Gender roles in the shrimp trawl fisheries value chain and in households investigated in at least 2 project pilot sites c) Men and women who are particularly vulnerable to changes in shrimp/bottom trawl fisheries management (e.g. changes in employment and catch/bycatch volumes) are identified and supported, as required and appropriate.	a) TOR for value chain analysis and gender prepared.	a) and b) Value chain and gender analysis carried out in at least two pilot sites and follow-up activities identified.	c) Support activities under implemen-tation according to outcomes of value chain and gender analysis.	b) and c) Report on gender roles in bottom/shrimp trawl fisheries.		PPR. Value chain study report Gender report Visits to pilot sites.	RPCU.
Output 3.1.2 Existing and potential non-fisheries livelihood alternatives for both men and women identified along the value chain, and capacity building support provided accordingly, including promotion of decent work.	There is limited information on current livelihood strategies and levels of vulnerability, including in relation to climate change and variability. Sustainable livelihoods analyses (SLAs) have generally not been conducted in the fisheries sector in the participating project countries in the last decade. However, in OSPESCA countries, various livelihood studies have been carried out in fishing communities. FAO/CRFM assessments, supported by the CLME project indicated lack of	a) Increased knowledge on current livelihood strategies and options for enhancement/diversification improved in at least 3 project pilot sites (communities). b) Support interventions have been carried out in at least 3 pilot sites.	a) Initial desk study on successful livelihood strategies finalised for three pilot sites.	a) Regional workshop carried out to exchange ideas on alternative livelihoods (combined with output 3.1.3).	b) Capacity building and training activities under implemen-tation.	b) Capacity building and training activities under implemen-tation.		PPR. Visits to project sites. Study report on alternative livelihoods.	RPCU.

	business management and negotiating skills.								
Indicators	**Baseline**	**Target**	**Milestones towards achieving output and outcome targets**					**Data Collection and Reporting**	
			Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Means of verification**	**Responsible for Data Collection**
<u>Output 3.1.3</u> Community organisations strengthened, allowing for participatory processes (at household and enterprise level) leading to desired livelihood changes.	In general, in project countries, fishers organisations exist but they are reactive, not proactive, and need to become better vehicles for community engagement and representation in decision-making – both on development issues and in the context of fisheries co-management.	a) Fisherfolk associations/cooperatives are in place and contribute to enhanced livelihoods in at least at least 3 project pilot sites (communities). • Where no fisher organisations exist, formation of at least one fisher/fish workers organisation at such site. • Where fisherfolk associations/ cooperatives exist, delivery of minimum of one training workshop to increase capacity to contribute to enhanced livelihoods.	Review of existing organisations and their strengths and weaknesses finalised.	Regional workshop carried out (combined with output 3.1.2).	Organisational strengthening activities under implemen-tation.	Organisational strengthening activities under implemen-tation.		PPR. Visits to project sites. Organization Review Report	RPCU.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Component 4: *Project progress monitoring, evaluation and information dissemination and communication*									
<u>Outcome 4.1</u> Project implementation based on results-based management and application of project findings and lessons learned in future operations.	Project results matrix exists with baseline information and outcome and output indicators and targets.	Project outcomes are achieved, disseminated and sustained.			30-40% progress in achieving project outcomes		Project outcomes are achieved and prove to be sustainable	Mid-term and final evaluations. PPR, project completion report.	
<u>Output 4.1.1</u> Project monitoring system operating and providing systematic on-progress information related to project outcome and output targets in all countries.	N/A	10 semi-annual PPRs	2 semi-annual PPRs	4 semi-annual PPRs	6 semi-annual PPRs	8 semi-annual PPRs	10 semi-annual PPRs	PPRs	LTU & RPCU.

Indicators	Baseline	Target	Milestones towards achieving output and outcome targets					Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Year 5	Means of verification	Responsible for Data Collection
Output 4.1.2 Mid-term and final evaluation conducted and project implementation adjusted according to recommendations	N/A	Two (2) evaluation reports			Mid-term Evaluation Report		Final evaluation Report.	Evaluation reports	FAO evaluation office.
Output 4.1.3 Project-related "best-practices" and "lessons-learned" published and disseminated in all project countries.	N/A	a) Good practices and lessons learnt reports from project countries posted on Project website b) 1% of the GEF grant will be going towards supporting IWLEARN activities such as participation in WICs and other regional and global IWLEARN meetings, producing a minimum of two experience notes etc.	Project website set up.	a) At least one report from each country posted on website.	b) RPC has participated in at least one IWLEARN activity.	a) All relevant project reports are available on website.		Website. Project reports.	RPCU.

1b: Country level Results Matrix – outputs, baselines and end-of-project targets

RESULTS MATRIX: COUNTRY DETAILS BY OUTPUT – BASELINES AND END-OF-PROJECT TARGETS

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
Component 1: *Improving institutional and regulatory arrangements for shrimp/bottom trawl fisheries and bycatch co-management*						
Outcome 1.1 Strengthened regional collaboration on shrimp/ bottom trawl fisheries and bycatch management.						
1.1.1 The B&D Guidelines are implemented in relevant fisheries in the project countries and regional collaboration promoted.	**Baseline:** B&D Guidelines are partly implemented. BRA is part of the shrimp/groundfish component of the CLME+ project.	**Baseline:** Recognition of bycatch issues (mandatory use of TEDs) but no B&D Guidelines implementation plan.	**Baseline:** Recognition of bycatch issues but no B&D Guidelines implementation plan.	**Baseline:** B&D Guidelines are partly implemented.	**Baseline:** Part of the B&D Guidelines is incorporated in the Ministerial Decree (published annually) regarding fish license conditions: use of TEDs, BRDs, fishing gears and log sheets (including reports of ETP encounters). SUR is part of the shrimp/groudfish component of the CLME+ project.	**Baseline:** No formal recognition of B&D Guidelines. TTO is part of the shrimp/groudfish component of the CLME+ project.
Overall/regional targets: a) All project countries refer to the B&D Guidelines in relevant policies and/or fisheries management plans. b) At least 3 media products (documentary, brochure, etc.) produced for dissemination to project and non-project countries, with content contributed by all project countries and RFBs/donors/international agencies involved in project.	**Targets:** A management plan for the shrimp trawl bycatch in line with B&D Guidelines adopted at national, regional and local levels, in the 7 pilot sites.	**Targets:** Management plan for shrimp trawl bycatch in line with B&D Guidelines developed (and adopted by AUNAP at national, regional and local levels (4 pilot sites)).	**Targets:** Workshops for awareness-raising on the B&G Guidelines and the SSF Guidelines carried out.	**Targets:** 4 shrimp fisheries management plans implemented (in line with B&D Guidelines)	**Targets:** Review and consideration of the B&D Guidelines continue to take place yearly and shall be fully incorporated through a Ministerial Decree. Recommendations by CLME+ will be discussed and incorporated as best as possible.	**Targets:** Recommendations made for increased participation of TTO in regional efforts for sustainable management of Caribbean LME in line with the B&D Guidelines.
1.1.2 Regional strategy for shrimp/bottom trawl fisheries and bycatch management established and agreed.	**Regional baseline:** The concerns of bycatch and discards in shrimp/bottom trawl fisheries are shared by many countries in the LAC region, as is evidenced by the CLME SAP, OSPESCA studies, and WECAFC and CRFM working groups. However, the awareness of the exact problems and their potential solutions is limited and no common regional policy or strategy exists.					
Overall/regional targets: a) A bycatch management policy/strategy in line with project results, regional priorities, B&D Guidelines and the CLME SAP has been agreed by at least one regional fishery body (hence including endorsement of both project and non-project countries). b) At least 5 non-project countries have participated in at least one project regional workshop on shrimp/ bottom trawl bycatch issues.						

N/A = the country does not foresee activities contributing to the particular output.

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
Outcome 1.2 Improved legal and institutional frameworks in the project countries for shrimp/bottom trawl fisheries and bycatch co-management and EAF.						
1.2.1 National legal frameworks for shrimp/bottom trawl fisheries and bycatch management, EAF and co-management reviewed and amended.	**Baseline:** Legal review needed focusing on bycatch and EAF implementation (proposed new shrimp trawl fisheries management plan does not include bycatch).	**Baseline:** No legal provisions for bycatch co-management; only mandatory use for use of TEDs. Some co-management experience exists but this and rights-based management not reflected in legal framework.	**Baseline:** Recent decision on shrimp trawl ban (no renewal of licences) and adjustment of legal framework needed accordingly. The fisheries law does not refer directly to bycatch. Co-management exists in the context of 'responsible marine fisheries areas' management mechanisms but related protected area legislation does not provide for co-management.	**Baseline:** There is limited scope for industry participation although current legislation recognises fisheries co-management.	**Baseline:** Fisheries Act 2010 with apparent legal provisions for bycatch. Coast guard installed in 2013 but not covered by legal framework.	**Baseline:** New draft policy/legislation exists envisaging co-management but not yet passed.
a) Institutions responsible for fishery law and regulations in at least 3 project countries have received training on and have applied the FAO legal assessment tool to evaluate the appropriateness of their legal frameworks for: • Bycatch management and EAF in accordance with the B&D Guidelines. • Co-management, including rights-based approaches in accordance with the SSF Guidelines. b) Regional level recommendations for harmonized regulations on shrimp/bottom trawl bycatch management developed, reviewed and adopted by RFBs for region-wide implementation.	**Targets:** Local (in the 7 pilot sites), regional and national legislation related to shrimp trawl fisheries reviewed, focusing on bycatch and the application of the EAF assessed, and a new legal and regulatory framework proposed.	**Targets:** Legislation for bycatch co-management revised in line with B&D Guidelines including agreement with small-scale fishers (in one pilot site) and large-scale fishers (in one pilot site) and evaluation of the management response by fisheries authorities.	**Targets:** A public consensus policy for fisheries management established. Legal framework revised to include shrimp fisheries legislation and to be in line with the B&G Guidelines and the SSF Guidelines. Legal assessment tool developed.	**Targets:** N/A	**Targets:**. Legal framework reviewed and recommendations made for amendments as required. Coast Guard functional based on relevant legislation and supporting improved MCS of trawl fisheries.	**Targets:** Recommendations made for necessary amendments to existing legislation and policies or to proposed Fisheries Management Bill and draft Fisheries Management Policy to create appropriate legislative and policy framework for sustainable management of the fishery.

