



## **DIAGNOSTIC OF ORGANIZATIONS AND NEEDS IN THE FISHING COMMUNITIES OF THE MESOAMERICAN REEF SYSTEM**



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The opinions expressed in this document belong to the authors, and do not necessarily reflect the opinions or beliefs of the MAR Fund.

## Acronyms

AECI	Agencia Española de Cooperación Internacional (Spanish Cooperation Agency)
AGROCYT	Proyecto para la Reconversión Agroalimentaria, Ciencia y Tecnología, Guatemala (Project for Agricultural Food Conversion, Science and Technology)
AMASURLI	Autoridad para el Manejo de Río Dulce y Lago de Izabal, Guatemala (Río Dulce and Lago de Izabal Management Authority)
ANP	Área Natural Protegida (Protected Natural Area)
ASMINPANO	Asociación de Micro Empresarios de Pescadores Artesanales del Municipio de Omoa, Honduras. (Omoa Municipality's Artisanal Fishermen Micro-Entrepreneur Association)
ASOPELIV	Asociación de Pescadores de Livingston, Guatemala (Livingston Fishermen's Association)
ASOVEMEPO	Asociación de Vendedores del Mercado del Porvenir, Honduras (Porvenir Market Vendor's Association)
BANPESCA	Banco de la Pesca, México (Fishing Bank)
BFCA	Belize Fisheries Cooperative Association
BICA	Bay Island Conservation Association, Utila Honduras
CARICOM	Caribbean Community Market
CBCRM	Coastal Base Caribbean Resources Management
CEMA	Centro de Estudios del Mar y Acuicultura, Guatemala. (Sea and Aquaculture Study Center)
CESPAGOH	Centro de Servicios para la Pesca en el Golfo de Honduras, Guatemala. (Fishing-Services Center in the Gulf of Honduras)
CISP	Comittato per lo Sviluppo dei Populi, Italia.
COCODES	Consejos Comunitarios de Desarrollo, Guatemala (Community Development Councils)
COMPACT	Community Management of Protected Areas for Conservation, Belize
CONANP	Comisión Nacional de Áreas Naturales Protegidas, México (National Commission for Protected Natural Areas)
CONAP	Consejo Nacional de Áreas Protegidas, Guatemala (National Council for Protected Areas)
CONAPESCA	Comisión Nacional de la Pesca, México. (National Fishing Commission)
CCO	Cuerpos de Conservación de Omoa, Honduras (Omoa Conservation Bodies)

DIGEPESCA	Dirección General de la Pesca, Honduras. (Fishing General Directorate)
FADS	Fisheries Aggregated Device System
FDN	Fundación Defensores de la Naturaleza, Guatemala (Defenders of Nature Foundation)
FENAPESCA	Federación Nacional de Pesca, Guatemala. (National Fishing Federation)
FON	Friends of Nature, Belize
FONAGRO	Fondo Agroalimentario, Guatemala. (Agro-Food Fund)
FUNDAECO	Fundación para el Ecodesarrollo y la Conservación, Guatemala. (Foundation for Eco-Development and Conservation)
FUNDARY	Fundación Mario Dary Rivera, Guatemala. (Mario Dary Rivera Foundation)
GoH	Gulf of Honduras
GoH Project	Proyecto Manejo Sustentable de los Recursos Marino Costeros en el Golfo de Honduras, CISP-FUNDAECO-Unión Europea (Sustainable Management of Coastal and Marine Resources in the Gulf of Honduras Project)
IDRC	International Development Resources Centre, Canada
JADE	Proyecto Justicia Ambiental y Desarrollo con Equidad, Reino de los Países Bajos (Environmental Justice and Development with Equity Project)
JICA	Japan International Cooperation Agency
MAR	Mesoamerican Reef Region
MARN	Ministerio de Ambiente y Recursos Naturales, Guatemala (Ministry of the Environment and Natural Resources)
MBRS	Mesoamerican Barrier Reef System Project (CCAD-World Bank-GEF) (Proyecto SAM, in Spanish)
MODERPESCA	Proyecto Modernización de la Pesca, Honduras. (Fishing Modernization Project)
ODECO	Organización de Desarrollo Étnica Comunitario, Honduras. (Ethnic and Community Development Organization)
OSPESCA	Organización del Sector Pesquero y Acuícola del Istmo Centroamericano (Central American Fishing and Aquaculture Organization)
PMAIB	Proyecto Manejo Ambiental de las Islas de la Bahía, Honduras. (Environmental Management Project for the Bay Islands)
UNDP	United Nations Development Program
PRADEPESCA	Programa Regional de apoyo al Desarrollo de la Pesca en el Istmo Centroamericano (Regional Program to Support Fishing Development in the Central American Isthmus)



PROACTA-SAG	Switzerland Agency
PROARCA/COSTAS	Componente Costero del Programa Regional Ambiental para Centro América. US-AID (Coastal component of the Central American Regional Environmental Program).
PROFEPA	Procuraduría Federal de Protección del Ambiente, México. (Federal Environmental Attorney's Office)
PROGAL	Programa de Gestión Ambiental Local, Guatemala. (Local Environmental Management Program)
PROLANSATE	Fundación para la Protección de la Lancetilla y Texiguat, Honduras, (Lancetilla and Texiguat Protection Foundation)
PROYECTO GoH	Proyecto “Manejo Sustentable de los Recursos Marino Costeros en el Golfo de Honduras” CISP-FUNDAECO-UE (Sustainable Management of Coastal and Marine Resources in the Gulf of Honduras Project)
PROYECTO JADE	Proyecto “Justicia Ambiental y Desarrollo de Equidad, Reino de los Países Bajos” (Environmental Justice and Development with Equity Project)
RECOSMO	Región de Conservación Sarstún-Motagua, Guatemala. (Sarstún-Motagua Conservation Region)
SATIIM	Sarstún Temash Indigenous Institute for Management, Belize
SAGARPA	Secretaría de Ganadería, Agricultura y Pesca, México. (Livestock, Agriculture and Fishing Secretariat)
SEMARNAT	Secretaría de Medio Ambiente y Recursos Naturales, México. (Environmental and Natural Resources Secretariat)
TASTE	Toledo Association for Sustainable Tourism and Empowerment, Belize
TRIGOH	Alianza Trinacional del Golfo de Honduras (Tri-National Alliance for the Gulf of Honduras)
TURFs	Territorial use rights in fisheries
EU	European Union
UNIPESCA	Unidad de la Pesca y Acuicultura, Guatemala. (Fishing and Aquaculture Management Unit)
UPEDA	Unión de Pescadores del Atlántico, Guatemala. (Atlantic Fishermen's Union)
WWF	World Wildlife Fund

# 1. SUMMARY

The Mesoamerican Reef Fund –MAR Fund- is a newly-developed financial mechanism whose main goal is to protect the Mesoamerican Reef region —MAR— with a specific focus on coastal and marine protected areas in the region.

The MAR Fund financial mechanism is backed by the four founding funds operating in the countries that integrate the MAR region: Belize, Guatemala, Honduras, and Mexico. They are:

- Protected Areas Conservation Trust (Belize)
- Fundación para la Conservación de los Recursos Naturales y Ambiente (Guatemala) [Foundation for the Conservation of Nature Resources and Environment]
- Fundación Biosfera (Honduras) [Biosphere Foundation]
- Fondo Mexicano para la Conservación de la Naturaleza (México) [Mexican Fund for Conservation of Nature].

With the purpose of performing a diagnostic of the fishing communities in the region, MAR Fund hired consultants that would engage in a study of the organizational status and needs of fishing communities and fishing organizations in the region including unique characteristics, their history, their organizational situation (administrative, accounting, and financial elements), the relationships they have with local authorities and other institutions, and the type of exchanges they have with them. This diagnostic also includes species used, fishing areas, markets, training needs, and the historical management of their territories and/or marine species, as well as fishing concessions.<sup>1</sup>

One of the main objectives of this diagnostic study is to determine if there are ocean-right usufructs, since this is a core issue in the MAR Fund agenda and an expected output of this consultancy, in order to strengthen community management of fishing resources by means of local empowerment. To this end, the study performed on the various types of community marine-reserve models existing in the MAR region, as well as the study on how these methodologies and practices are being implemented in the rest of the world (Giannini, 2006) have been very useful as the base for prioritizing some previously-identified organizations as potential managers of their territories and fishing resources.

Concurrently with this study, an analysis of the legal framework on fishing and other related issues was undertaken in the MAR Region countries, in order to ensure that the actions that MAR Fund will implement are consistent with national legal frameworks.

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<sup>1</sup> See Annex 1—Survey Form.

## 2. INTRODUCTION

### 2.1 Background

There have been only limited efforts to analyze fishing issues in the Mesoamerican Reef region. Before the MBRS Project and the Mesoamerican Biological Corridor initiative there was no established space to integrate Mexico and Central America as was done with the Central American Fishing and Aquaculture Organization (OSPESCA in Spanish) through SICA.

The survey on fishing activities in the Central American Isthmus<sup>2</sup> was an initial approach to learn about fishing issues in the region. However, there is a disadvantage to this document: it addresses the data it gathered only from a “macro” viewpoint, so it only provides an overall vision of the fishing sector in the Central American Caribbean area, and it does not break down or detail data, which limits the analysis. Furthermore, this document places emphasis on the Pacific Coast, where the most important fisheries in the region are concentrated, with the exception of Honduras.

At the end of the 90s, TRIGO<sup>3</sup> was able to start a qualitative and perceptive approach regarding fisheries in the Gulf of Honduras by way of a project called *La voz de los pescadores* (Fishermen’s Voice), which developed a document gathering all important data for the three countries. It is considered the first integral and systematized approach to diagnose the circumstances prevailing in the region. Subsequently, the Management and Sustainable Use of Coastal Marine Resources in the Gulf of Honduras Project, developed by CISP-FUNDAECO-EU, was able to gather more detailed data by performing diagnostics in most communities in the Gulf of Honduras.

There are other valuable analyses that have been performed locally and that have contributed to learning about fisheries in the region, among them the following documents: “Fishery Guidelines to Manage Fishing in Bahía de Amatique”, undertaken with the support of PROARCA COSTAS and FUNDAECO, and “How to Achieve Greater Income through Sustainable Fishing”, developed by WWF, which focuses on lobster fishing in the MAR region.

### 2.2 Justification

The conservation challenges in the MAR region are the focus of the MAR Fund program, as in the development of a network interconnecting priorities of conservation areas (PCAs in Spanish) in the reef, from the northern-most area –the Yum Balam Reserve in the Yucatan Peninsula– to the southern-most area in the Honduran Caribbean coast, the Bay Islands. If the PCA network is adequately managed, fish stocks, habitats, aggregation sites, proper water and forest resource management, and recreational opportunities will be protected.

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<sup>2</sup> PRADEPESCA, 1997

<sup>3</sup> Alianza Trinacional del Golfo de Honduras (Tri-National Alliance for the Gulf of Honduras)

However, PCAs do not operate without facing threats. Generally, by creating an effective network, MAR Fund seeks to target issues that directly affect the integrity and the health of each one of the areas and their ecosystems, as well as the local empowerment of fishermen so that they improve management of their fisheries. In order to service artisanal fishermen and community fishing activities, MAR Fund is developing a program for community marine reserves.

This program will finance the promotion, designation, establishment, management and monitoring of community marine reserves and productive alternatives that can reduce impacts on fishing resources and generate additional income for fishing organizations in the MAR region.

An effective way to apply regulations and improve fishing practices is through local participation in resource management. If responsibility over resources is transferred directly to users, it will be possible to define the measures and to establish the responsibilities aimed at managing fishing resources and, furthermore, to make said management sustainable.

There are successful examples of communities participating in managing fisheries associated to coastal and marine protected areas. Some important examples are in the Baja California Peninsula in Mexico, and the Southwest Pacific in Asia (Fiji, Indonesia and the Philippines). This program will transmit these experiences to replicate the most successful methodologies and adapt them to MAR conditions.

One of the activities that is necessary before engaging in this program is to evaluate the organized fishing communities in the region and to determine what they will need in order to establish community marine reserves, the primary objective of this consultancy.

## **2.3 Objectives**

- **General Objective:**

To evaluate the level of organization of the different fishing communities in the four countries of the MAR and their potential to administrate community marine reserves, as well as the determination of support required by the fishing communities in terms of organizational strengthening.

- **Specific Objectives:**

- To identify the capacity building needs of organized fishing groups
- To prioritize the places and organizations where MAR Fund will implement its intervention seeking to establish community marine reserves.

### 3. METHODOLOGY

Community intervention or immersion developed in the region has been well described by groups engaged in agricultural and land-use activities, since this region has historically been used for agricultural purposes. Thus, the methodology to develop a program in coastal and fishing communities' needs combined environmental/marine/coastal approaches in order to establish appropriate contact with these communities.

Some documents, such as the Manual for Interventions in Fishing Communities, developed by the Republic of Colombia<sup>4</sup> or the recently-systematized *Socioeconomic Manual to Manage Coral Reefs in the Greater Caribbean*, also known as the SocMon<sup>5</sup> methodology, provide us with some tools to engage fishing communities that are difficult to reach because of their previous failed experiences with multiple consultation processes, which generally provided no feedback and yielded no results to improve the quality of their lives. These failed attempts have generated mistrust from those communities and have exacerbated their unwillingness to provide data and information.

We, therefore, consider that an important strategy to perform this work is to establish a strategic alliance with the General Manager of the Red de Pescadores del Caribe y Lago de Izabal (Caribbean and Lago de Izabal Fishermen's Network), who is very knowledgeable about the Gulf of Honduras (GoH) and whom the groups of fishermen trust.

The other two important aspects of the methodology to be developed were to design a semi-open survey that could reflect, through simple non-guided interviews, the situation of the fishing organization. Honduras and Mexico were defined as the priority areas for the Associate Consultant because these are areas that have already been surveyed, and because Mexican fishermen can be approached better with a "fisherman to fisherman" focus and with the support of the same main consultant who was to work in Belize and Guatemala.

Fieldwork was performed with groups and individuals by means of interviews and informal conversations, in order to obtain the concepts that would be included in the form.

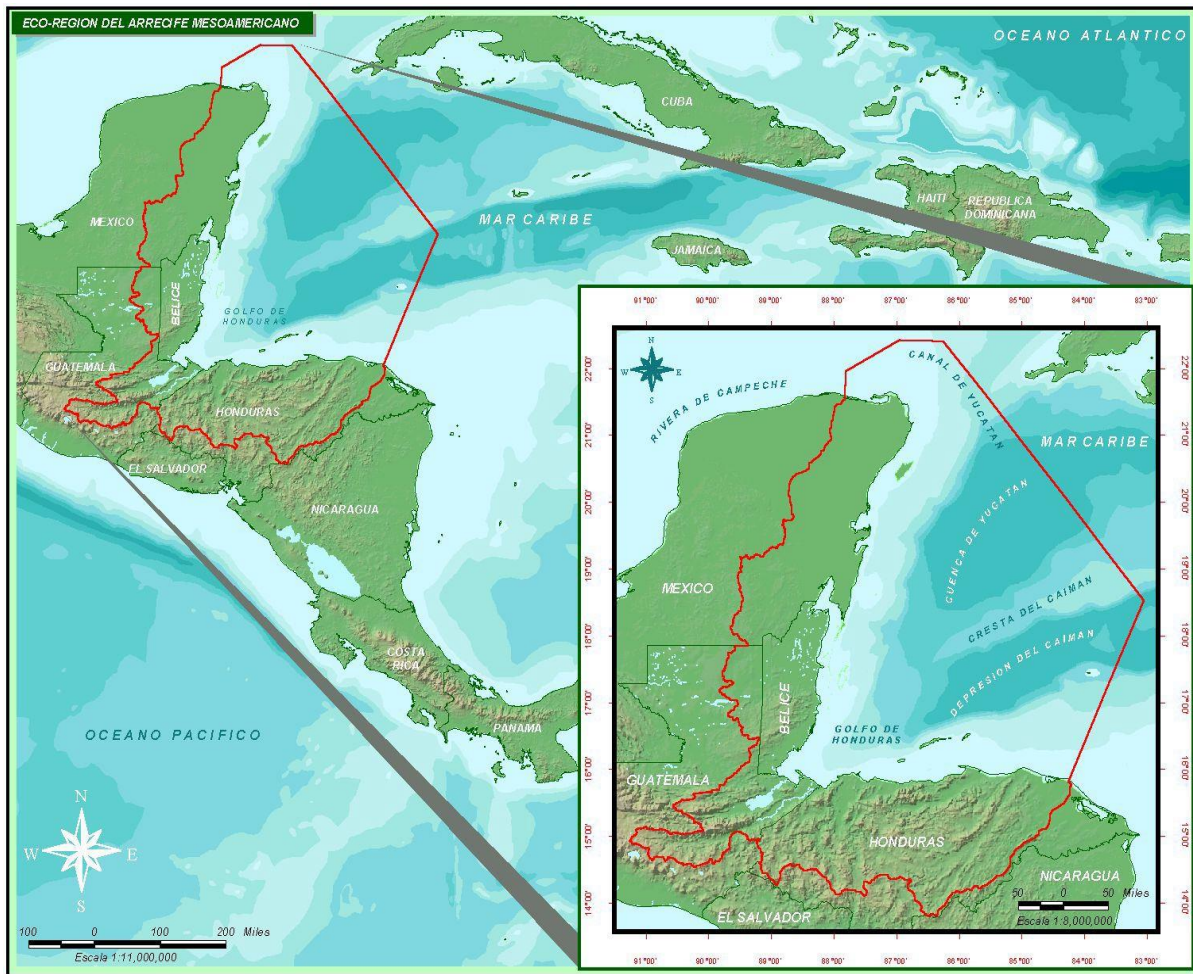
Subsequently, the use of the Quick Observation Methodology was defined. It allows us to obtain considerable information by simple observation, without "tiring" the person being interviewed. For example, in order to establish what fishing gear they are using, it is not necessary to ask about it; it can be determined by observing it and writing it into the form.