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
1.2.2 Institutional structures	**Baseline:**	**Baseline:**	**Baseline:**	**Baseline:**	**Baseline:**	**Baseline:**

for EAF and co-management of shrimp/bottom trawl fisheries and bycatch in place.	National, multisectoral committee created for co-management but not yet functional. Fishers/industry associations exist.	Institutional structure in place and small and large-scale fisher associations with interest in shrimp co-management exist but the capacity for implementation needs to be strengthened.	Institutional structure in place but very few fisheries associations involved in co-management. There is one successful example of collaboration between the small-scale and semi-industrial fisheries.	In 2014, there were 4 management plans published for the Gulf of Mexico but specific regulations for bycatch are missing. There is limited scope for industry participation although current legislation recognises fisheries co-management as the means for implementation and a national committee for fisheries and aquaculture for broader fisheries sector involvement exists.	Collaboration with industry on MSC certification of part of seabob fleet. There are fishers organisations in two communities (Commewijne and Coronie) which participate in the Advisory Committee for Sea Fisheries, but capacities need strengthening.	Further work required on regulatory and institutional baselines and recommendations to allow for the Bill's future implementation. Previously established Monitoring and Advisory Committee has not functioned for approximately 5 years to date. However, stakeholder consultations are conducted by the Fisheries Division on a project-by-project basis to ensure stakeholder input and participation.
Overall/regional targets: a) Functional institutional structures, including multisectoral committees involving both men and women, for shrimp/bottom trawl fisheries and bycatch co-management exist in at least 3 project countries.	**Targets:** State-of-the-art assessment of the management process of the shrimp trawl fisheries in Brazil, focusing on bycatch and the application of the EAF, at local, regional and national levels, carried out and a new management framework adopted.	**Targets:** Functioning institutional structure with clear shrimp bycatch co-management responsibilities in place.	**Targets:** Capacities developed for shrimp/bottom trawl fisheries and bycatch co-management. Creation of a committee for closed seasons that meets monthly for monitoring and planning.	**Targets:** Management committee established.	**Targets:** Overarching organisations for small and large-scale fishers established.	**Targets:** Recommendations for institutional framework to achieve efficient, effective delivery of services and sustainable management of fisheries focusing on restructuring of the Fisheries Division and establishment of mechanisms for institutional collaboration and cooperation on fisheries management among governmental and non-governmental agencies.

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
Component 2: *Strengthening bycatch management and responsible trawling practices within an EAF framework*						
Outcome 2.1 Selected key shrimp/bottom trawl fisheries in the region are successfully co-managed through EAF (including bycatch/discards considerations).						
2.1.1 Information on bycatch (species, volumes, bottom impacts) and monitoring systems improved in selected fisheries (both small and large-scale) in project areas, supporting EAF and co-management.	**Baseline:** Critical bycatch species are not known. No observer programmes in the bottom/shrimp trawl fisheries.	**Baseline:** Up-to-date and systematic information available on bycatch for the preceeding 6 years, but does not include habitat impacts.	**Baseline:** Data are collected on some commercial species that are part of bycatch through landing sales bills but this information is not kept up-to-date.	**Baseline:** Information on bycatch and trawl impact on the sea floor is patchy and from one-off investigations (not systematic).	**Baseline:** Data on bycatch species are available and critical bycatch species known. No observer programmes exist in the shrimp/bottom trawl fisheries.	**Baseline:** Critical bycatch species are known. Current data collection system only monitor and record landed catch at major landing sites. No mechanism exists to record total bycatch, i.e. landed and discards.
Overall/regional targets: a) Critical bycatch species are known or identified in at least 5 project pilot sites. b) Bycatch data monitoring systems are improved according to local needs and provide information for shrimp/bottom trawl fisheries and bycatch management in at least 3 project countries. c) Information is shared in a harmonised and efficient way through the WECAFC/CRFM/IFREMER Working Group and the need for a regional DSS (as defined in the CLME SAP) has been evaluated.	**Targets:** Assessment of bycatch in the shrimp trawl fisheries carried out in the 7 pilot sites, with species composition and the main biological traits of the species caught, ecological interactions, and ecosystem resilience, including threats to seabed habitats and fish stocks, as well as a comparative analysis of the results between sites.	**Targets:** At least 3 bycatch and habitat impact indicators available in 4 pilot sites through improved fisheries monitoring programmes.	**Targets:** Statistics are up dated and publically available. Capacity strengthened of small-scale shrimp fishers and INCOPESCA. Data are shared with other countries in the region. Data collecting system is strengthened by provision of equipment and software to identified fisheries organisations (small-scale and semi-industrial).	**Targets:** Monitoring programme available providing information on the composition and spatial-temporal variation of bycatch in the Gulf of Mexico/Caribbean Sea.	**Targets:** Observer programme in place for collecting data. Observers are trained in data collection on trawlers. Data collected and analysed from all shrimp trawlers.	**Targets:** Appropriate data collection system to support bycatch reduction and monitor and assess effectiveness of measures introduced. Observer programmes, logbook programmes, etc., implemented.

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
2.1.2 Alternative fishing methods, BRD technologies and other management measures identified and adopted by fishers.	**Baseline:** TEDs are mandatory in semi-industrial/industrial shrimp fisheries. BRDs are generally not used.	**Baseline:** TEDs are mandatory in semi-industrial/industrial shrimp fisheries. Technological advances on BRDs were made during REBYC-I but not adopted by fisheries authorities nor by fishers.	**Baseline:** TEDs are mandatory in semi-industrial/industrial shrimp fisheries. BRDs mandatory since 2013 in the semi-industrial shrimp trawl fishery. There are closed seasons for shrimp fisheries.	**Baseline:** TEDs are mandatory in semi-industrial/industrial shrimp fisheries. Gear design exists in the Pacific that needs testing for the Gulf of Mexico/Caribbean Sea where bycatch is high and unsustainable.	**Baseline:** TEDs are mandatory in semi-industrial/industrial shrimp fisheries. BRDs in seabob trawl fisheries but not in other trawl fisheries.	**Baseline:** TEDs are mandatory in semi-industrial/industrial shrimp fisheries. Gear testing under REBYC-I but still inconclusive results. Zoning and some temporal restrictions for trawling exist for small-scale, semi-industrial and large-scale fisheries).
Overall/regional targets: a) Management measures for decreasing bycatch have been investigated in all project countries (in project pilot sites) and recommendations formulated and presented to competent authorities. b) At least half of the project countries have benefited from NOAA BRD testing assistance. c) The feasibility of alternative fishing methods has been tested in at least one project pilot sites,s. Outcomes of these activities are documented (including economic viability and level of acceptance by fishers), evaluated and communicated to all other project countries.	**Targets:** A catalogue of the main fishing boats and gears used in the shrimp trawl fisheries in the 7 pilot sites published. A report on simulated and observed behaviour of fishing gear during commercial trawls, prepared for one pilot site. A report on the behavior of bycatch species and their interaction with the gears currently used by the industrial fisheries, prepared for 2 pilot sites. Potential gear and/or operational changes in order to reduce bycatch of sensible/endangered organisms tested in all 7 pilot sites Management measures for the reduction of bycatch and increase of survival of the species caught adopted at national, regional and local levels (at the 7 pilot sites).	**Targets:** At least 2 prototype BRDs in operation (1 for small-scale fisheries and one for large-scale) and other management measures agreed with fishers in at least half the project sites.	**Targets:** Technology adjustments to minimise ecosystem impacts; evaluation of other types of gear devices (doors, net material and design, etc) that do not entail high costs for fishers. Integration of scientific and traditional knowledge to prepare maps of sensitive areas. Redefinition of the closed shrimp season in the Gulf of Nicoya and change of fishing practices in small-scale fisheries. Fishing capacity plan developed (defining how many small-scale and semi-industrial vessels the resources can sustain).	**Targets:** Prototype net is used by the large-scale fleet in the Gulf of Mexico/Caribbean Sea and unsustainable bycatch is reduced by 20%.	**Targets:** BRD testing carried out with NOAA assistance. Most effective and environmentally sound BRD installed on all shrimp trawlers. Reduction of HP and licences for coastal fleets. VMS implemented in coastal fleet.	**Targets:** Up to 30% reduction in bycatch in pilot area compared to baseline established in Year 1 of project. Minimum of 50% of trawling vessels at pilot site using BRDs. Evidence-based identification of sensitive areas and periods for spatial-temporal restrictions within fishing grounds.

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
2.1.3 EAF training provided and participatory management planning process operational.	**Baseline:** Limited experience of EAF, but participated in CLME case study of which one objective was to mainstream EAF in the management of the shrimp and groundfish fisheries. National institutional set-up for co-management exists but not yet operational.	**Baseline:** EAF applied to evaluate the status of the shrimp resource and fishing impact on the environment. Some fisheries, EAF and co-management experience exists but are not effectively implemented. General recognition of the need to involve small and large-scale fishers in management but this is not done formally.	**Baseline:** More responsible fishing methods and gear have been adopted by shrimp fisheries in line with EAF principles; hence, the need for EAF recognised and some experience, but further capacity building is needed. There is co-management of the 'responsible marine fisheries areas' in Tárcoles.	**Baseline:** Management plans are not EAF based. Management plans exist already that need to be implemented. The need for increased fishers participation is recognised.	**Baseline:** EAF capacity building provided through CLME and foreseen within CLME+ but additional training needs exist. Draft national management plan needs to be adopted and specific plans for shrimp and finfish developed.	**Baseline:** Baseline and recommendations exist for trawl fisheries. EAF capacity building provided through CLME and foreseen within CLME+ but additional training needs exist. Monitoring and Advisory Committee in place including government and commercial and non-commercial fishing interests but it has not functioned as foreseen.
Overall/regional targets: a) Government officials and technical staff and fisher representatives have been trained in co-management principles and EAF. b) EAF shrimp/bottom trawl fisheries co-management plans/strategies, developed through participatory approaches including both men and women and covering bycatch, are under implementation in at least 5 project pilot fisheries. c) Information on the EAF participatory processes is shared amongst the countries and at regional level (through workshop and/or via reports and website).	**Targets:** Stakeholders (fishers' representatives and government officials) trained in one stakeholder EAF workshop. National guidelines on strategies and methodologies to apply the participatory adaptive management to the reality of the shrimp trawl fisheries developed, with focus on bycatch and the application of EAF, to different fishery scales and regional contexts. Forty-two (42) demonstrative workshops on the BRDs to be developed, to be carried out in fishing communities of the 7 pilot sites. Sixteen (16) workshops for evaluation of the BRD results, in fishing communities of the 7 pilot sites done and a bycatch management plan adopted	**Targets:** Government officials and technical staff and fisher representatives have been trained in co-management principles and EAF (12 industrial fishers, 30 artisanal fishers and 10 technicians from fisheries and environment authorities). At least 2 participatory bycatch management planning processes applying EAF carried out (one for small-scale fisheries and one for large-scale).	**Targets:** 4 training courses annually during first 3 years for INCOPESCA, MINAE, Guardacostas, AMPR in EAF; principles of co-management; entrepreneurship; negotiation tools.; organisational strengthening; research, fisheries information management and data bases; political influence; and women's health. Permanent capacity and extension programme established. Presence and participation of fishers associations (and not only technicians) in the development of bycatch management measures/technologies. Inter-institutional approach to improve MSC.	**Targets:** N/A	**Targets:** Capacity development provided based on CANARI existing support and mentoring programmes established in at least 2 project pilot sites. National Fisheries Management plan is approved by Ministerial Decree. Management plans for other shrimp species and finfish species are drafted.	**Targets:** Stakeholders (fishers' representatives and government officials) trained in four (4) stakeholder EAF Shrimp/Bottom trawl fisheries co-management workshops/consultations. Five (5) workshops/consultations with key stakeholders (fishers' representatives and government officials) for baseline data gathering and dissemination of information and results gained from research programmes. Gear trial surveys (BRDs) for artisanal, semi-industrial and industrial trawl fleets-to cover one trawl-fishing season (6 months).

	through a participatory process.					

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
Outcome 2.2 An enabling environment created including incentives and promoting responsible practices by trawl operators.						
2.2.1 Drivers of bycatch and discard practices investigated and understood and potential incentives identified for bycatch management.	**Baseline:** There is no integrated analysis based on more robust methods to assess the impact of the shrimp trawl fisheries on the affected ecosystems. These aspects, therefore, are not taken into account in the managerial process. There is no planning based on the analysis of different scenarios. Certification schemes are not used in the shrimp trawl fisheries.	**Baseline:** There are some cases of small-scale fisheries diversification but not in small-scale shrimp fisheries to reduce bycatch. Certification schemes are not used in the shrimp trawl fisheries.	**Baseline:** Certification schemes are not used in shrimp trawl fisheries.	**Baseline:** Studies show that fuel costs constitute 60% of the operational costs. Studies of the Pacific shrimp trawl fisheries show that these costs can be reduced by 40% by using BRDs but similar studies are not available for the Gulf of Mexico. Certification schemes are not used in the shrimp trawl fisheries.	**Baseline:** One seabob fleet is MSC-certified but with 6 conditions still to be met Duty free fuel is sold to all trawlers.	**Baseline:** No incentives exist. No certification schemes. The environmental management act authorises the environmental management authority to certify an activity as being environmentally friendly. This facility is however not operational.
Overall/regional targets: a) Bycatch and discard drivers are investigated through collaborative research with fishers/industry in at least 5 project pilot sites, and SWOT and feasibility analyses carried out of potential incentives. b) Potential incentive packages are tested in at list 2 project pilot sites.	**Targets:** The socio-economic characteristics of the shrimp trawl fisheries in the 7 pilot sites assessed. One capacity-building workshop on ecological modeling and scenario analyses/management strategy evaluation carried out and 7 local models developed (one for each pilot site) and an integrated model for the shrimp trawl fisheries in the country. Design of possible ecosystem scenarios and management strategies. Preliminary evaluation of the potential use of certification schemes to aggregate value to shrimp trawling fishery, in 2 pilot sites. The energy efficiency and possible solutions for the reduction of fossil-fuel consumption and the emission of greenhouse	**Targets:** One resource has been evaluated with the intention to provide the basis for small-scale fisheries diversification. Recommendations formulated for creating incentives in the form of fuel consumption savings as part of bycatch management in large-scale fisheries in one pilot site.	**Targets:** Gear selectivity and incentives study carried out.	**Targets:** N/A	**Targets:** Certification of the seabob fleet is confirmed and conditions lifted.	**Targets:** Incentives for bycatch reduction identified and implemented in pilot area. SWOT and feasibility analysis for possible incentive packages for bycatch reduction on a national scale.

	effect gases in the artisanal and small-scale fisheries tested in 2 pilot sites.					

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
2.2.2 New products tested, using sustainable bycatch, with a view to reducing discards.	**Baseline:** Introduction of new products is not a priority.	**Baseline:** Apparent trend of increased use of bycatch but no information on improved utilisation for limiting discards.	**Baseline:**	**Baseline:** 19,000 MT of bycatch is estimated to be discarded in the Gulf of Mexico. Trials have been made to increase use of bycatch but these were not successful.	**Baseline:** Surimi has been recently produced as a new product exported to Japan using formerly discarded species.	**Baseline:** Discards generally of no commercial value and no opportunity for their utilization exists.
Overall/regional targets: a) New products and markets using current discards tested in at least one project pilot fishery, results evaluated and recommendations formulated for potential application in other fisheries in the region.	**Targets:** N/A	**Targets:** Discards have been reduced by 10% in one pilot site for small-scale fisheries and in one pilot site for large-scale fisheries.	**Targets:** N/A	**Targets:** N/A	**Targets:** Production of smoked and salted fish for local consumption and exports.	**Targets:** N/A

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
Component 3: *Promoting sustainable and equitable livelihoods through enhancement and diversification*						
Outcome 3.1 Capacities and opportunities for enhanced sustainable and diverse livelihoods created						
3.1.1 Value chain analysis with focus on the utilisation of bycatch and the roles of gender and vulnerable groups carried out.	**Baseline:** The role of women in the shrimp trawl fishing is not adequately understood nor addressed, including their contribution to decisions to use or discard bycatch.	**Baseline:** Limited consideration of the value chain in training on organisational development, and marketing and processing of fishery products. There is no information on the role of women in small-scale shrimp fisheries and related bycatch issues.	**Baseline:** There is a government policy on promoting the role of women but it is not fully implemented. There are however several small-scale fisheries organisations led by women (e.g. Coope Tárcoles); semi-industrial fisheries employ about 1,000 women. Some initiatives exist for addressing vulnerability but not specific for fisheries.	**Baseline:** The role of women in shrimp trawl fishing is not adequately understood nor addressed, including their contribution to decisions to use or discard bycatch	**Baseline:** Women are involved in retail (but are not first-hand buyers of shrimp or bycatch) and in processing plants. A study was carried out by CFRAMP in 2000 in two fishing communities (Commewijne and Nickerie). Report exists.	**Baseline:** No studies have been conducted that have focused on the various roles according to gender in the fishing industry in Trinidad and Tobago. However, anecdotal information suggests that women do play roles in the fishery industry with some being vessel owners, but the majority operate as vendors and processors or prepare and sell food using trawl bycatch. Women and vulnerable groups generally marginalized in representative organisations.
Overall/regional targets: a) The utilisation of bycatch investigated and its economic and social value understood at different steps in the value chain. b) Gender roles in the shrimp trawl fisheries value chain and in households investigated in at least 2 project pilot sites. Men and women who are particularly vulnerable to changes in shrimp/bottom trawl fisheries management (e.g. changes in employment and catch/bycatch volumes) are identified and supported, as required and	**Targets:** The role of women in the shrimp trawling fishery assessed in 2 pilot sites.	**Targets:** Review of the gender roles in the shrimp fisheries value chain in at least 2 pilot sites (small-scale fisheries). Value chain activities strengthening the role of women carried out. At least 10% of the small-scale fisheries women in at least one pilot site have been trained in organisational development, and marketing and processing of fishery products.	**Targets:** Value chain analysis carried out. Workshop carried out on the role of women in shrimp production. Analysis of the social security situation and work related risks. Negotiations with the Social Security agency to obtain benefits for semi-industrial fisheries, taking gender into account, undertaken. Experience exchanges between different women groups (also in other sectors) facilitated.	**Targets:** N/A	**Targets:** Involvement of women and their role in the fisheries sector are investigated and understood.	**Targets:** N/A

appropriate.						