The observation and interview guides are included in the Annexes of this document. See Map 1 for the region in which the diagnostic was developed.

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<sup>4</sup> Intervention Tools for Marine and Coastal Areas. INPA, 2001

<sup>5</sup> Socioeconomic Manual to Manage Coral Reefs, IUCN, Australian Institute of Marine Science, NOAA. 2000.



**Map 1**  
**Study Area**  
**Source: MAR Fund**

Three focus groups were defined for field interventions:

- a. Fishing organizations and communities
- b. Governmental institutions
- c. Non-governmental institutions

Lastly, a list of possible contacts was defined in the four countries in order to send them an e-mail with the basic information about our visit, thus ensuring better support during our stay and increased coordination before our arrival.

## 4. RESULTS

### 4.1 Background

The region being studied is 1,000 Km long and, according to the data gathered and the estimations of the people interviewed, there are 11,410 fishermen, of which 4,932 (43%) belong to associations, and are distributed by country as follows: 2026 in Belize, 900 in Guatemala, 1000 in Honduras, and 1006 in Mexico.

It is estimated that the total of fishermen that do not belong to associations is 6,478 (57%), distributed by country as follows: 250 in Belize, 2500 in Guatemala, 2000 in Honduras and 1728 in México (including candidates and individual fishermen).

One of the most important results that are constant in the region is that there is an individual and second-tier organization system. This organizational system present in each country is more advanced in Mexico, especially evident in the 19 cooperatives that are grouped in the Confederación de Cooperativas Pesqueras de Quintana Roo (Quintana Roo Fishing Cooperative Confederation).

In Belize, the Belize Fisheries Cooperative Association —BFCA— is composed of six organizations; it is adequately developed and, essentially, represents that country's whole fishing sector.

In Guatemala, the Federación de Pescadores Artesanales de Guatemala (National Artisan Fishermen's Federation) —FENAPESCA— is an organization that is represented in the Caribbean area by the Red de Pescadores del Caribe y Lago de Izabal (Caribbean and Lago de Izabal Fishermen's Network). It was created 3 years ago and is presently constituted by 17 associated groups.

In Honduras, there is a Federación de Pescadores del Caribe de Honduras (Honduran Caribbean Fishermen's Federation), which represents a second-tier type of organization that, according to observations, is the weakest in the region.

The following types of organization are present in the target countries:

- Fishing cooperatives (in the 4 countries)
- Fishing associations (in the whole region, except Mexico)
- Fishing Commissions under the Community Development Councils [COCODES in Spanish] (in Guatemala)
- Councils (in Honduras)

In the whole region, there is a challenge faced by every group: they are not aware of and do not define the responsibilities and roles of the members of the Board of Directors and of the General Assembly. In addition, there are sub-groups with their own personal interests and there is apathy in regard to increasing the number of members in their organizations.

Lastly, almost 60% of the fishermen in the region do not belong to fishing organizations owing to different reasons, among them, social rivalries among groups, resistance to joining, lack of credibility in the individual fishermen within associations, and lack of the proper mechanisms, such as community or corporate licenses issued by the fishing authorities, that may promote association. Community licenses may discourage individual fishing, “compelling” fishermen to seek a way to associate, thus favoring the control and patrolling —and other aspects— needed for fisheries management. Consequently, this “phantom”, non-associative, fishing is one of the greatest challenges in the region and one that must be reduced and worked on.

## **4.2 Inter-Institutional Relations**

The main challenges found regarding the interaction among non-governmental, governmental and fishing organizations, with the exception of Mexico, are that fishermen groups are not clear about the role of NGOs as development agents and co-administrators of protected areas.

This fosters relations that are dependant on the degree of support –provided by community-development organizations or projects– to groups that are organized or in the process of being organized. Good support means good relations and vice versa. This is the result of poor information systematization by fishermen’s groups and their leaders, and implies ambiguity in qualitative concepts, since they depend on the memory, perception and interests of each leader.

## **4.3 Financial Issues**

In regard to financial issues, it was also observed that, except for some cooperatives in Mexico and Belize, seed capital and patrimonial funds are not a priority. Exceptions are some leaders in organizations such as the Cooperativa Langosteros del Caribe (Caribbean Lobster Cooperative) located in Chetumal, Mexico, for example. *Fishermen must be motivated in some way to become empowered and to establish their communal banks, generating their proper financial controls, such as accounting books and certificates attesting to profit deliveries, among others.* Organizations have no seed capitals, which results in a lack of coordination between fishing extraction and the possibility of impacting potential markets with required quality.

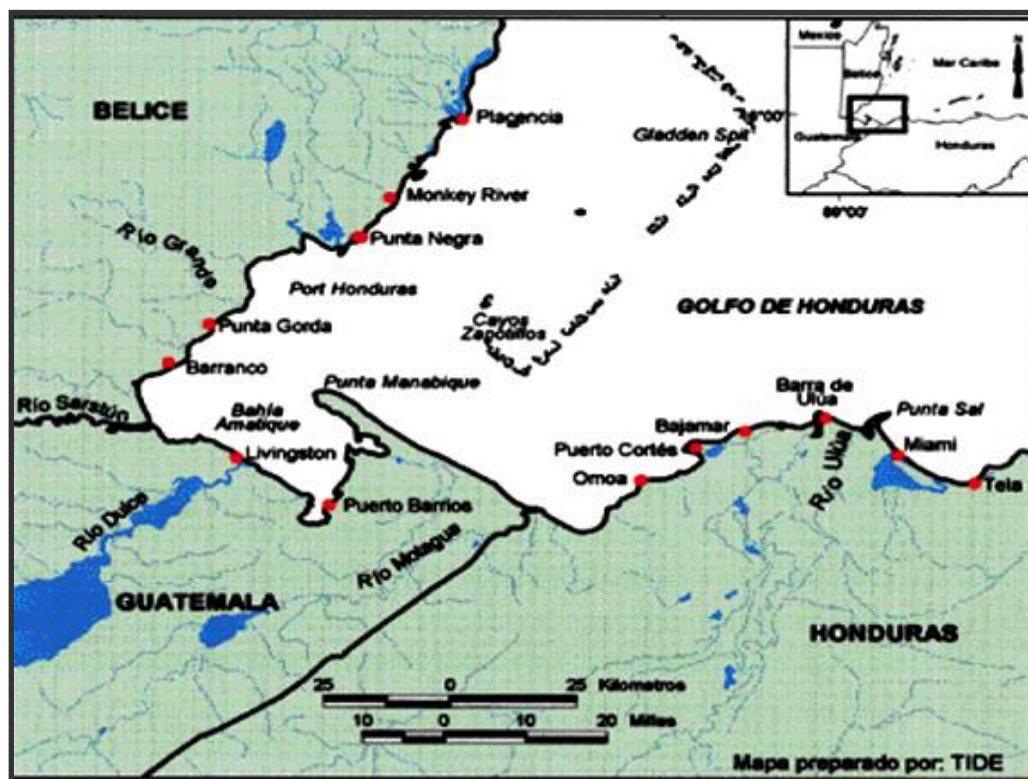
## **4.4 Marketing**

The most important species for fishing activities are lobster in Mexico, Belize and Honduras, Queen conch in Belize and Honduras, and scale fish and shrimp in Guatemala.

As far as marketing is concerned, except for some cooperatives in Mexico and Belize, which already sell and export their finished products to USA and UE markets, fishing groups are generally not interested in improving marketing for their products. This responds to various factors, among them the weak training processes, limited or no seed capital and storage and processing infrastructure. Above all, it is important and necessary to generate a change of attitude in the groups of fishermen, creating a business-type mentality.



Map 2 shows how near many fishing communities are to each other in the MAR region, especially in the 10,000 square km that make up the Gulf of Honduras, and how the commercial ties among them can be established in order to create better markets.



**Map 2**  
**Some fishing communities in the Gulf of Honduras (GoH)**  
**Source: *La voz de los pescadores* (Fishermen's Voice), Honduras**

## 4.5 Training

The need for training focuses on organization and cooperative strengthening; fishing administration; establishing communal banks; marketing, including all types of marketing chains; managing natural fisheries resources; project development and management, and the English language. This was specifically requested in Mexico.

Something that is worth noting about training is that most of the issues included in the previous paragraph have been included in training sessions provided by various organizations on many occasions; however, most times, they have not been implemented by group leaders or members. It is important to reflect on this, in order to find a way in which to optimize the support received by organizations.

In this regard, it is essential that training be provided parallel to productive, administrative and other kinds of processes. This may be the only way of putting the contents of training efforts into practice.

## **4.6 Fishing Co-Management**

As far as the historical use of fishing areas and ocean concessions or rights is concerned, only Mexico shows considerable progress in implementing the fishing concession format included in its Fishing Law. In Guatemala, fishermen developed an agreement that they called the “Gentlemen’s Pact”, which is the start of what could later be fishing co-management. Unfortunately, it has not been put into practice although it was recently incorporated into the set of regulations applicable to fishing in the Guatemalan Caribbean region. Owing to the pressure exerted by groups of fishermen, Honduras was able to establish a 3-nautical-mile area in which industrial activity is banned. This could be considered something nearing fishing co-management. In Belize, the attempts to incorporate fishermen’s groups into fishery management have yielded good results, since they have been empowered by the Fisheries Department in the processes to manage protected areas. Among these processes, it is important to mention the data fishermen provided to establish open and closed season, their participation in defining no-take zones, and adapting sustainable fishing methodologies promoted by various regional projects in the area.

## 5. THE BELIZE EXPERIENCE

### 5.1 Background

The history of cooperatives in Belize begins in the 1950's when two foreigners who owned fishing companies began exporting lobsters to the United States. In the early 60's local fishermen promoted the idea of cooperatives with the aim of establishing their own processing and marketing company, to reduce the gap between middlemen's prices, who were selling lobsters at US\$2.40 a pound, but were buying them at \$0.40.

Fishing cooperatives were first established at Icaco Key in Belize on September 5, 1960, when the *Northern Fishermen Cooperative Society Ltd.* was founded. At present, this cooperative continues to work and has offices in Placencia, Icaco Key and its headquarters are in Belize City,

Other cooperatives were established, such as the *National Fishermen Producers Cooperative Society Ltd.*, registered on April 29, 1966, and the *Sarteneja Fishermen Cooperative Society Ltd.*, established on July 2, 1968.

In 1970 the above-mentioned cooperatives began working together as the Belize Fisheries Cooperative Association –BFCA- that later was constituted by:

- *Southern Fishermen Cooperative Society Ltd. (1971)*
- *Central Fishermen Cooperative Society Ltd. (1973)*
- *Western Fresh Water Fishermen Cooperative Society Ltd. (1974)*
- *Barranco Fishermen Cooperative Society Ltd. (1980)*
- *Hopkins Fishermen Cooperative Society Ltd. (1983)*
- *Toledo North Fishermen Cooperative Society Ltd (1986)*
- *Independence Fishermen Cooperative Society Ltd. (1985)*

Since BFCA was established, it has managed to work in the following areas:

- a) Strengthening and maintaining close cooperation between cooperatives.
- b) Providing its members with information to avoid effects due to fishing market fluctuations, making special efforts to protect the producers' interests and to have relative control in terms of commercial over-fishing.
- c) Observing the regulations and laws, so they can be applied for the protection and preservation of the industry.
- d) Providing assistance to cooperatives in areas that could strengthen their productivity.

The consequence of all this has been the development of the following plans and achievements:

- Joint work between boat owners and fishermen in order to explore and demonstrate new fishing methods

- Publication of a monthly newspaper distributed to all fishermen, with information regarding fish distribution and fisheries. This is one of the best achievements and has been locally and internationally acclaimed.
- Education programs for fishermen of all levels belonging to the cooperative movement.
- Joint programs on marketing and derivative processing.

The fishing industry is the third foreign-currency generating activity in the country. The shrimp industry, in particular, has grown considerably in the past ten years, from 450,000 pounds in 1990 to 6.2 million pounds at present. A large part of this increase is due not to the extraction activity, but to the establishment of shrimp farming as a sustainable industry. This is due to the strategic geographic location of Belize, which provides it with easy access to the seafood industry of the United States, Mexico, and Europe.

Table one shows that there has been adequate management of Queen conch in the Belize area. This is the reason why its production has been maintained and it still maintains the stock under the maximum sustainable yield. This does not take into account the data for conch and lobster catches by Guatemalan and Honduran illegal fishermen, but the Fisheries Department objective is to obtain data of these volumes in order to incorporate them into their Fishing Management data. (Pers. Comm., Góngora 2006)

**Table 1. Conch Production (1977-2005)**

Year	Production (lbs.)	Year	Production (lbs.)
1977	592,792	1992	462,421
1978	521,283	1993	464,291
1979	456,812	1994	415,924
1780	363,197	1995	301,951
1981	333,067	1996	325,180
1982	370,819	1997	566,942
1983	445,612	1998	556,713
1984	523,479	1999	309,377
1985	413,692	2000	513,469
1986	257,352	2001	579,561
1987	291,194	2002	412,542
1988	314,600	2003	530,670
1989	244,971	2004	622,637
1990	369,210	2005	633,070
1991	458,389		

Source: Fisheries Department Annual Report, Belize, 2005.

Table two confirms that the two most important cooperatives in Belize are the *Northern and the National*.

**Table 2. Production of Whole Lobster and Lobster Tails per Cooperatives, as of 2005**

Cooperative	Quantity (lbs.)	
	Tail	Whole
Northern	173,198	12,046
National	269,937	31,725
Placencia	24,228	1,152
Caribeña	21,535	-
Río Grande	2,717.5	261.5

Source: Fisheries Department Annual Report, Belize, 2005

Table 3 confirms that the most important cooperatives in Belize, from the production point of view, are the Northern Fishermen Cooperative Society Ltd. and the National Fishermen Producers Cooperative Ltd. They gather together approximately 1,800 of the country's fishermen, from the 2,026 reported by the Fisheries Department, (Fisheries Department Annual Report, 2005). They are the only ones with export licenses and, therefore, collect the products from the rest of the cooperatives.

**Table 3. Number of Fishermen Members per Cooperatives in Belize**

Cooperative	Location	Producers	Non- Producers	Total
Northern	Belize City	373	342	715
National	Belize City	324	170	494
Caribeña	San Pedro	15	121	136
Placencia	Placencia Village	32	19	51

Source: Fisheries Department Annual Report, Belize, 2005

Table 4 shows the behaviour of the Belize fishing fleet.

**Table 4. Number of Authorized Vessels and Fishermen in Belize**

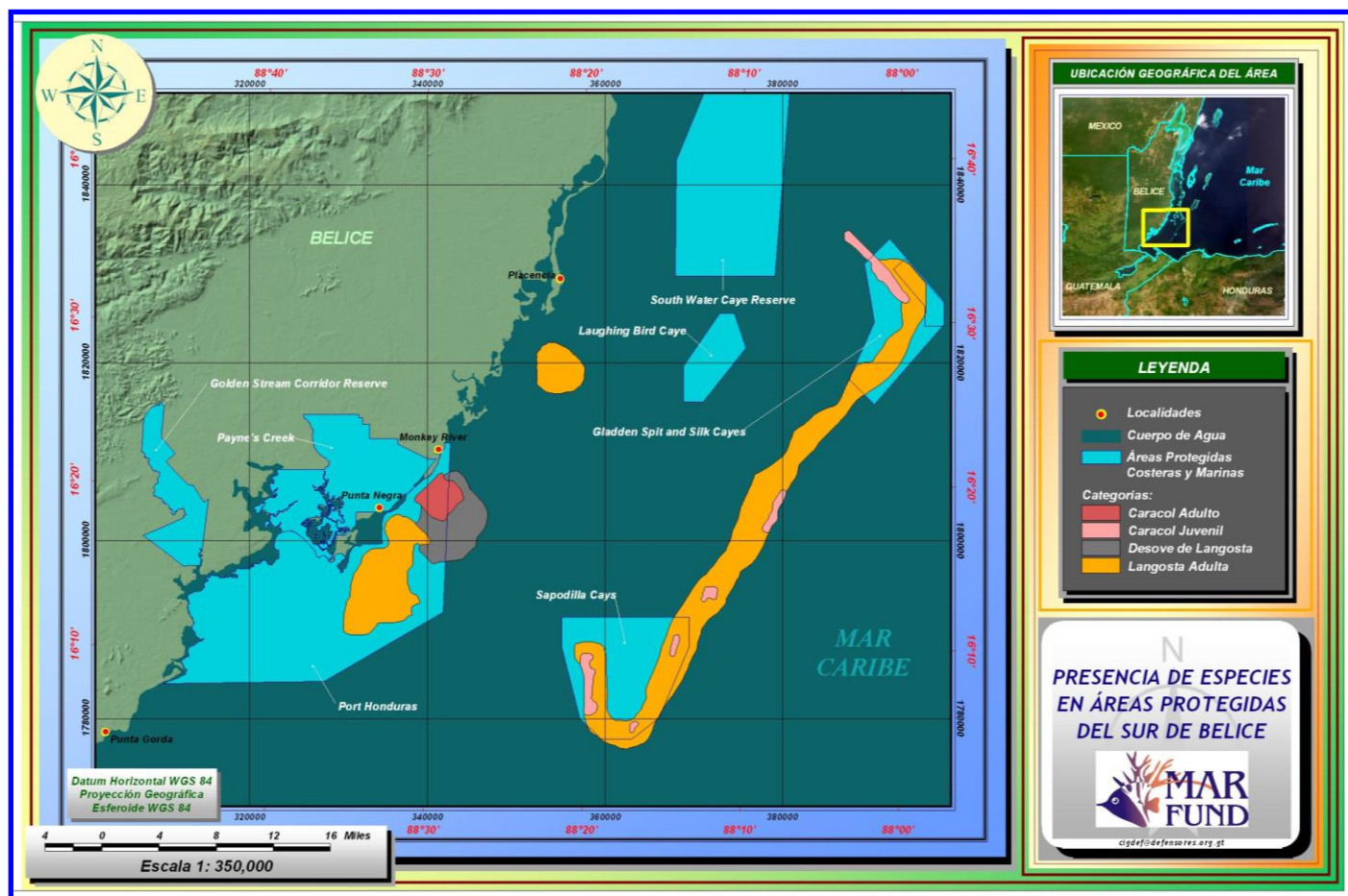
Year	1997	1998	1999	2000	2001	2002	2003	2004	2005
Fishermen	1359	1718	2137	1872	1707	1947	2009	1731	2026
Vessels	977	759	728	750	608	708	689	621	652

Source: Fisheries Department Annual Report, Belize, 2005

There are other fishing cooperatives and organizations with lower fishing volumes, such as the *Caribeña Producers Cooperative Ltd.*, the *Placencia Producers Cooperative Ltd.*, the *Río Grande Cooperative Society Ltd.*, the *Caribeña Cooperative Ltd.*, the *Monkey River Fishermen Association*, and the recently established *Punta Gorda Fishermen's Association*.

The *Northern Cooperative* includes fishermen from Sartaneja, San Pedro, Belize City, Hopkins, Placencia, Sein Bight and Riversdale. The *National* and the *Northern Cooperatives* do not buy whole scale fish because it is not profitable for them. That is why individual fishermen sell most of this product to hotels and restaurants.

Map 3 shows fisheries in the southern province of Belize, in fishing zones 3 and 6, showing aggregation sites for commercially important species, such as conch and lobster, as well as fishing areas and delimitation of protected areas.



**Map 3**  
**Lobster and Conch Fishing, Aggregation and Growth Areas**  
**in the Southern Zone of Belize**  
**Source: The Voice of Belize Fishermen**





**Photograph 1**  
**Typical vessel with a 6-12 day sailing range and the**  
**capability to carry 6 dugouts and 4 fishermen, used to catch lobster and conch.**  
**Source: <http://www.northerncooperative.com>**

## **5.2 Resources and Project Management**

In general, it can be said that the relationships among fishermen groups and governmental and non-governmental organizations are good, and that they go both ways at all levels.

Most small-scale fishing is done in the buffer zones of protected areas and in the waters between these areas and the Barrier Reef outside the “no take zones”, which in some cases have been marked with buoys, taking into account the ecological functions of the barrier reef, which contains the most productive areas.

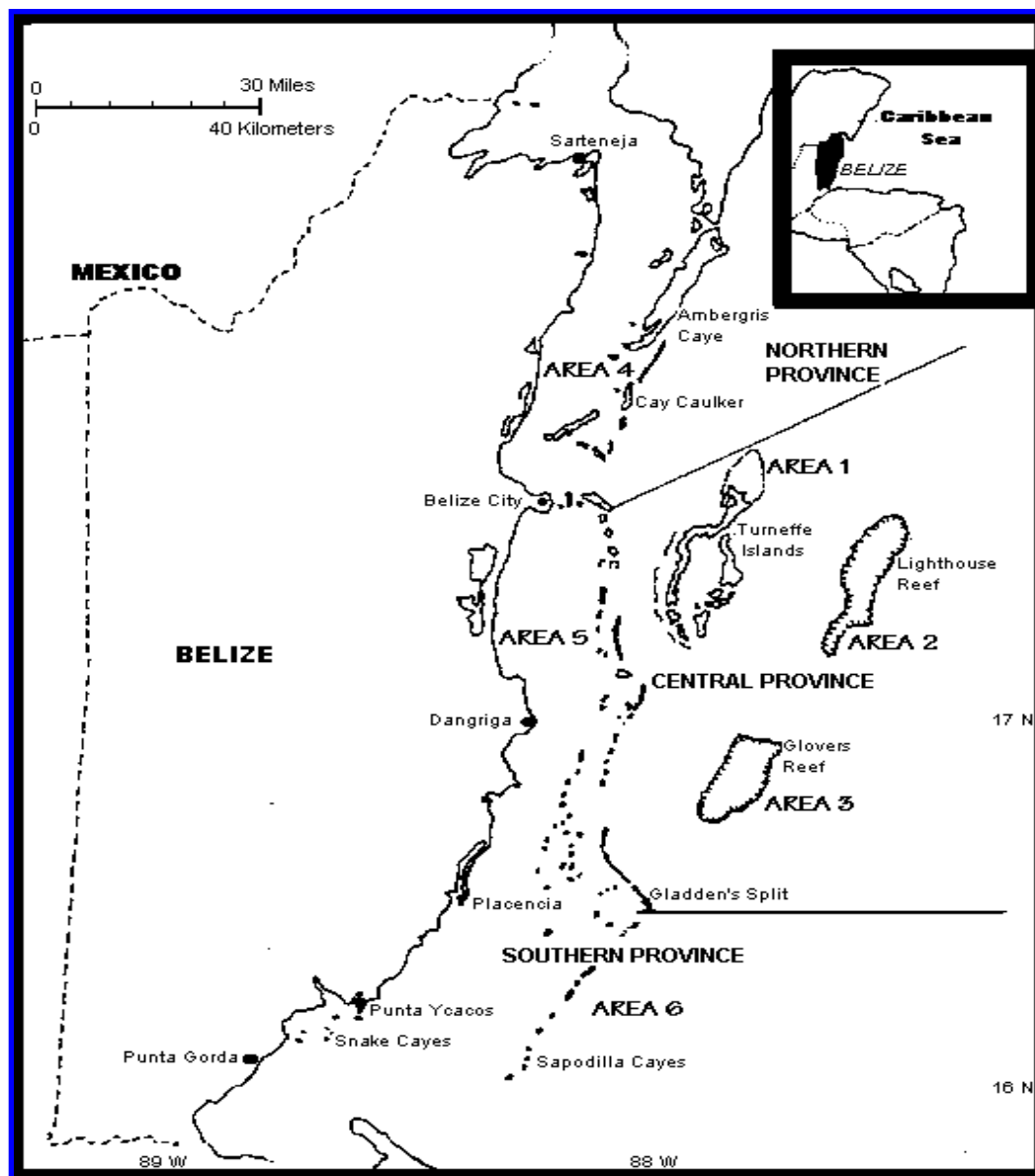
Fishing is sometimes undertaken outside the protected areas and the barrier reef, in open ocean waters, mainly to catch shark. Guatemalan and Honduran fishermen undertake this type of mostly illegal fishing. Belize fishing areas also include the three atolls *Turneffe Islands, Glovers Reef and Lighthouse Reef* (see map 4).

Map four shows the Belize fishing areas, which are divided in three provinces: Northern, Central and Southern, which, in turn, are divided into 6 zones:

- a) Zone 4 in the Northern Province
- b) Zones 1, 2, 3, and 5 in the Central Province, and
- c) Zone 6 in the Southern Province

Of these, the Central Province is the one where most fishing occurs, probably because it is the area with the greatest productivity. This is a result of the surge phenomenon produced by the cold-water current originating in the Cayman Trough and the barrier reef. This may be confirmed by the considerable number of whale-shark sightings, attracted by the high concentrations of zooplankton, which are a sure sign of these ocean phenomena and by fish aggregations, especially snapper and grouper, confirming that this a most productive fishing area.





**Map 4**  
**Belize Fishing Areas**  
 Source: Fisheries Department Annual Report

## 5.3 Fishing Management Issues

In Belize, protected marine areas are under the *Fisheries Department*, which may assign the area's management to other entities, mainly to NGO's.

This has given way to two kinds of relationships, one with NGOs and one with the Fisheries Department; they depend on the area's administrative status. If there are NGOs present, fishermen's relationships are with them and not with official government entities. This is not the rule, because there are cases in which declaring protected areas has directly affected the interests of fishermen groups, and has given way to problems among individual fishermen and the organizations, such as the TIDE case in southern Belize, which is the joint administrator of the Port Honduras Marine Reserve and Paynes Creek National Park.

It has been possible to partially introduce fishing management in Belize because organizations such as TIDE<sup>6</sup> and FON<sup>7</sup> have used appropriate approaches with local fishermen groups, who have engaged in sport-fishing activities, which are booming in Belize and have been a productive alternative to fishing. Ecotourism is another alternative. It includes kayaking, snorkeling, and other activities that have also been successfully implemented by TASTE<sup>8</sup> in the Zapotillos Cayes area.

The *Monkey River* group is the one that has achieved most progress in managing their fishery. With support from TIDE, they have almost eliminated fishing nets, engaging in other types of activities such as sport fishing and ecotourism. The new fishermen's association at Punta Gorda is also very interested in managing fishing activities along the coast of the Sarstoon-Temash National Park protected areas, jointly managed by SATIIM<sup>9</sup>. In addition to them, the Riversdale fishermen are also interested in managing their fishing in South Water Caye, the largest marine protected area in Belize.

Historical practices at some locations were described, such as those of the fishermen working at *Glovers Reef*. They are generally associated with the Garífuna fishermen, as in the case of the Barranco marine area. Here, fishermen have located the most important fishing areas and have marked and named them, so that they become part of their culture's conception of the world, as important sites for their daily life.

The *Fisheries Department* is also trying to manage protected areas with support from fishermen. They have tried alternatives such as the use of Fish Aggregation Device Systems –FADS- but they have had little success to date.

## 5.4 Organizational Issues

Except for the four large cooperatives that have offices, employees, and an established accounting-financial-administrative management system, the rest do not have any of this.

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<sup>6</sup> Toledo Institute for Development and Environment, Belize

<sup>7</sup> Friends of Nature, Belize

<sup>8</sup> Toledo Association Sustainable Tourist for Empowerment

<sup>9</sup> Sarstún Temash Indigenous Institute for Management, Belize

The four large cooperatives have a seed fund collected from members' production quotas, which vary in each organization. The amount of this contribution is based on conch and lobster pounds caught.

In general, fishermen are knowledgeable about community participation, and this is evident when considering the very good fishing organization existing in Belize aimed at supporting projects involving fishing resources.

## **5.5 Training**

In general, there are fewer fishing organizations in Belize's southern zone, and this is where more actions and training on organizational strengthening are needed, especially for the recently established fishermen associations of Punta Gorda and Monkey River. The thorniest issues include conflict resolution, addressing illegal fishing in Guatemala, Belize and Honduras, and the joint management of fishing resources. (See map 5)

## **5.6 Description by Organizations and/or Communities**

Below is a summary of the visits to the communities and organizations in which individuals were interviewed, from the South to the North of Belize.

### **a. Barranco Community:**

This was previously a strong Garífuna fishermen community that established the *Barranco Fishermen Cooperative Society Ltd.* in 1980. Barranco is the only Garífuna Community in the Toledo District, and they keep their artisan fishing tradition, fishing in dugouts propelled by oars and plastic or cloth sails. Fishermen began to progressively migrate to the United States and the tradition or need was lost, because remittances began to arrive for the few remaining fishermen. In addition to this, according to Barranco fishermen, Guatemalan shrimp fishermen are responsible for a decrease in catches and thus, the activity has become unprofitable for the fishermen. Only five of them fish at present.

At this time, they are no longer organized and they are incorporating into the Punta Gorda Fishermen Association. Their fishing sites are the coral patches in front of their community and the main species they catch are snappers, jack, Spanish mackerel and grouper.

### **b. Río Grande Cooperative**

This cooperative is located in Punta Gorda and markets mainly lobster tails. Currently, it is being led by Víctor Jacobs. This organization has had many leadership problems, especially administrative ones, so it has not been active on a regular basis; its activity is intermittent. This cooperative has approached some organizations that are members of the Guatemalan Caribbean Artisan Fishermen Network, such as the Garífuna Fishermen Association and the Río Dulce Cooperative R.L. to evaluate commercial transactions with them.

This cooperative does not work like the others in Belize; it mostly buys from independent fishermen; that is, it acts as a commercial agent. The fishing areas for the fishermen who sell to this cooperative are mostly in the Zapotillo Cayes Protected Marine Areas and Port Honduras. The cooperative has a small office and a weighing area, as well as seafront storage in the southern part of Punta Gorda. (See map 5). Their training needs are focused on strengthening their organization: entrepreneurial leadership, association skills, financial and accounting handling issues, management and administration, among others.

### **c. Punta Gorda Fishermen Association**

This is a group of fishermen that has just established their association, and they are waiting for it to become official. Armando Ramírez, former SATIIM employee, is the person promoting this initiative, along with Omar Gale of the COMPACT Project<sup>10</sup>. It is also being supported by SATIIM in an effort to establish a fishermen alliance or a bi-national fishermen association with FUNDAECO in Guatemala. The areas that need strengthening are: project management, organizational strengthening, conflict resolution, and management.

### **d. Monkey River Fishermen Association**

Daniel Castellanos, senior, is the president of the Money River Fishermen Association. He said that they need training on how to improve their fishing activities. They are a very small group of approximately 20 fishermen who formally organized about a year ago. This organization was established as a result of a small contribution provided by Ted Hoskins, member of a church boat from Maine, USA.