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
3.1.2 Existing and potential non-fisheries livelihood alternatives for both men and women identified along the value chain, and capacity-building support provided accordingly, including promotion of decent work.	**Baseline:** Most fishers consider themselves only fishers and are reluctant to change to other activities. The families involved in the shrimp trawl fisheries are dependent on a single activity. The lack of livelihood alternatives increases the pressure on the resource.	**Baseline:** Trials of changing shrimp fishing technologies as a means of diversification have taken place but have not been successful.	**Baseline:** Most fishers consider themselves only fishers and are reluctant to change to other activities. Limited information on livelihood strategies and the perceptions of fishers on alternatives.	**Baseline:** No options for value-added bycatch products currently exist. No information available on the interactions between shrimp fleet and other fisheries.	**Baseline:** Most fishers consider themselves only fishers and are reluctant to change to other activities. Some interest and potential may exist for improved processing and increased value-added products . EU and USA regulation applied to all processing plants for export.	**Baseline:** Most fishers consider themselves only fishers and are reluctant to change to other activities. Some interest and potential may exist for aquaculture and fishers have expressed interest in importing fish if trawling is banned or reduced significantly. Limited information on existing livelihoods exists from previous projects e.g. *FAO/UNDP Project FI: DP/INT/91/007, Integrated Coastal Fisheries Management* .
Overall/regional targets: a) Increased knowledge on current livelihood strategies and options for enhancement/diversification improved in at least 3 project pilot sites (communities). b) Support interventions have been carried out in at least 3 pilot sites.	**Targets:** Assessment of existing and potential alternative activities to shrimp trawl fisheries in 2 pilot sites	**Targets:** At least 2 business plans formulated for feasibility assessment of, and awareness-raising on, technology changes for alternative fisheries.	**Targets:** Strengthened capacities on local entrepreneurship focusing on shrimp trawl crews and small-scale fisheries organisations. Commercial tourist fishing promoted and INCOPESCA authorised to support this type of activity. Project on reconverting the semi-industrial shrimp trawl fleet into pole and line tuna fishing initiated. Social study on fishers perspective on alternatives, e.g., small-scale commercial fishing for tourists. 4 training courses for sector actors and support for the development of project portfolio.	**Targets:** Alternative use of bycatch investigated in order to increase value-added products and provide diversification opportunities for shrimp fisher women in the Gulf of Mexico. Study carried out on the interactions between the large-scale trawl fisheries and the coastal finfish fisheries ('flota escamera ribereña') in the Gulf of Mexico and of the role of bycatch in food security and livelihoods of coastal communities.	**Targets:** Regulations are in place for processing plants for export to Caribbean countries.	**Targets:** Comprehensive investigation into needs and capacity of fishers and fishing community carried out in pilot areas to inform the mechanisms required to improve the capacity and skills of fishers and fish workers for developing and adopting alternative livelihoods focusing on gender component. Incentive package for adoption of sustainable fishing practices and alternative livelihood options developed and implemented in pilot areas. Increase by 25 % the numbers of persons engaged in sustainable fishing practices, new post-harvest activities, and alternative livelihood options directly as a result of project intervention in

						pilot areas compared to baseline established in Year 1. Three (3) workshops/consultations with key stakeholders (fishers representatives and government officials) for baseline-data gathering and dissemination of information and results gained from research programmes. Two (2) training workshops for existing fisherfolk associations/cooperatives to increase capacity to contribute to enhanced livelihoods.

Output	Brazil (BRA)	Colombia (COL)	Costa Rica (CRI)	Mexico (MEX)	Suriname (SUR)	Trinidad and Tobago (TTO)
3.1.3 Community organisations strengthened allowing for participatory processes leading to desired livelihood changes.	**Baseline:** There are several fishing community organisations in Brazil, but community participation should be strengthened.	**Baseline:** Fisheries organisations exist but are not proactive and need to be reactivated and converted into better vehicles for community participation in decision-making.	**Baseline:** Organisations exist but need support and strengthening.	**Baseline:** There are several fishing community organisations in Mexico, but community participation should be strengthened.	**Baseline:** There are 2 small-scale fisheries organisations (in Commewijne and Coronie).	**Baseline:** Some fishers and community organisations exist.
Overall/regional targets: a) Fisherfolk associations/cooperatives are in place and contribute to enhanced livelihoods in at least at least 3 project pilot sites (communities). • Where no fisher organisations exist, formation of at least one fisher/fish workers organisation at such site. • Where fisherfolk associations/	**Targets:** N/A	**Targets:** Common visions developed by fishers associations in 2 pilots sites and contributing to improved livelihoods.	**Targets:** Strengthening of INCOPESCA in extension and training.	**Targets:** N/A	**Targets:** Existing fishers organisations strengthened and new ones established where there are none.	**Targets:** N/A

cooperatives exist, delivery of minimum of one training workshop to increase capacity to contribute to enhanced livelihoods.						

APPENDIX 2: WORK PLAN (RESULTS BASED)

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q1	Q1	Q1	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: *Improving institutional and regulatory arrangements for shrimp/bottom trawl fisheries and bycatch co-management*																						
Output 1.1.1 The B&D Guidelines are implemented in relevant fisheries in the project countries and regional collaboration promoted.	Review of existing policies and management plans (in relation to B&D Guidelines, SSF Guidelines) and identification of gaps.	RPCU & NPCs																				
	Publication and dissemination of media products in the wider LAC region.	RPCU																				
	National awareness raising activities.	NPCs																				
	Development of recommendations for consideration of B&D Guidelines in policies.	NPCs																				
	Development/modification of policies and management plans addressing gaps in review (see also output 2.1.3)	NPCs																				
Output 1.1.2 Regional strategy for shrimp/bottom trawl fisheries and bycatch management established and agreed.	Drafting of regional strategy.	RPCU & RFBs																				
	Consultations among project countries and other countries in the region on the draft strategy.	RPCU & RFBs																				
	Workshop on strategy (including non-project countries) (combined with workshop outputs 1.2.1 & 2.1.1).	RPCU & RFBs																				
	Finalisation and adoption of regional strategy.	RPCU & RFBs																				
Output 1.2.1 National legal frameworks for shrimp/bottom trawl fisheries and bycatch co-management reviewed and amended.	Update of FAO legal assessment tool as required and on-the-job training of fisheries legal staff in its use.	NPCs																				
	Reviews of national legislative frameworks.	RPCU/FAO LEG																				
	Development of recommendations for national legal revisions, as required.	RPCU/ & RFBs																				
	Regional workshops for promotion of regional legal harmonisation (combined with workshop outputs 1.1.2 & 2.1.1)	RPCU & RFBs																				

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q1	Q1	Q1	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1.2.2 Institutional structures for EAF and co-management of shrimp/bottom trawl fisheries and bycatch in place.	Review of current national institutional structures.	NPCs																				
	National consultations and participatory design of improved institutional structures.	NPCs																				

Component 2: *Strengthening bycatch management and shrimp/bottom trawl fisheries responsible practices within an EAF framework*			**Year 1**				**Year 2**				**Year 3**				**Year 4**				**Year 5**			
			Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q1**	**Q1**	**Q1**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Output 2.1.1 Information on bycatch (species, volumes, bottom impacts) and monitoring systems improved in selected fisheries (both small- and large-scale) in project areas, supporting EAF and co-management, and information shared among countries.	National reviews of existing data and monitoring systems, and identification of gaps.	NPCs																				
	Data are collected on bycatch and habitat impacts and related indicators are agreed at the national level.	NPCs																				
	National monitoring systems and related capacity are improved, as required, considering also data on bycatch utilisation generated under output 3.1.1.	NPCs																				
	Regional workshop for experience-sharing and to promote harmonisation of data systems in the region (combined with workshop outputs 1.1.2 & 1.2.1).	RPCU & WECAFC/CRFM/IFRMEMER working group																				
Output 2.1.2 Alternative fishing methods, BRD technologies and other management measures identified and adopted by fishers.	Assessment of existing gear and management measures and consultations (fisheries authorities/research institutes/ fishers) on possible modifications	NPCs & RPCU																				
	Sea trials, testing and training (including trials with assistance by NOAA) of modified/alternative gear at project pilot sites.	NPCs & RPCU & NOAA																				
	Investigation of potential management measures other than gear.	NPCs & RPCU																				
	National consultations on, and evaluation of, test results and development of recommendations for management measures.	NPCs																				
	National results and recommendations shared among project countries in workshop (combined with output 2.1.3).	RPCU & RFBs																				
	Preparation of final national recommendations and implementation.	NPCs																				
Output 2.1.3 EAF training provided and participatory	Preparation of curriculum for EAF training courses.	NPCs & RPCU																				
	Carrying out of EAF training courses for government officials and fishers/other	NPCs & RPCU																				

management planning process operational.	stakeholders.																							
	Participatory development/refinement of management plans (see also output 1.1.1)	NPCs & RPCU																						
	Regional workshop on EAF and co-management processes (combined with output 2.1.2).	NPCs & RPCU																						
Output 2.2.1 Drivers of bycatch and discard practices investigated and understood and potential incentives identified for bycatch management.	Desk study of drivers and existing incentives (globally and in the LAC region).	NPCs & RPCU & market partner																						
	Refinement of desk study by investigations of drivers in pilot sites.	NPCs & RPCU & market partner																						
	Identification of potential incentives and SWOT analysis and feasibility studies/testing.	NPCs & RPCU & market partner																						
	Development of recommendations	NPCs & RPCU & market partner																						
Component 2: *Cont.*			**Year 1**				**Year 2**				**Year 3**				**Year 4**				**Year 5**			
			Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q1**	**Q1**	**Q1**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Output 2.2.2 New products tested, using sustainable bycatch, with a view to reducing discards.	Desk study of potential products and markets (globally and in the LAC region).	NPCs & RPCU & market partner																				
	Development of new product tested in pilot site(s).	NPCs & RPCU & market partner																				
	Analysis of results and development of recommendations for pilot site(s) in the region.	NPCs & RPCU & market partner																				

Component 3: *Promoting sustainable and equitable livelihoods through enhancement and diversification*			**Year 1**				**Year 2**				**Year 3**				**Year 4**				**Year 5**			
			Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q1**	**Q1**	**Q1**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Output 3.1.1 Value chain analysis with focus on the utilisation of bycatch and the roles of gender and vulnerable groups carried out.	Preparation of terms of reference for value chain and gender analysis.	RPCU & NPCs																				
	Carrying out of value chain and gender analysis in pilot sites and follow-up activities identified.	NPCs																				
	Implementation of follow-up activities (experience exchanges, training etc).	NPCs																				

	Feeding of information on bycatch utilisation into monitoring systems under output 2.1.1 and preparation of report on gender in shrimp/bottom trawl fisheries.	RPCU																					
Output 3.1.2 Existing and potential non-fisheries livelihood alternatives for both men and women identified along the value chain, and capacity building support provided accordingly, including promotion of decent work.	Participatory identification of potential alternatives in pilot sites and identification of capacity building and training needs.	RPCU & NPCs																					
	Workshop for exchange of experiences and planning of pilot site capacity building and training (combined with output 3.1.3).	RPCU & NPCs																					
	Capacity building and training carried out in pilot sites together with awareness-raising on decent work.	NPCs																					
Output 3.1.3 Community organisations strengthened allowing for participatory processes (at household and enterprise level) leading to desired livelihood changes.	Review of existing organisations and their strengths/weaknesses.	RPCU																					
	Workshop with existing organisations in project countries/pilot sites to identify capacity building and further organisational (at regional, national and local levels) needs (together with output 3.1.2).	RPCU & NPCs																					
	Carrying out of organisational strengthening activities, including establishment of new organisations, as required, and formal registration of organisations.	NPCs																					

Component 4: *Ensuring project progress monitoring and information dissemination and communication*			**Year 1**				**Year 2**				**Year 3**				**Year 4**				**Year 5**			
			Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q1**	**Q1**	**Q1**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Output 4.1.1 Project monitoring system operating and providing systematic on-progress information related to project outcome and output targets in all countries.	Inception workshop (with all partners).	LTU																				
	Review of indicators/targets and development of M&E tools.	RPCU & LTU																				
	Regular monitoring of project progress, including preparation of progress reports.	RPCU & LTU																				

Output 4.1.2 Mid-term and final evaluation conducted and project implementation adjusted according to recommendations.	Mid-term review	FAO evaluation office																					
	Final evaluation	FAO evaluation office																					
Output 4.1.3 Project-related "best-practices" and "lessons-learned" published and disseminated in all project countries.	Establishment of project website.	RPCU																					
	Publication and dissemination of best practices and lessons learned (see also output 1.1.1).	RPCU																					
	Participation in IW activities	RPCU																					
	Final project workshop for dissemination of results.	RPCU & RFBs.																					
Project Management																							
	Preparation of detailed work plan and budget.	LTU & RPCU																					
	Recruitment/designation of PRC, establishment of PSC and NWGs, and establishment of partnership coordination arrangements, including identification and training of project 'champions'.	FAO and national project technical executing partners																					
	Continuous project oversight	RPCU & LTU																					

APPENDIX 3: RESULTS BUDGET

For more details on GEF and co-financing budgets see this Excel file: 

For details of the detailed budget of GEF resources for each country see this Excel file: 

BUDGET FOR GEF RESOURCES IN USD									Total	Expenditures by year				
Oracle code and description	Unit	No. of units	Unit cost	Comp. 1: Total	Comp. 2: Total	Comp. 3: Total	Comp. 4: Total	PM	GEF	Year 1	Year 2	Year 3	Year 4	Year 5
5300 Salaries professionals														
Project CTO	Month	56	10,321	113,531	103,210	123,852	185,778	51,605	577,976	82,568	123,852	123,852	123,852	123,852
Operational and Administrative Officer (part time)	Month	40	8,207.55	0	0	0	0	328,302	328,302	65,660	65,660	65,660	65,660	65,660
5300 Sub-total salaries professionals				113,531	103,210	123,852	185,778	379,907	906,278	148,228	189,512	189,512	189,512	189,512
5570 International Consultants				113,531										
Legal consultant	Month	2	10,000	20,000	0	0	0		20,000	10,000	10,000			
Other consultants as required	Month	2	10,000	5,000	10,000	5,000	0		20,000	10,000	10,000			
Sub-total international Consultants				25,000	10,000	5,000	0	0	40,000	20,000	20,000	0	0	0
National consultants				0					0					
				0	0	0	0		0					
Sub-total national Consultants				0	0	0	0	0	0	0	0	0	0	0
5570 Sub-total consultants				25,000	10,000	5,000	0	0	40,000	20,000	20,000	0	0	0
5650 Contracts														
Brazil				80,000	863,000	57,000	0		1,000,000	499,500	251,500	219,000	30,000	0
Colombia				213,513	524,682	61,812	0		800,007	116,872	320,618	198,776	117,640	46,101

Costa Rica				69,300	282,900	97,800	0		450,000	146,200	75,200	75,200	76,200	77,200
Mexico				0	822,532	77,481	0		900,013	190,947	561,900	85,528	61,639	0
Suriname				65,000	376,150	109,000	0		550,150	86,000	196,600	165,550	102,000	0
Trinidad and Tobago				20,155	268,407	161,428	0		449,990	123,138	176,838	67007	26,000	57,007
Midterm review and evaluation	Lumpsum	2	80,000	0	0	0	160,000		160,000			80,000		80,000
Other contracts as required	Lumpsum	2	10,000	0	10,000	10,000	0		20,000		10,000	10,000		
5650 Sub-total Contracts				447,968	3,147,671	574,521	160,000	0	4,330,160	1,162,657	1,592,656	901,061	413,479	260,308
5900 Travel														
Regional travel RPCU		15	2,500	10,000	12,500	7,500	7,500		37,500	7,500	7,500	7,500	7,500	7,500
International travel RPCU	Trip	3	5,500	0	0	0	16,500		16,500		5,500	5,500	5,500	
				0	0	0	0		0					
5900 Sub-total travel				10,000	12,500	7,500	24,000	0	54,000	7,500	7,500	7,500	7,500	7,500
5023 Training and workshops														
PSC meetings	Meetings	5	36,000	0	0	0	180,000		180,000	36,000	36,000	36,000	36,000	36,000
Regional workshops (workshops will combine different outputs)	Workshops	5	40,000	40,000	80,000	40,000	40,000		200,000	40,000	40,000	40,000	40,000	40,000
				0	0	0	0		0					
5023 Sub-total training				40,000	80,000	40,000	220,000	0	380,000	76,000	76,000	76,000	76,000	76,000
6000 Expendable procurement														
				0	0	0	0		0					
6000 Sub-total expendable procurement				0	0	0	0	0	0	0	0	0	0	0
6100 Non-expendable procurement														
Computers and other equipment RPCU	Lumpsum	1	18,278	18,278	0	0	0		18,278	18,278				
6100 Sub-total non-expendable procurement				18,278	0	0	0	0	18,278	18,278	0	0	0	0
6300 GOE budget														
Communication and translation	Lumpsum	1	60,000	30,000	0	0	30,000		60,000		15,000	15,000	15,000	15,000
Miscellaneous, including contingencies	Lumpsum	1	11,284	0	0	0	11,284		11,284	2,257	2,257	2,257	2,257	2,257
6300 Sub-total GOE budget				30,000	0	0	41,284	0	71,284	2,257	17,257	17,257	17,257	17,257
TOTAL				684,777	3,353,381	750,873	631,062	379,907	5,800,000	1,434,920	1,902,925	1,191,330	703,748	550,577

APPENDIX 4: RISK MATRIX

Risk Description	Category[1]	Impact[2]	Likeli-hood[3]	Mitigating actions	Owner	Status[4]
Lack of political support for the project, e.g., a change in key policy and decision makers or other events beyond the control of the project leading to changes in policies and/or support for bycatch management and the project.		L-M	L-M	Project priorities are in line with overall local, national and regional concerns and are hence strongly anchored in existing policies. Through stakeholder participation, local, national and regional ownership has been already established at the project design stage and this broad-based support will also be promoted during implementation.		
There is insufficient capacity to support management changes proposed by the project, e.g. with regard to human resources and monitoring systems.		M	M	The scope of the project has been agreed with relevant authorities. During implementation, local, national and regional stakeholders will decide on what managerial measures should be adopted and hence what is feasible within existing capacities. Moreover, capacity building will be available from the project as required.		
Fishers and other private sector actors are reluctant to collaborate with the project.		M-H	M-H	By applying a participatory approach and providing capacity building for stakeholders to effectively take part in the project, it will address issues that are of concern to stakeholders ensuring that fishers, fish workers and other private sector actors will be interested in its activities. The work on incentives under Component 2 and on livelihoods under Component 3 will provide opportunities for a broader engagement by the private sector and communities. Stakeholders have been involved and shown interest in participation during the preparation of the project (national consultations and in the project workshops held in Suriname and in Costa Rica in 2014).		
Disagreements or conflicts among resource users, different government agencies/ departments – or central-local levels – or other stakeholder groups with regard to project priorities and implementation mechanisms.		L	L	A wide range of stakeholders have been consulted and participated in project design and different viewpoints have hence already been identified. As part of project implementation, institutional arrangements and processes will be set up for co-management of the shrimp/bottom trawl fisheries. These arrangements will include provisions for conflict resolution as		

[1] Risk categories defined in the FAO ERM Strategy: CLEAR INTENDED PURPOSE (IMPACT &OUTCOME); EFFECTIVE DELIVERY STRATEGY; EXTERNAL STAKEHOLDER SUPPORT; INTERNAL STAKEHOLDER SUPPORT; RIGHT RESOURCES; VIABLE DELIVERY STRUCTURES; STRONG DELIVERY MANAGEMENT.