The fishermen work mainly in the Port Honduras protected area, whose establishment has not benefited some of its members, but has been positive for others. Such is the case of Eloy Cuevas<sup>11</sup>, a tourist operator for a local sport-fishing operation. Above all, the problems stem from regulations governing the fishing equipment that had been historically used in the area before the protected area was created. A project was developed by TIDE in order to exchange gillnets for sport fishing gear, thus eliminating gillnet fishing. It has not been possible to eliminate it completely; and this has forced TIDE to face challenges and change the way in which it works.

The products they obtain from their fishing activity are: skill fish, Spanish mackerel, snapper, snook, “yalatíel”, lobster, and conch.

The Monkey River case is unique because the president of the Association was born in Livingston, Guatemala, and this is a positive factor in a fishing area where both Guatemalan and Belizean fishermen work illegally. The former use illegal fishing equipment and work in a foreign territory, and the latter, to a lesser degree, also use fishing equipment, such as gillnets, which are not allowed in protected areas.

These two are the most serious challenges facing TIDE, the protected area administrator.

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<sup>10</sup> Community Management of Protected Areas for Conservation

<sup>11</sup> Now member of the Monkey River Fishermen Association

**e. Punta Negra Community**

This is a small community near Monkey River, with about 20 fishermen, half of whom are ship skippers who are trying to engage in sport fishing and ecotourism with the support of TIDE. To that end, they are building an ecological hotel at this location.

These fishermen are currently in the process of becoming members of the Punta Gorda Fishermen Association. They use gillnets and funnel nets to fish and they catch lobster, conch, snapper and grouper.

**f. Placencia Fishermen Cooperative**

On June 23, 1962, a group of Placencia fishermen was registered as *The Placencia Producers Cooperative Society Ltd.* This is one of the cooperatives that provide most of the scale fish for national and export markets, along with the Río Grande and Caribeña Fishermen Coops.

Among the species they catch the most common are sea basses and red snappers; in the year 2001, they made up 6% of the country's total production, which was sold to the *Northern or the National Cooperatives* for export. Another of the main objectives of this cooperative is to purchase lobsters from other fishermen. Jack Young, the founder of the Placencia Cooperative stated that there is no adequate oversight during closed seasons and that there is no training in resource management.

Some of the fishermen consider that declaring protected marine areas has helped them, and they believe that the decrease in fishing is due mainly to foreigners who fish illegally and to contamination from aquacultural (shrimp farming) and agricultural activities.<sup>12</sup>

**g. Riversdale Community**

This is another small community in the Belizean coast, whose inhabitants are fishermen and members of the *Northern and National Cooperatives* in Belize City. Their fishery focuses mainly on lobster and conch in fishing zone No. 5. (See map 4)

**h. Hopkins Community**

Another Garífuna community located between Placencia and Dangriga, engaging mainly in catching lobster and conch. Its fishing area is Glovers Reef and its catches are sold to the Placencia Cooperative, of which they are members.

**i. Dangriga Community**

It is the most important Garífuna community in the country, where 63% of the 8,500 Belizean Garífunas live. This is a group of fishermen that would like to return to their traditional fishing method: funnel nets that they used some 25 years ago. In this type of

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<sup>12</sup> Personal communication with Jack Young, founder of the Placencia Cooperative, 2007

fishing, cages are thrown into the ocean to catch the different species, mainly scale fish and lobster.

A group of approximately 15 fishermen, whose leader is Eugene Hernández, was the subject of an anthropological study by the project supported by the International Development Resources Center –IDRC<sup>13</sup>. At present, this group is not part of the Northern Cooperative of Belize, and they fish independently in the reef in front of Dangriga, since their boats have limited sailing ranges. The species they fish are snapper, Spanish mackerel, jack, grouper, snook, tarpon, and barracuda.

The most important issue in this study is the effort undertaken to revitalize traditional fishing techniques used by the Garífunas: *Maciwa* and the *Wamaredu*. The former is a type of cage to catch crabs (*Callinectes sapidus*), and the latter is used to catch fish. This fishing equipment is very selective, and it would be worthwhile studying it further in order to re-introduce it as a way to provide quality livelihoods to the Garífuna communities within the MAR region.

Fishermen of this community fall into four categories:

- The first type of fishermen are those 10 to 15 individuals working about 2 kilometers from the coast in oar dugouts, and arriving in port at 8 o'clock in the morning. Their fishing resembles that of the Livingston Garífuna fishermen.
- The second type are fishermen who use gillnets. This group tries to coordinate its arrival with market hours, between 7 and 9 a.m., which may be considered as an advantage for their activities. They also sell to middlemen who take the product outside of town. This group is made up of legally established immigrants who have arrived from Guatemala and Honduras.
- The third group is made up of conch and lobster Garífuna and non-Garífuna fishermen who sell to Cooperatives.
- The fourth group is composed of some ten fishermen who work as tourist guides in the sport fishing industry, offering tours to the keys.

There is a total 40 fishermen in the area, some of whom are in the early process of organizing as a Garífuna group, while others already belong to the Cooperatives in Belize City.

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<sup>13</sup> This study was led by Dr. Joseph Palacio, within the framework of the Caribbean Base Coastal Resources Management –CBCRM- Regional Program, in conjunction with the CARICOM Fisheries Unit based in Belize.



**Photograph 2**  
**Typical fishing boats used in Belize**  
**Photo: Hugo Hidalgo**

**j. Caribeña Producers Cooperative Society Ltd.**

It operates in the San Pedro Community in Ambergris Caye. It was created on March 1, 1963. It currently has 165 members. They have improved their infrastructure for storage and marketing of fishing products. Regarding fisheries management, as with most Cooperatives in Belize, they respect minimum sizes, adequate use of fishing gear, closed seasons, and they participate in management activities implemented by the administrators of the MPAs.

The group captures mostly lobster, but they also sell Queen conch and grouper filets. They fish in the Central Province.

Their expectations are to maintain their capture quotas, although they are currently involved in tourism activities.

**k. Sartaneja Community**

This community is in the northern zone of Belize, neighboring the Mexican state of Quintana Roo, in Chetumal Bay. Its fishermen are members of the *Northern Cooperative* and engage mostly in lobster and conch fishing. According to map No. 4, their fishing area is No. 4, but they also go into the central province and sometimes all the way to zone 6 in the southern province.

**l. Northern Cooperative Ltd.**

This is one of the two most important cooperatives in Belize and one of the two that engage in exporting their product. Membership quotas are 200 lbs. of conch and 500 lbs. of lobster per year. It is composed of a committee of 7 directors, 4 of whom are reelected each year to provide continuity to the process. There is a trial period of 2 years for a new member to be admitted.

According to its president, there are problems with the export quotas authorized for each cooperative and they perceive it may be political. They agree with the establishment of protected areas. This cooperative, as the others, is overseen by the *Fisheries Department*, as to its quality control system and its conch and lobster quotas.



**Photograph 3. Typical Shrimp Boat in Belize<sup>14</sup>**

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<sup>14</sup> The only three shrimp boats in Belize are owned by the Northern Cooperative, and their fishing area is the central province in Belize bordering the GoH. They are supplied by the port in Roatán.



Table 5 contains important data on the fishing organizations that are considered the most advanced in their organization and management.

**Table 5. Summary of the Fishing Organizations in the Belizean Caribbean Region**

Organization	Years of Existence	Total Number of Members	% Aprox. of Fishermen Not Members	Expectations	Projects undertaken	Conflicts	Fishing Area (PA, TURF, Others)	Marketing	Activities Undertaken Focusing on Fishing Management
1 Northern Cooperative	47	715	10%	Obtaining export quotas	Improving marketing and fishing processes	Political, resulting from quotas	North and central fishing provinces	Direct export	Control of minimum sizes in catches, appropriate use of fishing equipment and gear, respect for closed seasons, involvement in management activities carried out by MPA administrators
2 National Cooperative	40	494	10%	Maintaining their catch quotas	Marketing and fishing-process improvement	Political, resulting from quotas	North and central fishing provinces	Direct export	IDEM
3 Caribeña	44	136	5%	Maintaining their catch quotas	Infrastructure construction for storage and process of fishery products.	-	North and central fishing province	Local	IDEM
5 Placencia Cooperative	25	51	5%	Improving their processing infrastructure	Improving their marketing and fishing processes	-	Central fishing province	Local	IDEM
6 Río Grande <sup>15</sup>	20								No
7 Monkey River Fishermen Association	1	20	5	Being able to manage fishing in PA	Obtaining funds to establish an association.	Obtaining fishing concession from TIDE and Fisheries Dept.	Port Honduras National Park	Local	IDEM, changing non-selective fishing equipment

<sup>15</sup> This cooperative is working temporarily, so it was difficult to obtain data on its operation.

## 6. THE GUATEMALA EXPERIENCE

### 6.1 Background

Fishing was first organized in the Guatemalan Caribbean area when groups of Garífuna fishermen established the Cooperativa Nuevo Livingston (New Livingston Cooperative) in 1942. The next organizational endeavor took place in the seventies, when the Cooperativa Río Dulce, R.L. (Río Dulce Cooperative) was founded. Both initiatives were short lived. However, the Cooperativa Río Dulce resurfaced in the nineties with support from FUNDAECO.<sup>16</sup>

Subsequently, at the end of the nineties, also with FUNDAECO support, the first organized fishermen groups were established. These were the Comité de Sarstún (Sarstún Committee) and the Comité de Trasmalleros (Trammel-Net Fishermen Committee) in Livingston. At that time, the Unión de Pescadores del Atlántico (Atlantic Fishermen Union) —UPEDA—, whose activities were centered on capturing anchovies (*Anchoa liolepis*), was also established. Its beginnings are rooted on the problem that fishermen had when the government office in charge of fishing administration banned anchovy fishing.

Some ideas on second-tier fishermen's association and socialization stem from the workshops promoted by FUNDAECO-Costas and a workshop on co-management supported by the MBRIS Project in Puerto Barrios in 2003.

At the start of 2004, the Red de Pescadores del Caribe y Lago de Izabal (Caribbean and Lago de Izabal Fishermen's Network) of Guatemala was founded. At present, it is composed of 17 groups. This group was established during the "Fishing Facing the Future" workshop, taught with the support of the Gulf of Honduras Project (EU-FUNDAECO-CISP). The average number of members in these groups ranges from 15 to 85, and at present, there are four other groups awaiting their legalization in order to join the Network.

Fishermen in the Guatemalan Caribbean area who participate in some kind of association add up to approximately 900. According to FUNDAECO-Costas estimates, fishermen number approximately 4,000, including those who engage in subsistence fishing activities. There are other estimates showing different data; for example, the PRADEPESCA 1997 report mentions 2,700 fishermen, while UNIPESCA<sup>17</sup> only reports 2,000 fishermen for the year 2000. This would seem to indicate that there was a decrease in the number of fishermen, but it could be attributed to PRADEPESCA's including subsistence and continental fishermen in its figure. Lastly, TRIGOH-FUNDAECO, in its document *Fishermen's Voice*, mentions 1,500 fishermen in the area in the year 2000, not including the Río Dulce and Lago de Izabal areas.

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<sup>16</sup> Fundación para el Ecodesarrollo y la Conservación, Guatemala. (Foundation for Eco- Development and Conservation)

<sup>17</sup> Fishing and Aquaculture Management Unit, Ministry of Agriculture, Guatemala

## 6.2 Project and Resource Management

In general, the relationships of organized fishermen's groups with NGOs have improved, and have changed from a vertical confrontation to an attitude that promotes receptivity, dialogue, and alliances.

In the case of relations with government entities, fishermen and organized groups keep a low profile and are distrustful of UNIPESCA, which has an office in Livingston and must work in the whole Izabal region. This office has only two technicians—one in charge of artisan fishing and the other one responsible for control and patrolling—and a ship skipper.

There are two UNIPESCA technicians in charge of the Lago de Izabal; they are headquartered in AMASURLI<sup>18</sup> and Mariscos, in the Los Amates municipality. Entities such as MARN have a very poor presence and CONAP<sup>19</sup> acts among fishermen only by presiding over local protected area executive councils, which are bodies created by laws.

FUNDAECO has been working on fishing issues in this area for more than 10 years, and we consider it is the organization that has been able to establish the closest links with organized and non-organized fishermen, in addition to the support provided to the Network to undertake new projects seeking its strengthening and self-management. The area attracting the greatest fishing efforts is the Amatique Bay, followed by Río Dulce and Lake Izabal. Only the communities located near the ocean in Punta de Manabique engage in ocean fishing.

The case of Amatique Bay in Guatemala is a very interesting one. Even though there had not been any protected marine and coastal areas until 2005, when Punta de Manabique and Sarstún were declared as such, these areas had already received support from FUNDAECO and, more recently from FUNDARY, to improve their management. FUNDAECO has been providing assistance to the fishing sector since 1996, promoting the first organized fishing structure by way of the “Gentlemen’s Pact”<sup>20</sup> (see Map 8).

This pact was contained in a notarial certificate issued by the group of fishermen belonging to the Río Dulce R.L. Cooperative, the trammel-net fishermen from Livingston and the Comité de Sarstún (Sarstún Committee). With the support of the Livingston Port Captain’s Office, they agreed to establish a space for open dialogue in which each party stated the kind of fishing they engaged in, and they decided to reduce the conflicts in the area by establishing a zoning system in Amatique Bay. Therefore, three temporary fishing zones were established for two types of equipment: drift nets and gillnets. This effort entailed many benefits for the communities (see maps 5 and 6).

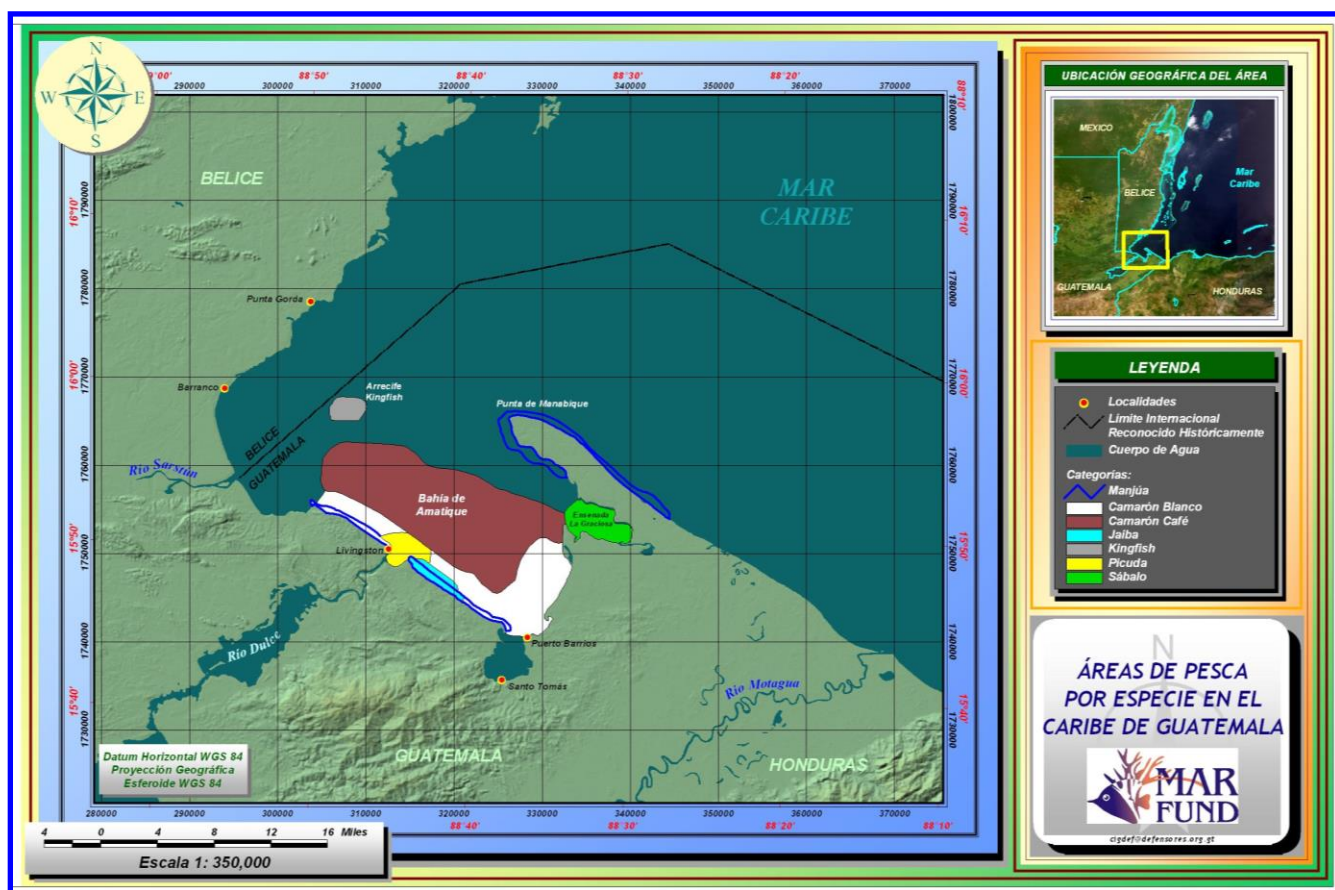
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<sup>18</sup> Autoridad para el Manejo Sostenible del Río Dulce y Lago de Izabal (Río Dulce and Lago de Izabal Management Authority), MARN, Government of Guatemala

<sup>19</sup> Consejo Nacional de Áreas Protegidas, Guatemala (National Council for Protected Areas)

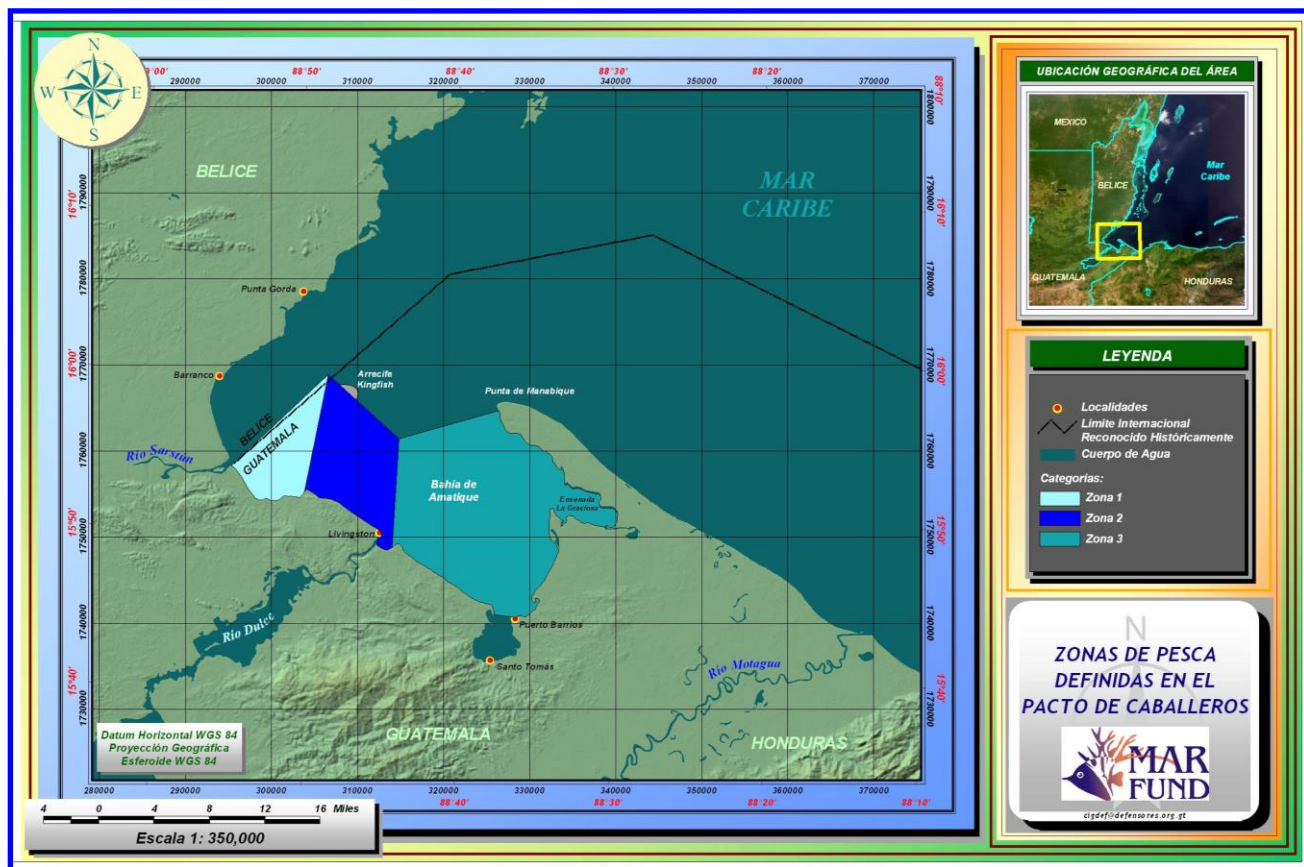
<sup>20</sup> In 1996, as a result of a scaling-up of the conflict among fishermen using gillnets and those using shrimp drift nets, this tool to partially organize fishing was put forward by the Governor’s Office and other local organizations, but especially by the group of fishermen and the Port Captain’s Office.

Map 5 shows how main catch is distributed in Amatique Bay.



**Map 5**  
**Fishing areas by species in the Guatemalan Caribbean Area**  
**Source: *Guatemalan Fishermen's Voice***

Map 6 shows the fishing zones defined by fishermen by means of the notarial certificate they issued and which they named "Gentlemen's Pact". Three areas are defined as: Area #1: Shrimp boats will be allowed to fish only from August 15 to September 30; Areas #2 and #3: fishing equipment such as trawling nets and gillnets will be rotated every week; Sunday will be the day to change over. Fishermen entered into this agreement in order to settle the growing conflict resulting from the decrease in shrimp captures during daytime and shifting the activity to nighttime, when they interfered with the gillnets that were used during the night.



**Map 6**  
**Fishing Zones established according to the Gentlemen's Pact**  
**Source: *Guatemalan Fishermen's Voice***

This tool was made official when it was included into the National Set of Regulations Applicable to Fishing in the Guatemalan Caribbean Region, which is part of the Fishing Law. Subsequently, a project was undertaken with the group of Garífuna fishermen, with support from FUNDAECO and UNIPESCA, to perform a diagnostic and to establish a mechanism to protect and co-manage the coral patches in the bay, especially in those places where Garífuna fishermen have historically fished.

These studies determined that low coral patches were the best places to start the municipal marine reserve project that will be co-managed by the Asociación de Pescadores Garífunas (Garífuna Fishermen Association).

Recently, when the Comité de Sarstún (Sarstún Committee) became a formal association, fishermen have expressed their interest in having the management of *Fishing Zone #1* implemented, as defined by the Gentlemen's Pact (see maps 7 and 8). Up to now, said management has been accomplished by placing mangrove branches on the bottom of the bay with two aims: the first one, to create snook aggregations, and the second one, to prevent trawling to put a stop to shrimp-boat activity.

The Red de Pescadores del Caribe y Lago de Izabal (Caribbean and Lago de Izabal Fishermen's Network) has progressed considerably in the past few years owing to the support of various local and international organizations, which have provided most groups with financial and technical support so that they can develop sustainable-development projects either totally or partially.

## **6.3 Marketing**

Marketing in the Guatemalan Caribbean area is accomplished by means of middlemen who collect products, who are known as “canasteros”<sup>21</sup>. This method is still being used even though a Gulf of Honduras Fishing-Services Center —CESPAGOH— has been established. This center includes a collection center and a processing plant that were built with the support of the European Union, CISP<sup>22</sup>, JICA, FUNDAECO, the Livingston Municipal Government, and the Spanish International Cooperation Agency —AECI—. However, this infrastructure still needs essential seed capital and some construction in order to be 100% ready to operate.

## **6.4 Organizational Issues**

All the organizations constituting the Red de Pescadores del Caribe y Lago de Izabal (Caribbean and Lago de Izabal Fishermen's Network) in Guatemala are legal entities. However, they, just as Honduran organizations, are not using the proper accounting, financing and administrative procedures, or use them incorrectly.

In regard to seed capital, some organizations have tried to implement low monthly member fees to raise capital, but some time will have to elapse before they have the seed capital they need to establish marketing operations at an organization level. Presently, marketing is being done individually, until enough seed capital is raised in the mid-term.

## **6.5 Training**

Organizations in the Guatemalan Caribbean area have implemented systematic training processes for more than 5 years; productive hours have been invested in learning about important issues for their organization and their empowerment. Unfortunately, they have not applied the practices that they have learned to their work, and it will be necessary to strengthen said practices. Consequently, specific training in the following topics is recommended:

- Leadership and Organizational Strengthening
- Project Development and Management

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<sup>21</sup> Agents in the Puerto Barrios and Livingston area. An example is the El Manatí fishery in Río Dulce; in other instances, agents come directly to communities, as is the case with the Barra Sarstún village, where other agents are currently working.

<sup>22</sup> Comittato per lo Sviluppo dei Populi



- Marketing
- Fishing Biology Issues Adapted to Protected Areas
- Establishment of Communal Banks

## **6.6 Description according to Organizations and/or Communities**

Following is a detail of the organizations that were visited, following a West to East route:

### **a. Asociación de Pescadores de Barra de Sarstún**

This organization is located in the Barra Sarstún village, bordering with Belize. This group was established with support from FUNDAECO at the end of the year 2000, when the Comité de Pescadores de Sarstún (Sarstún Fishermen Committee) was constituted. This committee was trained during its first years on financial, administrative, and technical management of fish species issues. Unfortunately, due to several causes, this committee dissolved and the organization is no longer operating; thus, much of the training was not put into practice.



**Photograph 4**  
**Typical Q'eqchi' fishing in Sarstún, Guatemala**  
**Photograph by Hugo Hidalgo**

Subsequently, in 2006, with support from FUNDAECO –as co-administrator of the Reserva de Usos Múltiples Río Sarstún (Multiple-Use Río Sarstún Reserve)–, the Asociación de Pescadores de Barra de Sarstún (Barra de Sarstún Fishermen's Association) was established. At the beginning of 2007, only the legal capacity for the group was pending in order for it to officially join the Fishermen's Network, in which it already participates.

Most of these fishermen are Q'eqchi'. The community is located in the area bordering with the Toledo District in Belize, separated from Guatemala by the Sarstún River. The Barra de Sarstún fishing organization has also been supported by the SATIIM organization, which has established a bi-national council in which two Sarstún fishermen participate. The organization presently has 89 members, from the original 107 founding members.

The most important expectations within this group are based on: 1) being able to manage the fishing area assigned to them by the Gentlemen's Pact contained in the Fishing Set of Regulations, in order to prevent shrimp trawling; 2) to reach an agreement with Belize's Fisheries Department in order to continue their fishing activities in the bordering area and to make their fishing permits official. The group is just starting and it has cooperated with FUNDAECO in implementing a project to establish fish aggregation devices. They engage in non-specialized and multi-specific artisan fishing. They use 9-foot long wooden dugouts with oars, and fiberglass boats up to 25 feet long with outboard motors from 15 to 75 HPs.

Their main fishing equipment is gillnets for snook with a 6-inch mesh light, *chango*-type trawling nets, nets for shrimp, nets for Spanish mackerel and jack; bottom fishing lines and traps for blue crab and prawns. Its fishing area is mainly the Río Sarstún and the zone bordering with Belize, in addition to the fishing areas historically used by them on the Belizean side. The product of their fishing activities is collected mainly by 5 persons, most of whom are non-residents; occasionally, buyers from Livingston come to the area, especially during the January-April fishing season.

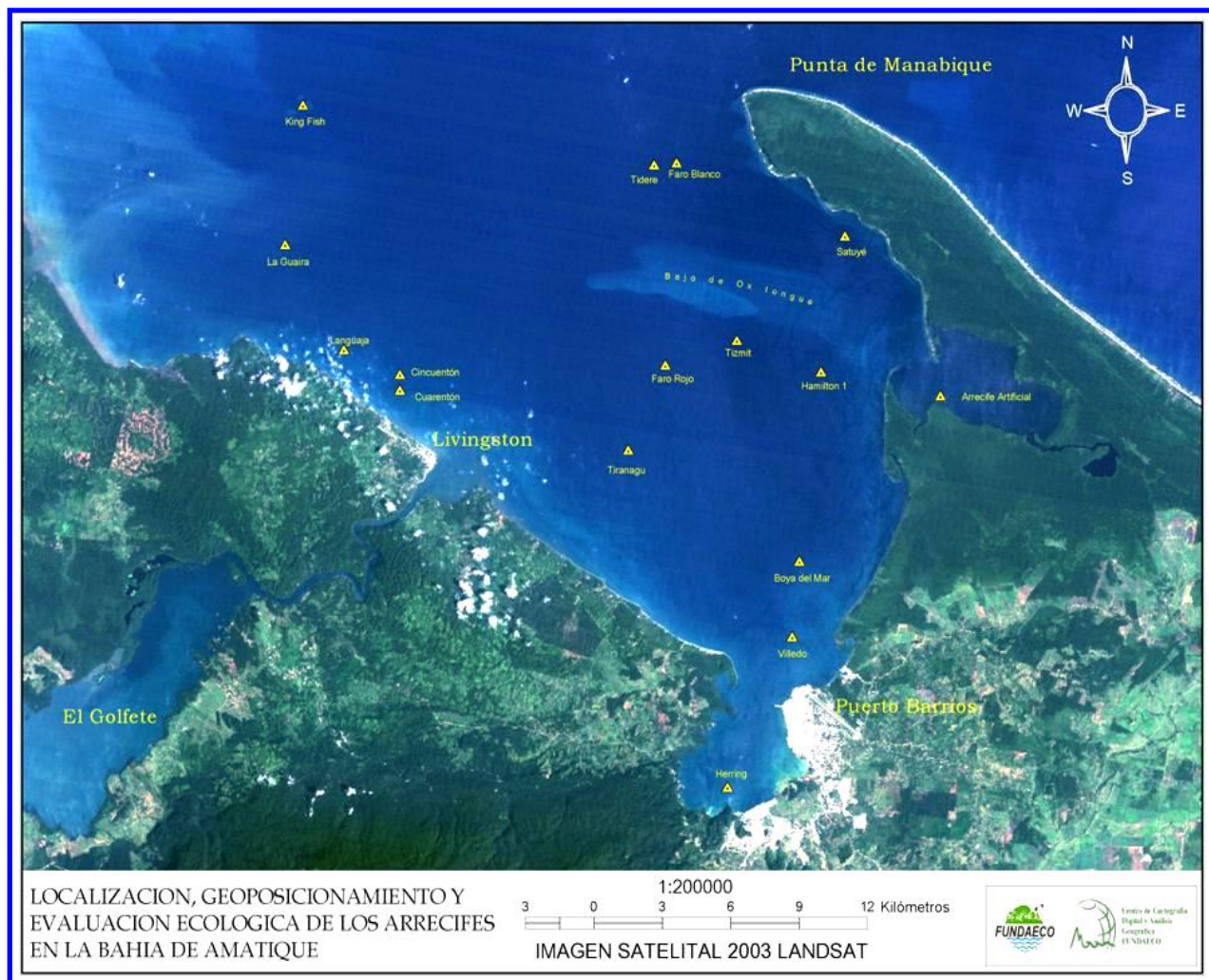
## **b. Asociación de Pescadores Tradicionales Garífunas**

The idea of establishing a group of Garífuna fishermen comes from the BALABALA (Mayan word that means the wheel that goes around) organization and it was supported by FUNDAECO in 2003, when it was legally established with UNIPESCA support. This was a requirement in order to receive a grant in boats, motors and fishing gear from the FONAGRO project. They have provided support to FUNDAECO in two projects it undertook to evaluate the reefs in the Bahía de Amatique. They have been supported by other organizations, such as "Razón para Quedarse" (Danish project), FENAPESCA, the MBRS project, UNIPESCA and the GoH Project, which have mainly provided training.

The organization has 30 fishermen members and their main expectations are to conserve fishing resources by protecting their historical fishing areas; they have identified shallow areas such as *Languaja*, *Tiranagu* and others for these protection efforts (see Map 7).

They mainly engage in artisan and subsistence fishing, since the sailing range of their boats is very restricted. They fish near the coasts of Livingston, in the coral patches existing in the area by using fishing lines and small gillnets set perpendicular to the coast. They use wooden 9-foot oar dugouts to fish. Others, the fewest, fish in 15-foot fiberglass boats powered by two-stroke 15-HP outboard motors. The fish they catch are mainly houndsfish, snapper, jack, Spanish mackerel, and kingfish.