[2] H: High, M: Medium, L: Low

[3] H: High, M: Medium, L: Low

[4] To be updated during implementation and monitoring phase (no change, reduced, increased).

				appropriate. Project implementation will be guided by principles of equitable development and gender equality.		
Technical and managerial solutions (gear modifications, alternative gear and management measures) are not available that provide the desired environmental and sustainable fishing effects and, at the same time, are acceptable to fishers and other stakeholders in the context of current livelihoods, food security and poverty.		M	M	Through FAO, information is available on the variety of BRDs, gear modifications and management measures that exist around the world. By working closely together with fishers and other stakeholders, those measures that are most suitable in the particular local situations can be selected, developed and/or adopted as required. The project recognises the potential (short-term) implications on incomes by reducing bycatch, and that immediate livelihood needs and improved management requirements must be reconciled. The project does not aim at eliminating bycatch but to make it part of an effective fisheries management plan.		
Market-based incentives are difficult to identify and implement because of a lack of demand and niche markets. Incentives based on cost-savings are not technologically feasible or attractive enough.		M	M	As a large share of the shrimp caught in the project countries is exported to markets (e.g. USA and EU) where demand for environmentally friendly products is growing, the project will work closely with fishers, seafood trading companies and other stakeholders to assess and access these markets. Cost-saving technologies exist generally; they need to be identified and adapted to the local situation. International advice and assistance will be provided by the project in this respect and all technological development will be made in close collaboration with fishers and the industry.		
Fishing communities are not interested nor feel able to pursue alternative livelihoods, or it is not possible to find viable options for diversification.		M	M	It is recognised that many fishers and fish workers see their profession as something more than a way of earning a living – it is a way of life. This makes it difficult to shift the livelihood basis from fisheries to other income-generating activities. The project will work closely with fishers and fish workers and take their perceptions into consideration when suggesting livelihood alternatives. Whenever possible, the focus will instead be on enhancing existing livelihoods and finding complementary income-generating activities rather than changing everything.		
Government agencies and other potential partners outside the fisheries sector do not have the interest, time, resources or capacity to engage in the project to provide the necessary non-fisheries inputs (especially important for Component 3).		L	L	Different partners at the national level have been involved already in the project preparation phase. National project teams will set up processes for collaboration with relevant government agencies and other partners at the beginning of the project, building on already existing working relationships as appropriate. The project also intends to provide regional/ international technical assistance with regard to livelihoods and gender which may be beneficial also to non-fisheries agencies.		
Co-funding from partners and collaboration do not materialise as planned and the project experiences budget shortcomings.		L	L	The project design will not contain expected results or activities for which funding has not been confirmed. In accordance with GEF requirements, all co-funders must confirm their contributions in writing. Regular reviews of project progress together with financial monitoring during project implementation will ensure that corrective actions can be taken if and as needed.		

APPENDIX 5: PROCUREMENT PLAN

Ref. No.	Requirement (Item Description)	Unit (Lts, MT, Kg., etc.)	Estimated quantities	Estimated cost	Unit price[1]	Solicitation Method[2]	Procurement Method[3]	Buyer[4]	Targeted tender launch date	Targeted contract award date	Targeted Delivery date	Final destination and delivery terms	Status[5]	Other Constraints/ Considerations

As per FAO Project Guidelines, this will be completed during inception of the project.

[1] To be completed during project cycle implementation and monitoring phase.
[2] RFP: Request for Proposal; RFQ: Request for Quotation; ITB: Invitation to Bid.
[3] Direct Procurement, re-use of tender results, UN, Framework, etc.
[4] CSAP, Non-HQ Location, Procurement Mission.
[5] Planned, Requested, Tendered, Order Placed, Delivered, Completed.

APPENDIX 6: TERMS OF REFERENCE (TORS)

Terms of Reference 1

Title: Regional Project Coordinator/Fisheries Expert (PRC)
Duty Station: FAO Subregional office for the Caribbean (FAO-SLC), Barbados
Duties and Responsibilities:

Under the supervision of the Project Steering Committee (PSC), the overall direction and supervision of the LTO and Project Task Force, reporting to the FAO Budget Holder (administrative matters) and FAO LTO (technical matters) and receiving technical advice from the FAO Lead Technical Unit (LTU), the PRC will be responsible for all technical and coordination aspects and overall implementation of the project. Specifically, he/she will:

- Be responsible for and ensure that all technical and coordination aspects and overall implementation of the project are in accordance with FAO and GEFs rules and procedures, and that technical activities implemented within the project are consistent with the Project's Results Framework indicators and results-based management target.
- Manage the project monitoring system and tracking output and outcome indicators as established in the Project's Results framework.
- In close collaboration with and based on inputs from National Co-executing Partners, prepare and follow up on the implementation of Annual Work Plans and Budgets for the project.
- Collect inputs from National Co-executing Partners and prepare six-monthly Project Progress Reports in accordance with FAO-GEF reporting requirements (see section 4.5 of the FAO Project Document) and submit them to the FAO Project Task Torce for comments and clearance (by the LTO) and to the Project Steering Committee for information
- Collect inputs from National Co-executing Partners and other project co-financing partners and prepare an annual report on the invested co-financing.
- Support the LTO in preparing the annual Project Implementation Review (PIR) to be submitted to the FAO-GEF Coordination Unit for clearance, (which subsequently submits it to GEF).
- Provide support to Government counterpart institutions as appropriate, and ensure effective and timely execution of planned activities in the countries and at regional level involving other related parties.
- Support the project Operational and Administrative Officer at FAO-SLC (the Budget Holder – BH) with: preparation of six-monthly statements of expenditures to be distributed to the PSC; six-monthly updating of the project's procurement plan; review and clear disbursement requests under the LoAs with National Co-executing Partners, and procurement and contract documentation for goods and services to be purchased in accordance with the project approved budget and procurement plan.
- Review TOR for consultancies and contracts to be performed under the LoAs with National Co-executing Partners for submission to FAO for clearance. Review and provide comments on technical products delivered by consultants and contract holders contracted by the GEF project.
- Be responsible for partner coordination and liaison with donors and other projects, programmes and organizations and coordinate institutional arrangements and

meeting/workshop activities needed to exchange lessons learned, harmonize approaches and coordinate activities to create synergies, and execute the project at the regional level.

- Provide on-the-job capacity building and mentoring to consultants on project management and coordination as required.
- Conduct periodic coordination and supervision missions to the participating countries.
- Develop materials for capacity development in collaboration with the LTO, LTU, the Project's Task Force, and in close coordination with participating countries and partners.
- Represent the project in relevant coordination meetings and conferences.
- Organize the PSC meetings and act as Secretary of the meetings.
- In consultation with the FAO Office of Evaluation, LTO, and the FAO GEF Coordination Unit, support the organization of the mid-term review and the final evaluation, contribute to the development of an eventual agreed adjustment plan for project execution and supervise its implementation.
- Perform other related duties as required.

Terms of Reference 2

Title: National Project Coordinators (NPCs) – six posts
Duty Station: In each participating country (location to be decided) – with travel as required
Duties and Responsibilities:

Under the supervision of the national FAO Representative and the Project Steering Committee (PSC), the overall direction and supervision of the Project Regional Coordinator (PRC) and the technical support and guidance of the LTO, and in close collaboration with project national and Project Coordination Unit (RPCU) staff, consultants and partners, the NPCs will be responsible for the technical and operational implementation of the project at the national and local level. Specifically, the incumbents will:

- Prepare national work plans and budgets and submit these to the PRC for clearance and incorporation into overall project annual reports and budgets. Be responsible for the implementation of national work plans.
- Ensure that monitoring mechanisms are in place at the national and local level allowing for tracking progress according to targets established in national work plans as well as to output and outcome indicators in the Project's Results Framework. Provide progress reports to the PRC for compilation into overall Project Progress reports.
- Support national activities in the country, supervise national project staff and consultants and prepare contractual arrangements.
- Liaise with relevant national organizations and partners, and support communication, coordination and collaboration.
- Organize the NWG meetings and act as Secretary of the meetings.
- Participate in project regional workshops and meetings, and represent the project in relevant national events and conferences.
- Perform other related duties as required.