**Map 7**  
**Garífuna Fishing Areas in Amatique Bay**  
**Source: FUNDAECO-FODECYT**



**Photograph 5**  
**Tarpon Catch**  
**Photograph by Hugo Hidalgo**

Some of these fishermen also use long lines to catch tarpon and rays. The product is marketed by selling surplus fish after it is sold on the beach when fishermen arrive. Women sell this surplus in the local market and in restaurants.

### **c. Asociación de Pescadores Trasmalleros y Changueros de Livingston (ASOPELIV).**

This organization was established with the support of FUNDAECO and PROARCA COSTAS, at the end of the nineties, as the Comité de Pescadores Trasmalleros y Changueros de Livingston (Livingston Gillnet and *Chango*-Net Fishermen Committee). Subsequently, in 2003, with support from the GoH Project, it became a formal association. UNIPESCA provided its support to secure the legal capacity it needed for them to receive support from the FONAGRO Project, which they were finally able to obtain.

The association has been involved in different local processes with FUNDAECO, the MBRS Project, and UNIPESCA, aimed at learning about issues such as organization, administrative management, and fishing management.

At present, the organization has 64 members, and their legal representative is Jorge Edén González. Its fishing area is Amatique Bay, especially near shallow areas and lighthouses.

This organization expects to secure support to improve their fishing and to make the Centro de Servicios para la Pesca en el Golfo de Honduras, Guatemala (Fishing-Services Center in the Gulf of Honduras) —CESPAGOH— operational. The group is not yet interested in engaging in fishing management. Thus, it is considered necessary to revitalize the group's organization and to make changes in its Board of Directors, since it has not changed during three periods, and it has had a tendency to a presidential-type management.

They engage in artisan fishing, using 14-, 23- and 25-foot fiberglass boats. Their fishing equipment includes seine nets and gill nets. The fish they catch mostly are jack, permit, Spanish mackerel, and snook. Their boats have a one-day sailing range; so sometimes they fish in Punta de Manabique and Río Dulce National Park protected area waters.

Their products are sold mostly through the main middleman in Livingston, who brines the fish and then sells it to briners from the highlands and the southern region of the country, some of who have set up operations in Livingston. It is worthwhile noting that the most important fishing season is from January to April, when fish prices increase as a result of higher consumption during Easter Week.

Most important in regard to fishing management, is the approach to the Garífuna fishermen to mediate in the conflict resulting from the use of a fishing system using net fences, known locally as “*tiro avión*”, in shallow areas. Because of this approach, it was possible to appease the conflict with Garífuna fishermen and to facilitate an agreement with the support of FUNDAECO and UNIPESCA, by means of which this fishing technique was banned; this ban was then incorporated into the Set of Regulations for the Fishing and Aquaculture Law. On the other hand, this group was also one of the originators of the Gentlemen’s Pact to forestall the conflict resulting from their loss of gillnets damaged by small-scale trawling.

#### **d. Cooperativa Agrícola Integral Río Dulce R.L.**

This organizations is the second oldest in the area, and it is based in Livingston. It was established in the sixties with the support of fishermen who previously fished in the Pacific Ocean and local fishermen who started shrimp-fishing activities with trawl nets and boats in the Guatemalan Caribbean region.

Their endeavors to establish a collection center succeeded when CESPAGOH was opened in 2005; before that, though, they had to surmount a series of obstacles. For example, their difficulty to secure a plot for the collection center, and the eradication of industrial shrimp fishing which was developed in the 60’s by Cuban fishermen and Guatemalan and Honduran ship skippers (sic) in this area where brown and white shrimp abounded (See Map 8)

According to fishermen in this organization, this was the moment in which most damage was done to Amatique Bay, since sea floors were swept with mechanized systems and boats with two and four cranes.

This organization performed a cleaning rally on the Bay and many of its members believe in fishing management. Unfortunately, only 21 fishermen with 30 boats are members of the organization, out of the 67 fishermen that catch shrimp.

This places members at a disadvantage in relation to this other group of shrimp-boat owners who are not part of the Cooperative, and fish with no regard to established norms.

This organization has changed from confronting environmental NGOs to being an “ally” and to support projects such as “Evaluating the Sustainability of Shrimp Fishing”, supported by AGROCYT and FUNDAECO.

This organization has several expectations: The first one is to achieve effective control and oversight of shrimp fishermen; to ban double-bag fishing, gillnet fishing during closed seasons, and the entrance of more boats into the local fishing activity. The second one is to establish a seed fund that can make CESPAGOH operational. The Cooperative is the owner of the plot of land where the service center is located, and it is one of its members through the Fishermen's Network.

Their fishing area is Amatique Bay and fishing efforts have increased in zones 2 and 3 (See Map 8). Worth noting is that boats can only fish at night in Sarstun's Zone 1 and only during one and a half months. (See Map 6)

Their fishing operation is defined as "small scale" in the Fishing Law, although it should be better defined as *specialized artisan fishing*, based on their catch volumes and the Net Register Tonnage (NRT), which does not exist in boats, since they only use coolers to store the fish and manual systems to lift nets and not cranes. The species they fish are white shrimp (*Litopenaeus schmitii*) and brown shrimp (*Farfantepenaeus notialis*).



**Photograph 6**  
**Catch sequence during a night of shrimp fishing in Amatique Bay<sup>23</sup>**  
**Photograph by Hugo Hidalgo**

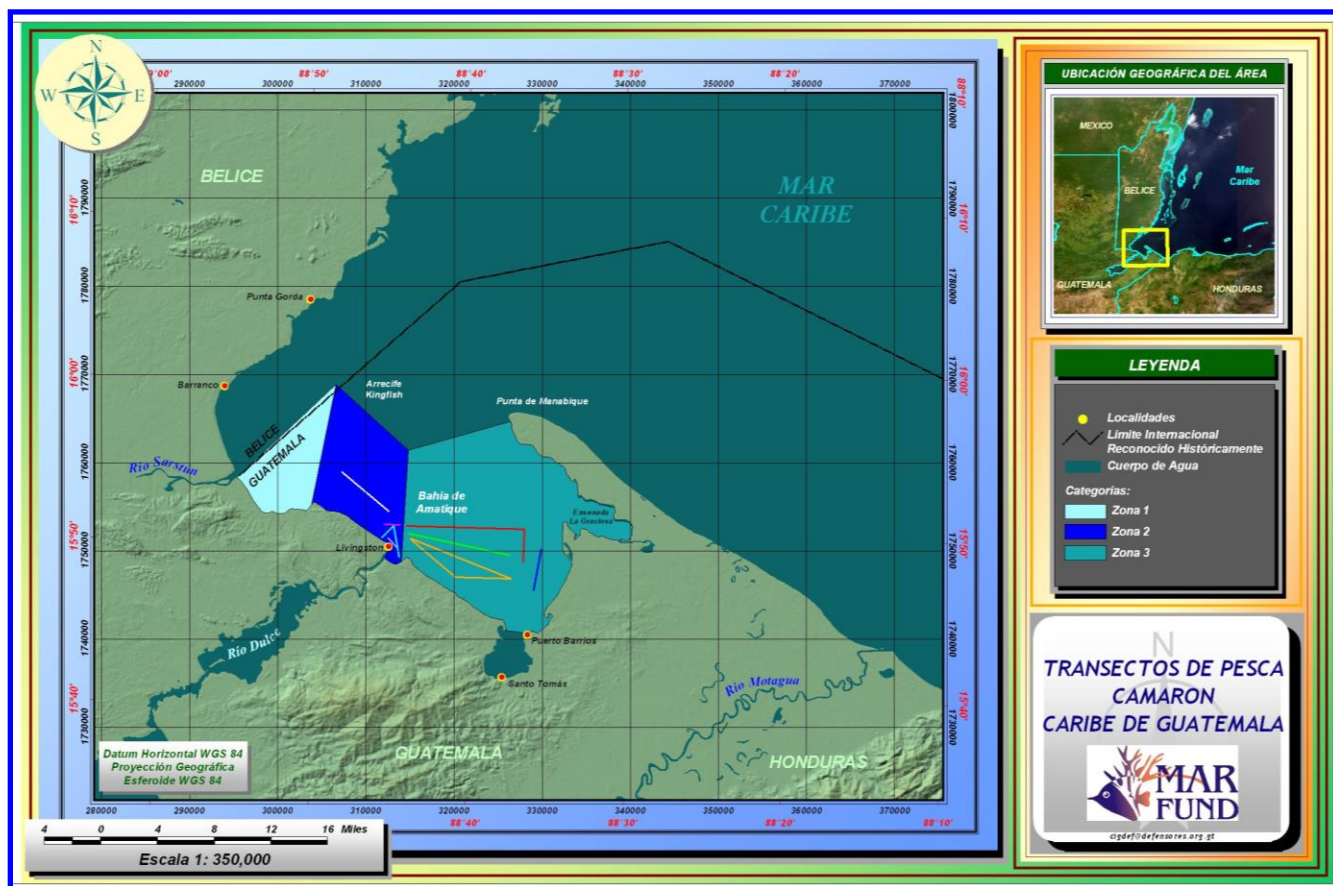
It is interesting to note that, as time goes by, by-catches that were formerly ignored, such as the Copey snail (*Melongena melongena*) are steadily increasing in value. This is an indicator that catches are decreasing.

Marketing is accomplished by predetermined buyers, who transport the product to Puerto Barrios, the Terminal market in Guatemala City, and other locations, such as Petén, Chiquimula, Cobán, and Zacapa.

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<sup>23</sup> See actual shrimp-catch and by-catch





**Map 8**  
**Most widely used shrimp fishing transects in Amatique Bay**  
**Source: Hidalgo-FUNDAECO, 2005**

#### **e. Asociación de Pescadores de Buena Vista Miramar**

This organization was established in 2004 as a result of the FUNDAECO initiative to curb problems among groups of fishermen resulting from shrimp fishing during the closed season in Río Dulce. The group has 37 fishers, and it is important to mention that most of them are women.<sup>24</sup> They hope that regulations will allow fishing in the waters at the mouth of Río Dulce during closed season when shrimp are leaving the estuary toward the sea. They have justified this petition alleging that this is the only time they can catch shrimp, since this is not their only activity. Nevertheless, it has been ascertained that this organization has other options for their livelihood, such as capturing snook, jack and permit during other seasons of the year, so it is quite difficult to promote their petition, which would affect the *Litopenaeus schmittii* shrimp population in the area.

<sup>24</sup> The leader of this organization is Claudia de la Cruz, who is also a fisher.

## **f. Asociación de Pescadores Artesanales de Bocas del Polochic**

This organization was established with the support of Fundación Defensores de la Naturaleza (Defenders of Nature Foundation), especially its office in Bocas del Polochic.<sup>25</sup> Its current president, Emilio Quinich leads the 191 mostly Q'eqchi' members.

Its members have been trained on sport fishing in Belize, and they recently developed a project with PROGAL support in order to implement fish aggregation device systems and an adaptation of the Cuban technique to catch lobsters, locally known as "little Cuban houses", aimed at capturing fish. Twenty members of the Association are implementing this project. In addition, the GoH Project, along with the Razón para Quedarse Project, financed by Denmark, have trained them in organizational issues.

Pedro Jiménez, another Association leader, is a very active entrepreneur who was able to incorporate the Association into the Red de Pescadores (Fishermen's Network), and has maintained close links with Razón para Quedarse and the JADE Project by means of the Community Forum. This indicates that Don Pedro is a good leader to work with in this Association.

Their specific fishing area is the Bocas del Polochic Wildlife Refuge. They engage in artisan fishing, using gillnets, lines and cast nets, and mostly wooden dugout canoes propelled by paddles. They mainly catch snook, and several Cichlid and catfish species (*chumbimba*, *tacazonte*, *bagre*, and *guapote*).

The group expects to lessen conflict with trawlers<sup>26</sup> "who have increased the local fishing effort tenfold for the past three years". They market their product by means of local middlemen, retail sales, and some trawlers who are also middlemen.

The group of trawlers is made up of a 15-member committee. They started their activities about 6 years ago, when such activities were not regulated. When they started, they were capturing up to 12 quintals (1,200 lbs) per fisherman. At present, catches only total from 1 to 1½ quintals (100 to 150 lbs).

## **g. Asociación de Pescadores Trasmalleros de Puerto Barrios**

This association was founded with the support of Razón para Quedarse and the GoH Project, with the aim of organizing and becoming part of the Fishermen's Network and FENAPESCA, in order to implement projects, receive training, and participate in exchanges. CISP is supporting them with capacity building on basic administration, integration, and organizational issues.

There are 50 fishermen who are members of this association, led by Benedicto Córdón, who is not the president. They engage in scale-fish fishing with gill nets, seine nets, and funnel nets. They mostly catch snook, Spanish mackerel, jack, and skipjack. They are headquartered in Puerto Barrios, in the El Rastro neighborhood, and their fishing area is the zone next to Punta de Manabique, in a place known as Punta Pichilingo. Its main achievements have been obtaining a pier and having the streets of their neighborhood re-surfaced.

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<sup>25</sup> This office is located near El Estor, Izabal, and its main objective is to manage the Bocas de Polochic Wildlife Reserve.

<sup>26</sup> Fishing activity that started 6 years ago; trawling using seine-type trawl nets that can be several kilometers long and that are set in the Izabal lake waters.

José Arriaza, the President of the Association, is the one who collects and markets most of the members' products. They also market products through other middlemen in Puerto Barrios. Their most important expectation is to have a school, so they are working with the local COCODE to which they belong.

#### **h. Unión de Pescadores del Atlántico —UPEDA—**

This organization was constituted at the beginning of the year 2000 as a result of the ban on anchovy (*Anchoa liolepis*) fishing, which led anchovy fishermen in Puerto Barrios to seek counsel and to associate.

The group gathers anchovy fishermen and it has not participated in activities promoted by other organizations, since its main purpose is to defend themselves from the anchovy-fishing ban. What is more, there were rumors that not even the area in Livingston where Garífuna fishermen fish would be allowed in order to reduce the pressure on anchovy fisheries.

Its headquarters are located in Puerto Barrios, in the El Estrecho neighborhood. Its fishing area is located from the coastal areas in Punta de Manabique to the Livingston coasts, near Los Altares. (See Map 7.) They market their product through middlemen from the Highlands, who come to buy the product specifically for the Lent period.

This group, also known as “*manjueros*”, is not interested in managing fishing activities.

#### **i. Comité de Pesca de Santo Tomás de Castilla**

This group, located in the village with the same name, was established by the Guatemalan Red Cross, which provided it with a vessel. Its fishing area is in the Santo Tomás inlet. It is made up of 11 members and their leader is Damián Paz. They engage in artisan fishing with dugout canoes and small nets to catch mullets (*Mugil spp*). In addition, they catch fish, especially groupers, with harpoons. Lately, they have had problems with local authorities who are claiming that all fishing is banned in the Santo Tomás inlet. There have been conflicts with the Santo Tomás de Castilla Port Authority as a result of its new requirements and high safety standards, which are banning them from fishing near the piers of the Port Authority.

#### **j. Asociación de Pescadores de Cayo Quemado**

This group initiated activities in 2004 under the GoH Project. The group consists of 62 fishers, men and women. Their fishing area is the “Golfete” in Río Dulce National Park, which limits their fishing activity due to the area's conservation category. Their desire is to achieve sustainable fishing by reducing pressure on the resource through economic alternatives, such as the restaurant they are currently building with support from PROGAL.

They have an interesting project management experience, not necessarily tied to fishing, under the guidance of their leader, Hortensia Reyes.

The most important species they catch include snook, permit, and stationally sardine and shrimp.

## **k. Punta de Manabique Fishing Commissions**

The Punta de Manabique Special Protected area is a special case within the MAR region.

The groups of fishermen are part of the Consejo de Desarrollo Comunitario —COCODE— in each of the Punta de Manabique communities. This is the methodology that FUNDARY,<sup>27</sup> the co-administrator of the Protected Area has been implementing in order to strengthen local organization. The advantage of this methodology is that it builds on the official organization promoted by the Guatemalan government and prevents splitting into multiple organizations, each one with a specific aim, which could endanger the true purpose of fishermen's associations.

The focal point and the most important aspect of this system is that the legal capacity used by fishermen groups is that of COCODE "X" from "X" community, which according to the de-centralization State law, can pursue projects with national or international organizations.

Similarly, community organization has been strengthened by a legal framework that is being promoted by the Government to streamline the procedures to secure support for communities, by presenting projects to municipalities through Municipal, Departmental and Regional Development projects.

All these commissions are located in Punta de Manabique and they are, from East to West:

1. Comisión de Pesca de Santa Isabel
2. Comisión de Pesca de La Graciosa
3. Comisión de Pesca de Estero Lagarto
4. Comisión de Pesca del Cabo Tres Puntas
5. Comisión de Pesca de Punta de Manabique
6. Comisión de Pesca de San Francisco del Mar
7. Comisión de Pesca de Quetzalito

In all, they join together 286 fishermen who work within the Protected Area, and are members of the Red de Pescadores del Caribe y Lago de Izabal (Caribbean and Lago de Izabal Fishermen's Network). The first three are located in the inside area of Punta de Manabique (Ensenada, La Graciosa and Bahía de Amatique), and the rest are on coastal areas on open seas. Theirs is artisan fishing using 14-, 23-, and 25-foot fiberglass boats, gillnets for scale fish and lobster, "cimbra"-type drift net for sharks, seine nets for anchovy, and traps for scale fish, such as snappers, locally known as cubera snappers.

It is important to mention that Manabique fishermen are the only ones catching lobster and shark in this Guatemalan area, although gill-net fishermen from Livingston sometimes engage in this activity.

In regard to managing fishing in the area, a fishing-monitoring program has been implemented by FUNDARY, and fishermen have been very actively involved. This shows that the awareness-reflection process has attained considerable progress in this area, in relation to that in other areas.

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<sup>27</sup> Mario Dary Rivera Foundation



In Estero Lagarto and Santa Isabel, some groups have started alternate activities, such as eco-tourism, with support from FUNDARY and from other regional projects such as PROGAL and RECOSMO.

The main problems that they have are marketing, due to how far they are from Puerto Barrios, and control and patrolling, especially in the area of the La Graciosa inlet. Some initiatives that are being implemented to reduce the impact of fishing include a project supported by AGROCYT to evaluate growing cubera snappers (*Lutjanus spp*) in water tanks in the Cabo Tres Puntas area.

Eight years ago they tried to grow snappers in cages in this same area, but they had trouble with seed supply. The Vivamos Mejor NGO and a student from the Universidad San Carlos' Centro de Estudios del Mar y Acuicultura (Sea and Aquaculture Study Center) —CEMA— supported this activity.

The Santa Isabel and Estero Lagarto groups are located in an area with high ecological value in the core Punta de Manabique area, which contains *Thalasia testudium*, a type of sea grass where marine turtles and manatees feed.

Lately, there have been considerable problems in the fishing area since non-local fishermen are placing gill nets along the mangrove trees during high tide -when fish come in to look for food in mangrove and *Pachira acuatica* roots. When the waters recede at low tide, all fish swim out and fall into the gill net. This is an unsustainable technique, and local fishermen have sought support from FUNDARY and CONAP in order to reduce impact, but with no results.

## **I. Centro Mar**

This business is mostly made up of women who process sea products, especially scale fish, which are provided by community fishermen. It was established in 2003 as an initiative to foster fishing options in the Punta de Manabique area, supported by the Swiss Fund and FUNDARY. Originally, the founding members were 17 women, but subsequently, the number of members dropped to 10. At present, Centro Mar has 14 women fishers led by Carlota Calix in the San Francisco del Mar community.

The Centro Mar project's objective is to transform fishing products into sausages and fish "seviche" (a raw-fish salad) to give products added value. They have received training in manufacturing issues, care of ice, good hygiene practices, and organizational issues. At present, Centro Mar has a proper space to process fishing products, a cold room and a sales outlet in Puerto Barrios. The organization has legal capacity and it is a member of the Fishermen's Network.

The group has mentioned having the following problems:

- a) Transportation to deliver orders,
- b) Lack of funds to purchase products,
- c) More physical and logistical support from men,
- d) Lack of electricity.

Tables 6a and 6b show a summary of fishing organizations in the Guatemalan Caribbean Region, and they highlight the ones recommended to start establishing community reserves.

**Table 6a. Description of Fishing Organizations in the Guatemalan Caribbean Region**

Organization	Years Established	Number of Members	Fishermen Non-Members	Organization's Expectations	Projects Undertaken	Conflicts	Fishing Area (PA, TURF, others)	Marketing	Fishing Management
<b>Sarstún</b>	1	76	30	Reducing shrimp boats in the area and bi-national conflicts with Belize.	Supporting implementation of fish-aggregation devices	Bi-national and fishing territories.	Sarstún, Amatique Bay, PAs, Belize's south zone	Middlemen	No
<b>ASOPELIV</b>	8	64	400%		Negotiation of motors and gillnet with FONAGRO	Fishing areas and internal	Río Dulce NP and Amatique Bay	Middlemen	No
<b>Garífunas</b>	3	30	20	Reducing anchovy-fishing and trawling, managing shallow areas	Negotiation of dugouts and motors with FONAGRO	Fishing zoning	Shallow areas in Amatique Bay	Garífuna women, retail	Yes, fishing actions aimed at responsible management are carried out
<b>Bocas del Polochic</b>	3	191	400	Resolving conflicts with trawlers	Project to adapt Cuban traps with PROGAL	Trawling	Bocas del Polochic, Izabal Lake	Middlemen, Barrios	No
<b>Cayo Quemado</b>	3	62	-	Obtaining support to develop their environmental tourist project	Managing ongoing environmental-tourist project with PROGAL	Contamination of the Golfete (Río Dulce)	Río Dulce NP	Directly to markets	No

**Table 6b. Description of Fishing Organizations in the Guatemalan Caribbean Region (continued)**

Organization	Years Established	Number of Members	Fishermen Non-Members	Organization's Expectations	Projects Undertaken	Conflicts	Fishing Area (PA, TURF, others)	Marketing	Fishing Management (Yes, no)
<b>Buena Vista Miramar</b>	3	35	100	Securing a market to sell their products	-	Achieving agreement to catch shrimp legally during closed season, more control and oversight to avoid conflicts in fishing areas	Río Dulce NP, Amatique Bay	Middlemen	No
<b>Santo Tomás</b>	2	11	100%		-		Santo Tomás inlet	Directly to the market, household consumption	No
<b>Pto. Barrios</b>	3	50	50%		-		Punta de Manabique, Amatique Bay		No
<b>UPEDA</b>	7								
<b>Coop. Río Dulce</b>	25	21	46	Restricting number of boats in Amatique Bay	Negotiating plot for the collection center	Lack of control and oversight	Amatique Bay	Middlemen	No

Table 7 contains a description of fishing commissions that have been established in the Punta de Manabique Protected Area, which belong to the Community Development Councils —COCODES—.

**Table 7. Description of Fishing Commissions and CENTROMAR in Punta de Manabique**

Organization	Years Established	Number of Members	Fishermen Non-Members	Organization's Expectations	Projects Undertaken	Conflicts	Fishing Area (PA, TURF, others)	Marketing	Fishing Management (Yes, No)
<b>Santa Isabel</b>	2	24	10%	Promoting their tourism project, obtaining licenses for anchovy fishing; control and oversight	Ecotourism project	Barrios Fishermen working with illegal systems	Punta de Manabique	Middlemen	No, but they are intent on protecting their resource.
<b>La Graciosa</b>	2	21	10%				Punta de Manabique	Middlemen	IDEM
<b>Estero Lagarto</b>	2	21	10%	Strengthening their tourism project, obtaining accurate information to establish the anchovy closed season, obtaining fishing licenses.	Eco- hostel project			Middlemen, sales in Barrios	IDEM
<b>Punta de Manabique</b>	2	31	10%	Land tenure	No	Land tenure, prices established by middlemen	Punta de Manabique	Middleman, Barrios	No
<b>El Cabo Tres Puntas</b>	2	87	10%				Punta de Manabique	Middleman, Barrios	No
<b>San Francisco</b>	2	52	25%	Improving their fishing equipment, obtaining fishing licenses.	No	Middlemen establish prices	Punta de Manabique	Middleman, Barrios	No
<b>Quetzalito</b>	2	50	25%	Improving their fishing gear, obtaining fishing licenses					
<b>CENTROMAR</b>	2	15	0%	Improving its marketing	Sales outlet	Internal	-	Direct	No

## **7. THE HONDURAS EXPERIENCE**

### **7.1 Background**

A great number of the Honduran Caribbean fishermen are Garífunas who fish with artisan techniques in the three-mile coastal area defined by the Honduran Fishing Law as “artisan zone”.

The institution managing the country’s fisheries resources is the Fishing General Directorate (DIGEPESCA in Spanish), which has three offices for the Honduran Caribbean: in Trujillo, La Ceiba and San Pedro Sula. Its headquarters are in Tegucigalpa

Regarding the relationship between DIGEPESCA and the fishermen’s organizations, there is a problem similar to the one occurring in the other three countries: institutions cannot make their presence felt because of low budgets, and there is a tendency to prioritize the needs of the industrial fishing sector, especially shrimpers, in the case of Honduras.

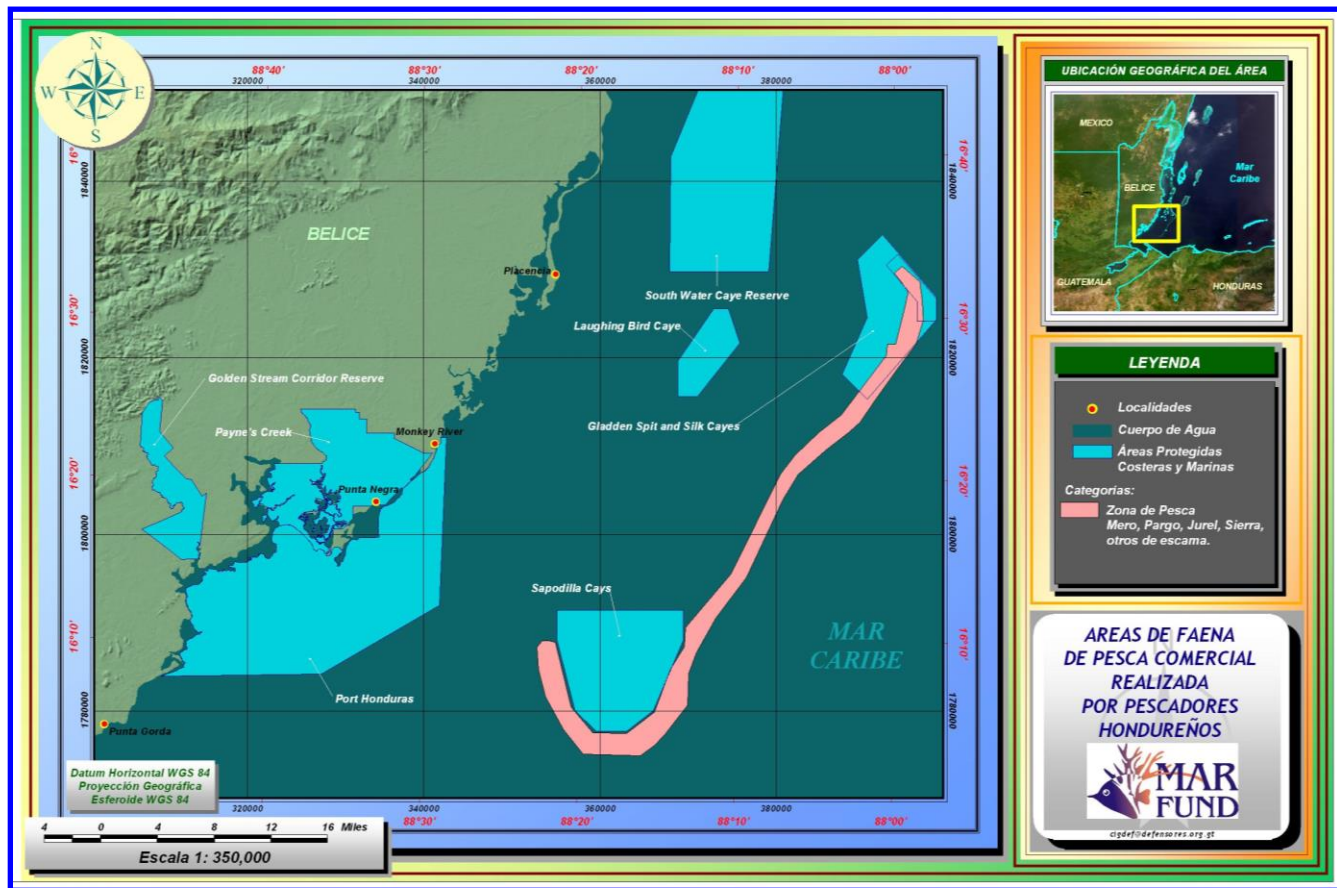
There are activities that DIGEPESCA cannot undertake due to internal reasons, and they are taken on by NGOs that generally co-manage the marine-coastal protected areas. This is a responsibility assigned to them by COHDEFOR. One of DIGEPESCA’s objectives is to work with local fishermen groups. That is why some organizations such as PROLANSTATE and the Cochinós Cayes Foundation have a very good relationship with fishermen groups in Triunfo de la Cruz, Tornabé, Miami and Cochinós Cayes, respectively. Conversely, organizations such as the Omoa Conservation Corps and the Cuero y Salado Foundation have not been sufficiently involved, or they have not been adequately considered by fishermen groups, who do not have enough confidence in them. (Pers. comm. Cárcamo 2007).

### **7.2 Project and Resource Management**

The fishermen of the Honduran Caribbean region work in five main fishing areas:

1. Oceanic waters limiting with Guatemala and Belize (Punta de Manabique, Zapotillos Cayos) (see map 9)
2. In waters within protected areas such as the Cochinós Cayes National Monument and Jeanette Kavas (see maps 10 y 11)
3. Islas de la Bahía (Bay Islands) within their 3-mile and 12-mile zones (see map 12)
4. The three-mile coastal area assigned to artisan fishing
5. In addition, there are other bays and inlets such as Omoa and Los Micos (See photograph 7)

No intention of engaging in fishing management has been expressed by Honduran organized groups, nor are there any cases of sea rights having been granted to them. The ban on industrial fishing from the three-mile coastal area was a great achievement for artisan fishing, and it was possible with the support of DIGEPESCA and non-governmental organizations, such as the Cochinós Cayes Foundation.



**Map 9**  
**Zapotillos Cayes<sup>28</sup>**

**Source: The Voice of the Fishermen of the Honduras Atlantic Coast**

Community participation is present only within protected areas on the marine coastline emphasizing joint management of hydro-biological and marine resources.

Several projects have been developed, such as the Fishing Modernization Project (MODERPESCA in Spanish) and the Asociación de Micro Empresarios de Pescadores Artesanales del Municipio de Omoa, Honduras (Omoa Municipality's Artisan Fishermen Micro-Entrepreneur Association) –ASMINPANO–, promoted by international organizations. Their main purpose has been to strengthen fishermen with training, storage centers, and processing facilities, as well as fishing equipment and gear. These projects have not had the follow-up they require, and they are not operating at their full capability or, in some cases, they are not working at all. In general, several projects have been jointly developed, emphasizing the technological development of the fishing activities and increase of the fishing efforts.

<sup>28</sup> The Zapotillos Cayes are islands being claimed by both Guatemala and Honduras, and their legal status has not yet been defined.

## 7.3 Marketing

In general, marketing is accomplished through middlemen who sell to local restaurants. Some fishermen are starting to sell their products to nearby restaurants on their own. As mentioned previously, this is due to the lack of follow-up to the projects that have already been developed to improve storage and processing, such as ASMINPANO and MODERPESCA in La Ceiba, Trujillo and Omoa. In La Ceiba there is a processing plant that exports to the Cayman Islands, which buys the products from most of the area's fishermen.

## 7.4 Organizational Issues

There are three levels of fishing organization in Honduras:

1. Associations
2. Cooperatives
3. Councils; these are similar to the Guatemalan Community Development Councils (COCODE in Spanish); they are decentralized organizations to support and promote local enterprises. In communities where the degree of organization is poor, they are used to manage fishing, as is the case of the Garífuna communities of Armenia, Sambo Creek, and other similar ones in the Honduran Caribbean coast.

Most of the organizations visited in the Honduran Caribbean are not yet implementing financial-administrative systems. The reason is that they are not fully operational, and in many cases, they do not have the means to develop these capabilities.