APPENDIX 7: INFORMATION ON SHRIMP/BOTTOM TRAWL FISHERIES IN PROJECT COUNTRIES

Brazil – shrimp fisheries

Fleet	*Vessels / type of fishing*	*Targeted species and annual production*	*Bycatch / discards*	*Management measures*	*Employment*	*Markets*	*Remarks*
Industrial/North	70 shrimp trawl double-rig vessels (17-23 m LOA; 325-425 HP engines)	Pink shrimp; 5,000 t/year	4-7 kg/ kg of shrimp tail; 17,000 – 24,000 t/year; 150 species (90% finfish; weakfish, croaker, snapper, etc.); most discarded.	TEDs; Time closure, mesh size, distance from land.	About 500	Mainly exports to USA, Europe and Japan	
Artisanal/Northeast	Over 1,000	Seabob and white shrimp, 15,000 t/year	1-5 kg/ kg of shrimp; 20,000 t/year; 60 species, mainly finfish. Most landed.	TEDs; Time closure, mesh size, distance from land.	About 5,000	Mainly domestic	
Industrial/Southeast	About 300 shrimp trawl double-rig vessels (mean LOA= 20m; mean HP= 260 HP).	Pink shrimp, seabob; 1,000 t/year	10 kg/kg of shrimp; Almost 200 species, mainly finfish. Partially discarded	TEDs; Time closure, mesh size, distance from land.	About 1,000	Mainly exports to USA, Europe and Japan	
Artisanal/Southeast	About 3,000 (mean LOA= 10m; mean HP= 30)	Seabob, pink shrimp 4,000 t/year	9 kg/ kg of shrimp; Almost 150 species, mainly finfish. Partially discarded	TEDs; Time closure, mesh size, distance from land.	About 15,000	Mainly domestic	

Colombia – shrimp fisheries

Fleet	*Vessels / type of fishing*	*Targeted species and annual production*	*Bycatch / discards*	*Management measures*	*Employment*	*Markets*	*Remarks*
Industrial: on both Caribbean and Pacific coasts	Caribbean: 17 trawl vessels in 2013 (13 active). In Cartagena port vessels are Florida type trawler, 21.3 m in length, 450 hp. Japanese type trawl nets (two per band), 12.8 m of head line. In Tolu port vessels are 13.1 m in length, 165 hp. Japanese trawl net (one per band), 14.9 m of head line. Pacific: 92 trawl vessels in 2013 (50 active). In shallow waters (< 80 m in deep), vessels are Florida type trawler, 20 m in length, 350 hp. Flat type trawl nets (one per band), 12.5 m of head line. In deep waters, vessels are Florida type trawler, 20 in length, 450 hp. Flat type trawl nets (one per band), 20.3 m of head line. These vessels fish between 80 and 350 m in deep waters.	Caribbean: Pink shrimp (*Farfantepenaeus notialis*) main species landed; Brown shrimp (*Farfantepenaeus subtilis*); White shrimp *Litopenaeus schmitti*). Average annual catch last 5 years: 314 t. Pacific: White shrimp *(Litopenaeus occidentalis*) main species landed; Titi shrimp (*Xiphopenaeus riveti*); Tiger shri*mp* (*Trachypenaeus spp.*) in shallow waters. Average annual catch last 5 years: 164 t. Brown shrimp (*Farfantepenaeus californiensis*); Coliflor (*Solenocera agassizi*); Pink shrimp (*Farfantepenaeus brevirostris*) are harvested in deep waters. Average annual catch last 5 years: 683 t.	Caribbean: In 2005, 7045 t of bycatch was estimated. In 2010, 3000 t of bycatch was estimated. Part of bycatch is in demand in local markets, but another part (discards) cannot be sold. Main species of the incidental catch are catfishes, snappers, mojarras, croakers and grunts. Species discard include crabs, catfishes, mojarras, flat fishes and goat fishes. Bycatch: 2.1-12 kg/ kg of pink shrimp Pacific: In 1998, 8470 t of bycatch was estimated, whereas in 2012 the bycatch was 5578 t (5076 t of shallow water fishery). Part of bycatch is in demand in local markets, but another part (discards) cannot be sold. Main species of the incidental catch are catfishes, snappers, harvestfish, mojarras, moonfish, and damsel bass. Species discard include crabs, catfishes, mojarras, flat fishes, goat fishes, eels and herrings. Bycatch: 5-20 kg/ kg of shallow water shrimp 1-3 kg/ kg of deep sea shrimp	TEDs as mandatory rule; No industrial fishing in the gulfs, estuaries and MPAs. In Pacific coast, there is a ban to protect spawning and recruitment seasons (January to February). No trawl fishing areas are located in the north of the Pacific coast (ZEPA or artisanal exclusive fishing ground).	In the Caribean the activity employs directly 125 people In the Pacific coast, the fleet employs 1,250 people (1,000 women as target and incidental catch workers).	Shrimp of aquaculture and fishing in 2009 $US 37,300,000 FOB exported to USA & EU (Spain and France). Landed bycatch is sold in local markets.	Main port in Caribe: Cartagena. Shrimp catches have declined since 1992 (status depleted). Main port in Pacific: Buenaventura. Shallow shrimp catches have declined since 1984 (status depleted). Deep shrimp catches are stable (status moderately exploited).

Colombia – shrimp fisheries *(cont.)*

Fleet	*Vessels / type of fishing*	*Targeted species and annual production*	*Bycatch / discards*	*Management measures*	*Employment*	*Markets*	*Remarks*
Artisanal on both Caribbean and Pacific coasts.	Caribbean: 26 oOut-board boats in 2014 using small-scale trawl net (changas) Boats 4.3 m in length, 40 hp. 6.5 m of head line. 12 shrimp beach seine using oar boats. Pacific: In 2001 aprox 20,000 of gill nets using mesh size from 1 to 2 ¾". 140 Small-scale trawl net (active changas)	Caribbean: Titi shrimp (*Xiphopenaeus kroyeri*), Pink shrimp (*Farfantepenaeus notialis*). Pacific: White shrimp *(Litopenaeus occidentalis*), Titi shrimp (*Xiphopenaeus riveti*) and Tiger shri*mp* (*Trachypenaeus spp.*).	Caribbean: In 2012, 18.8 t of bycatch was estimated for the shrimp beach seine. Main species include mullets, largehead hairtail, herring, anchovies, catfishes. 372 t of bycatch in small-scale trawl net. Main species include anchovies, jellyfish, croakers, largehead hairtail, crabs and catfishes. Pacific: White shrimp *(Litopenaeus occidentalis*), Titi shrimp	In the Pacific small-scale trawl nets are banned. Gill nets are mandatory using 2 ¾" at mesh size.	In Caribean, 437 people are employed (fishers using small scale trawl net and beach seine). In the Pacific, 12,000 people employed (fishers using small scale trawl net and gill net).	Landed target species are sold in local and national markets. Landed bycatch sold in local markets.	Some resources shared with the industrial fisheries (sequential fisheries).

Costa Rica – shrimp fisheries

Fleet	*Vessels / type of fishing*	*Targeted species and annual production*	*Bycatch / discards*	*Management measures*	*Employment*	*Markets*	*Remarks*
Semi-industrial	37 trawl vessels active, 41-140 GT (31 no active)	700 MT Coastal: White complex shrimp (*Litopenaeus occidentalis, L. stylirostris, L. vannamei; "camarón blanco"*) *Xiphopenaeus riveti ("camaron tití"*) Pink shrimp (*Farfantepenaeus brevirostris, "camarón rosado"*) Brownshrimp (*Farfantepenaeus californiensis, "camarón café"*) Deepwater: *Solenocera agassizi (*"camarón Fidel") *Heterocarpus vicarius (*"camarón camello") *Heterocarpus affinis* ("camarón real")	Coastal shrimp trawl: Some bycatch that is in demand in local markets but also juveniles and species that cannot be sold and are discarded. Deepwater shrimp trawl: 25% bycatch are sold in local and international markets (Stomatopoda, "chicharras")	TEDs since 1996; BRDs (fisheye) since January 2014. No industrial fishing in: the gulfs; marine areas of responsible fishing (áreas marinas de pesca responsable, AMPRs); marine protected areas. Trawl ban: three months per year	Direct: 830 (whole value chain) Indirect beneficiaries: 4,150 circa	Shrimp: 60-70% exported - USA (Walmart) & EU Species for export are: *Solenocera agassizi*, *Heterocarpus vicarius* *Heterocarpus affinis* Landed profitable bycatch sold in local markets	Main port: Puntarenas. Shrimp catches have declined during recent years due toseveral factors.
Artisanal fisheries	1 540 gillnetters Indefined number of illegal fisheries ('Rastras ilegales')	Annual production has not been calculated due to vessels landing in unofficial or improvised sites White shrimp and *Trachypenaeus byrdii* ("camaron conchudo o carabalí")	Juvenile fishes (corvina, pargos)	Small mesh sizes prohibited	3,080	Domestic, local markets	Some resources shared with the semi-industrial fisheries

Mexico – Atlantic coast shrimp fisheries

Fleet	Vessels/type of fishing	Targeted species and annual production	Bycatch discards	Management measures	Employment	Markets	Remarks
Industrial	338 trawlers, Length of 21-25 m	19,140 MT Coast: - brown shrimp *Farfantepenaeus aztecus,* - Pink shrimp *F. duorarum* - White shrimp *Litopenaeus setiferus* - Red shrimp *F. brasiliensis* - Rock shrimp *Sycionia brevirostris* - Seabob *Xiphopenaeus kroyeri*	Shrimp (19.4%) Other crustaceans (2.06%) Molluscs (4.80%) (15.9%) Commercial fish (15.9%) Discards (50.7%) Elasmobranches (6.9%) Only 15.9% of the catch is harvested for human consumption. Relationship shrimp: bycatch 1: 3 to 1:19	Control of fishing effort. Control of equipment and fishing gear. Trawls, which must meet specific criteria. Temporary closures to protect reproduction, recruitment and growth of shrimp species. Permanent ban of trawling in the area of 0-5 fathoms of depth. Permanent closure in the Gulf of Mexico in the marine area from 0-15 miles from the coastline, from Isla Aguada, Campeche, to the border with Belize, except the area of Contoy. Total and indefinite ban for catching sea turtles. No industrial fishing in bays and coastal lagoons. Mandatory use of turtle excluder devices.	Direct: 190 884 Indirect: 573 000	Shrimp: 50% exported to United States of America, Japan and France. Bycatch: sold in local markets. The largest shrimp is exported and medium and small shrimp sold in the domestic market.	Main ports: Tamaulipas, Veracruz and Campeche in the Atlantic. Shrimp catches have declined in recent years.
Artisanal fisheries. They are rare in shrimp, no artisanal fisheries dedicated to finfish.	2,540 small vessels ("charangas") engaged in shrimp fishing	- Pink shrimp *F. duorarum* - White shrimp *Litopenaeus setiferus*	Unknown	Permanent closure of the *Términos* lagoon.	Unknown	100% exported to international market	Some fish resources are fished by both industrial and artisanal fisheries.

Suriname – finfish trawl and shrimp fisheries

Fleet	*Vessels / type of fishing*	*Targeted species and annual production (2011)*	*Bycatch / discards*	*Management measures*	*Employment on Primary level (estimation)*	*Markets (based on export in 2012 – in tons)*	*Remarks*
Industrial	25 shrimp trawlers	572 MT	80-90% of total catch	TEDs VMS Fishing ground from 15 fathoms and onwards Landing sheets on target species	Crew: 175 Office + Processing: 130	**Exports 50-60% of total production.** **USA**: 1,266 (Canada) **CARICOM**: 8,391 (T&T, Jamaica, Barbados, Netherlands Antilles) **EU**: 5,902 The Netherlands, Belgium, UK, Spain, Italy) **Others:** 840.37 Columbia, Peru,	BRD will be mandated from January 2016
Industrial	22 seabob trawlers	7 031 MT	15-16 % of total catch	TEDs and BRDs VMS Fishing ground between 10 – 18 fathoms Log sheets including information on bycatch	Crew: 154 Office + Processing: 315		Seabob fleet MSC certified whole fleet
Industrial	23 fish trawlers	28 622 MT	25-35 % of total catch	VMS Fishing ground from 15 fathoms and onwards Landing sheets on target species	Crew: 184 Office + Processing: ±800 (some companies also process fish from Artisanal fleet)		TED will be mandated from January 2017
Coastal fisheries Excluding Inland (from river mouth and upstream)	318 vessels			Fishing ground between the coast and isobath of 9 fathoms (= 16,641 m)			VMS are implemented from July 2014 .

Trinidad and Tobago – finfish trawl and shrimp fisheries

Fleet	*Vessels / type of fishing*	*Targeted species and annual production*	*Bycatch / discards*	*Management measures*	*Employment*	*Markets*	*Remarks*
Industrial / North-west, West, South	25 Gulf-of-Mexico double-rigged trawlers. Vessels range between 10.9 and 23.6 m, are 30 to 96 GRT and carry inboard diesel engines of 325 to 425 Hp, have communication equipment and may carry electronic fishing aids and refrigeration. These vessels each utilize a hydraulic double-drum winch and usually stay out for several days or weeks.	Data for the period 1988 to 2010 show landings (Tonnes): **Artisanal Fleet**: Minimum = 214; Maximum = 689; Average = 380. **Semi-industrial Fleet**: Minimum = 59; Maximum = 173; Average = 105. **Industrial Fleet**: Minimum = 312; Maximum = 721; Average = 448. **Shrimp** *(Litopenaeus schmitti, Farfantepenaeus subtilis, F. notialis, F. brasiliensis, Xiphopenaeus kroyeri*) and associated **groundfish** (e.g. *Micropogonias furnieri, Cynoscion jamaicensis*)	Estimated bycatch to shrimp ratio of 0.6:1. Logbook returns from the industrial fleet also indicated that approximately 66% of the total bycatch is discarded and this was often comprised of commercially important groundfish species. The estimated ratio of finfish to shrimp obtained from landing statistics for the industrial fleet for the period 1992-96 was 1.7:1	TEDs; Time closure (north coast of Trinidad outside of 2 nautical miles from the coast in the area west of Saut D'eau from 15 November to 15 January, between 6am and 6pm); diagonal stretched mesh of the trawl net must not be less than 3 inches (7.6 cm) when trawling for fish, and not less than 1.5 inches (3.8 cm) when trawling for shrimp, and chafing gear must cover not less than 25% of the codend; distance from land/10-fathom isobath; freeze on number of vessels in fishery.	128 on industrial trawlers.	Products sold locally include fresh-chilled shrimp, peeled, and breaded shrimp. Exports include fresh-chilled/frozen shrimp, whole, heads-off or peeled. During the period 1998 to 2010, over 90% of shrimp was exported to the CARICOM region with the remainder going to South America, Canada, United States and territories, European Union (EU) and territories, and others.	Production and market information not available, disaggregated by species. In addition to the 348 fishers directly involved in the trawl fishery, the shrimp and groundfish industry on the west and south coasts of Trinidad indirectly employs some 566 land-based individuals, with the majority of these workers (over 80%) operating on the west coast. Wild shrimp exports from Trinidad and Tobago have steadily declined from 163 tonnes valued at $TT10 million in 1998, to 13.5 tonnes valued at $TT0.4 million in 2010.

Trinidad and Tobago – finfish trawl and shrimp fisheries *(cont.)*

Fleet	*Vessels / type of fishing*	*Targeted species and annual production*	*Bycatch / discards*	*Management measures*	*Employment*	*Markets*	*Remarks*
Semi-Industrial (Stern drag) / West, South	10 fibreglass stern trawlers ranging between 9.3 and 12.2 m, with inboard diesel engines of 165 to 174 Hp. Each utilize a hydraulic winch to operate the net. Trip duration ranges from 24 hours to 1 week.	***See above.***	25 species of finfish in the bycatch from 14 families (Amos, 1990). The most abundant families were the Carangidae, Gerreidae, Lutjanidae, Sciaenidae, Triglidae and Portunidae. Approx. 60% of fin-fish caught was discarded. Bycatch to shrimp ratio was estimated at 12:1. Finfish to shrimp ratio was within the range of 5-10:1.	TEDs; Time closure as per industrial fleet; diagonal stretched mesh of the trawl net must not be less than 3 inches (7.6 cm) when trawling for fish, and not less than 1.5 inches (3.8 cm) when trawling for shrimp, and chafing gear must cover not less than 25% of the codend; distance from land/6-fathom isobath; freeze on number of vessels in fishery.	30 on semi-industrial trawlers.	***See above.***	***See above.***
Artisanal West, South	1,200 fiberglass or fibreglass-coated wooden vessels (pirogues) between 6.7 and 11.6 m, categorized as Types I and II. Type I trawlers are powered by one or two outboard engines ranging between 45 and 75 Hp each. Type II trawlers are powered by inboard, diesel engines of 90 to 150 Hp. Trip duration less than 24 hours.	***See above.***	70 species of finfish from 40 families as well as several species of portunid crabs (Maharaj, 1989). Commercially important fish species accounted for only 15-33% of the total finfish catch. About 80% of the finfish bycatch comprised juveniles belonging to the families Ariidae, Carangidae, Clupeidae, Engraulidae, Gerreidae and Sciaenidae. The bycatch to shrimp ratio was estimated at 15:1 and the finfish to shrimp ratio was 9:1. Approx. 94% of the bycatch of artisanal trawlers was discarded in 1986.	Diagonal stretched mesh of the trawl net must not be less than 3 inches (7.6 cm) when trawling for fish, and not less than 1.5 inches (3.8 cm) when trawling for shrimp, and chafing gear must cover not less than 25% of the codend; must operate outside of 1 nautical mile from the coast.	Total employed in artisanal trawl fishery = 190 76 employed on artisanal Type I; 114 on artisanal Type II.	***See above.***	***See above.***

APPENDIX 8: ENVIRONMENTAL AND SOCIAL REVIEW FORM

(for category C projects)[1]

PROJECT NAME	Sustainable management of bycatch in Latin America and Caribbean trawl fisheries (REBYC-II LAC) (GCP/RLA/201/GFF)

Project description and environmental and social impacts: The main thrust of the project is about introducing more environmentally sustainable fishing practices. The improvements to shrimp/bottom trawl fisheries and bycatch management included in Component 2 will be supported by sound and adequate institutional and legal frameworks, developed as required under Component 1, and by enhanced livelihoods for both men and women under Component 3.

Certification:

Project Category C	Yes	No
I affirm that I have performed an environmental review of this project and certify that the project conforms to the pre-approved list of projects excluded from environmental assessment and that the project will have minimal or no adverse environmental or social impacts. No further analysis is required.	**X**	

Title, name and signature of project Lead Technical Officer:

Fishery Industry Officer, Daniela Coswig Kalikoski
Fishery Industry Officer, Petri Suuronen

Date: 28/01/2015

Insert scanned signed PDF as icon here:

[1] [1] Please see FAO Environmental Impact Assessment – Guidelines for FAO Field Projects http://www.fao.org/docrep/016/i2802e/i2802e.pdf