In general, the organizational level in Honduras is weak, and it still needs much support, even though there are many non-governmental organizations and/or protected area administrators working with them to help strengthen these capabilities.

There is a second-tier organization in the Honduran Caribbean coast, The National Federation of Artisan Fishermen of Honduras (FENAPESCAH in Spanish), whose president is Félix Dolores Paz García. This organization was created with the support of a fishing-revamping project –MODERPESCA- sponsored by the Government of Japan through its international cooperation agency, JICA.

This organization integrates at least four of the large fishing groups present in the Honduran Caribbean coast and has more than 1,000 members: Omoa, Tela, La Ceiba and Trujillo.

## 7.5 Training

The issues needed to strengthen Honduran Caribbean organizations are:

- Leadership and organizational strengthening
- Project development and management
- Marketing
- Fish biology adapted to protected areas
- Establishment of communal banks

## 7.6 Description according to Fishing Organizations and/or Communities

Following are the fishermen communities and organizations that were visited from West to East:

### a. Masca

It is important to highlight that this is the first Garífuna community of the Honduran Caribbean area from West to East. Historically, the natural organization of this group parallels the presence of fishermen in the area and the traditional organization of the Garífuna culture in the nineteenth century, when fishing was a subsistence activity. This natural organization schema has been promoted by DIGEPESCA and projects such as the MBRS Project -that have added training elements-, and the Danish organization Razón para Quedarse (Reason to Stay), in addition to JICA and the Ethnic and Community Development Organization (ODECO in Spanish).

At this time, the community is still not organized and its members are 59 fishermen located in the area between Corinto, the Guatemalan border, and Omoa.

The most important achievements this group seeks are based on their desire to increase their catches and to improve their fishing equipment, in order to export through a cooperative. This clearly indicates that they are still thinking about increasing their fishing efforts and not about managing fishing activities. The group has no experience in project management as a result of their lack of organizational capabilities, which does not allow them to qualify for support from international and national organizations.

Their fishing is eminently artisan and they have a short sailing range. They fish in front of the Bahía de Omoa in the three-mile area found within the zoning established by the Omoa-Baracoa Landscape Territory, a proposed protected area, and Punta de Manabique. They fish in dugouts approximately ten feet long, using bottom lines, seine and gill nets. The species that they fish most are jack, snapper and Spanish mackerel.

They market their products through Omoa middlemen who sell directly to restaurants and hotels in the area.



Regarding the handling of fishing resources, only some training provided by the MBRs Project generated some reflection, but fishermen are far from undertaking fishing co-management, mainly because they have been almost completely abandoned by formal organizations.

**b. Paraíso, Veracruz, Chachaguala, Barra de Cuyamel, Milla 4, Milla 3, and Pueblo Nuevo Communities.**

These small communities of subsistence and small-scale fishermen have four to ten fishermen who use boats with rudimentary sails and dugouts. The main species they capture is one known locally as “Cabo de Año” (*Caranx spp*). It is marketed locally through ASMINPANO –Asociación de Micro Empresarios de Pescadores Artesanales del Municipio de Omoa, Honduras. (Omoa Municipality’s Artisan Fishermen Micro-Entrepreneur Association).

**c. Asociación de Microempresarios de Pescadores Artesanales del Municipio de Omoa –ASMINPANO-**

This association is located in the community of Omoa, in the Department of Cortés, and has approximately 50 members. The Gulf of Honduras Project has strengthened the organization’s development, and it has recently built a small collection center with support from Caritas and PROACTA-SAG in Honduras. This center includes a number of coolers, a cold room, an ice maker, administrative offices with a computer, and ten 25-foot boats with 75 HP outboard motors. These were added to the fishing fleet owned by the organization.

The fishing area where they work is in front of the Bahía de Omoa, an area south of Belize and claimed by the Honduran Government, especially the Zapotillos Cayes. It was interesting to discover that the Omoa fishermen also fish in front of the Guatemalan coasts (Punta de Manabique).

This is a good indicator about adequate fishing resources in the Guatemalan Caribbean region, but on the other hand, it may pose a risk of future conflicts if the resources are not handled adequately in a bi-national zone where, historically, fishermen have worked without any regard for borders (the Manabique fishermen also fish in Honduran waters).

Most of the species captured by these fishermen are jack (*Caranx hippos* and *latus*), Cabo de Año (*Caranx spp.*), Spanish mackerel (*Scomberomorous maculates*), and snappers (*Lutjanus spp*).

According to the fishermen, this area was damaged by Hurricane Fifi at the beginning of the 70’s. As a result, there was considerable erosion in the steep mountains and there was much sedimentation in the Bahía de Omoa coral patches. These sites are now known as “stony places” because Hurricane Mitch further affected them. These fishermen would

like to implement a project to create artificial reefs<sup>29</sup>. At this time the greatest challenge for the organization is leadership, because since the death of Leonel Alas, who was the natural leader and the promoter of fishing projects in the area, there has been lack of leadership, and relationships within the group and ongoing activities suffered serious setbacks.

This is the reason why the “ASMINPANO” Fishing Terminal is so neglected. It was also worrisome to establish that they have had no support from NGOs —such as the Omoa Conservation Bodies, which promotes the establishment of the Omoa-Baracoa Coastal Marine Landscape Territory— since ASMINPANO could be a good partner.

#### **d. Travesía, Bajamar, Saraweina and Río Tinto Communities**

These are four communities located in the area between Cortés and the Miami Community. Their inhabitants are mainly Garífunas and they have a very basic organizational level, even though they have a council that represents the community. Their leader is Julio Fernández, who mentioned that they have had meetings with DIGEPESCA in order to secure support from the Razón para Quedarse project, but that there has been no follow-up. They catch mostly species such as jack, Spanish mackerel, and “yalatíel”, using dugout canoes with oars and sails approximately 10 to 25 feet long.

#### **e. La Asociación de Vendedores del Mercado el Porvenir–SOVEMEPO-**

Neftali Cardoza, its President, explains that 15 years ago there was a cooperative in the area, whose members were fishermen from the Garífuna communities of Bajamar and Travesía, from Cortés to Omoa. It disappeared because their kind of work was very individualistic.

The cooperative morphed into ASOVEMEPO, which is a hybrid association of former fishermen and fish sellers, with a seed capital of a little over US\$200,000 and around 200 fishermen working for them.

This model is interesting because they regulate fishing on site, not buying fish whose sizes are not acceptable for export or for sale at the local market. Furthermore, fishermen must comply with this regulation because they depend on the equipment, boats, and funds they receive.

It was obvious from the interview that this is not only done because they cannot sell the under-sized products that are unmarketable, but also because the group of fishermen has decided to do so in order to protect resources.

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<sup>29</sup> There was an attempt to develop the project with Partners of America, at the beginning of the 80's, but it was not possible. Conversely, in Guatemala one was implemented in the Ensenada La Graciosa (“The Quinto's Reef”).

On the other hand, associated fishermen never lose because the owners pay them U\$266 (sic) *per diem* for the work they perform, whether they catch fish or not. It is worth mentioning that it is difficult for a fisherman to go out to sea if he considers that he will not have a good catch.

The most important limitation for this association is that its most important fishing area is located in the Belize central fishing province. Therefore, their fishing is illegal, and they know it. Their objective is to catch snappers (*Lutjanus spp*), and they abound in that area of Belize.

All of this confirms that illegal fishing in the region poses a serious challenge, since Honduran fishermen fish in Guatemala and Belize.

#### **f. Cooperativa Unión Torbeña**

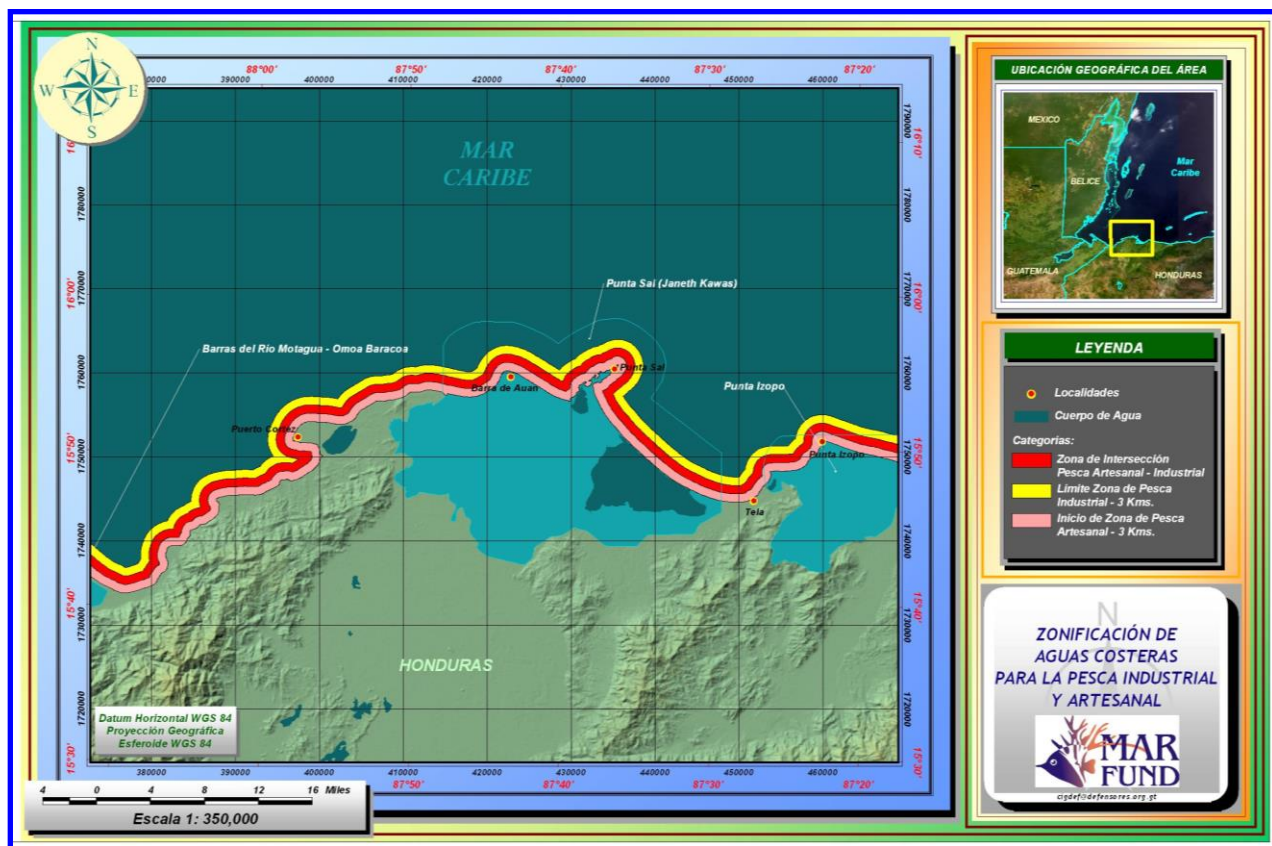
This organization is located in the Jeanette Kawas National Park in Tornabe, which is co-managed by PROLANSATE Foundation. The cooperative was established in 2001 with 20 members. They must pay weekly or monthly fees and they have started to keep minute books.

This organization is a very interesting case, as it is very gender-oriented; four of the ten members of its Board of Directors are women. The current relationship between this organization and PROLANSATE is very good because of the support they have received.

Tornabe is a totally Garífuna community with approximately 50 fishermen from a total of 2,500 inhabitants; more than half of these fishermen are boat skippers. Men are in charge of fishing, as in most of the cases that we have documented. They use several kinds of fishing equipment, such as ocean-floor fishing lines, diving with harpoons, seine nets, cast nets, and gillnets. They use dugouts with wide-bladed paddles, wooden canoes with 15-HP outboard motors, and also the fiberglass boats with 25- and 40-HP motors.

One of the most pressing problems with fishing in this community is the lack of technical support due to a weak presence of authorities in the area. In addition, during the best-capture times of the year prices go down, and since they still do not have their own marketing systems, they depend on middlemen. They also say that they need support to process and to give added value to their fishing products. Insofar as organization is concerned, they consider they also need support, as some of their fellow fishermen still do not respect established regulations. Another of their problems is that fishermen from Tela use gillnets that are too long and other fishing equipment that is not allowed in the area, and by doing that, they obstruct access to the village.

One of the most interesting issues is that they are trying to promote ecotourism with the support of PROLANSATE; they are offering tours to the Jeannette Kawas National Park – JKNP– and to Laguna Los Micos to strengthen the Los Micos Resort initiative. (See Map 10, Photograph 7).



**Map 10**  
**Coastal-Water Zoning for Industrial and Artisanal Fishing**  
**Source: The Voice of the Fishermen.**  
**Map edited by CIGDEF**

#### **g. Asociación de Lancheros de la Bahía de Tela**

This organized group of individuals was interviewed because many of them are temporary fishermen in the community of Tela, where there is no fishing organization. Additionally, they offer recreational fishing services, but their main activity is transporting tourists. They have the same problems and challenges as other communities close to Tela.

#### **h. Asociación de Pescadores de Triunfo de la Cruz**

It is located in the Punta Sal Park protected area, which co-managed by the PROLANSATE Foundation. There are a total of 90 fishermen, most of them Garífuna, of whom one third are boat skippers. Triunfo de la Cruz is one of the largest Garífuna communities in Honduras, with approximately 10,000 inhabitants. The most important expectation of this organization is to improve their fishing equipment. They market their products through middlemen. Although at present there is no fishing management, some of their traditional activities tend toward better fishing practices.



**Photograph 7**  
**Aerial view of Laguna Los Micos**  
**Photo: Hugo Hidalgo**

#### **i. Cooperativa San Vicente**

Located in Los Cerritos community, this is a small organization of 15 fishermen from a total of more than 40. It is based on the shores of Laguna Los Micos at the Jeanette Kawas National Park. (See photograph 7.) The organization emerged three years ago and was strengthened by the GoH Project from year 2003. At present, the PROLANSATE Foundation supports it through the Los Micos Resort project.<sup>30</sup> This community is exclusively engaged in artisan and subsistence fishing and the main species they capture are blue crab, “yalatíel”, croaker and grouper.

The community has the same characteristics as Tornabé in regard to the species they catch, and the equipment and vessels they use, since they are in the same area. The only noteworthy difference in the structure of their organization is that this community is eminently non-indigenous and that they catch crabs (*Callinectes spp*). The crabs have part of their life cycle in the lagoon and are very abundant.

One of the problems they have is the lack of organization and marketing, since middlemen from San Pedro Sula buy most of the products, thus decreasing their income. One of their hopes is to improve their marketing system. This organization undertakes some activities focused on fishing management, such as promoting closed seasons for crab fishing and regulating the minimum sizes allowed for this species.

In these places, there is a weak presence of DIGEPESCA and that space is covered by PROLANSATE.

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<sup>30</sup> (Dennis Sierra 2006. Personal communication.)



**Map 11**  
**Fishing Areas in the Department of Tela, Honduras**  
**Source: The Voice of Honduran Fishermen**  
**Map edited by CIGDEF**

**j. Asociación Caribeña de Pescadores Artesanales de La Ceiba – ACEPA–**

This is the organization that was initially operating when the Fishing Modernization Project (MODERPESCA) supported it. At first, it assembled 34 groups of three fishermen each. At present, there are 29 groups. The communities associated to this organization are El Porvenir, Nueva Armenia, Corozal, Sambo Creek, Cacao, Río Esteban, Roma and others. This organization works with the support of the DIGEPESCA headquarters in La Ceiba, where MODERPESCA constructed a building with an ice-making plant.

The MODERPESCA project contributed mainly with boats. DIGEPESCA estimates that there are a total of 500 fishermen in La Ceiba and its surroundings. Many fishermen sell their products to Caribbean Sea Food, based in La Ceiba, which processes and exports them to the Cayman Islands.

Currently, ACEPA is not longer organized and even with DIGEPESCA's considerable influence, much work will be needed to reactivate it (Castañeda 2007, Pers. comm.).

## **k. Comunidad Sambo Creek**

This community is located in an area bordering on the Cochineros Cayes Natural Monument, and in the past it was an important fishing community of Garífunas and Ladinos. At this time there are only some isolated fishermen most of whom have their own tourist-operation business or work for other tourist operators.

One of these fishermen owns a tourist-operation business that is one of the most important in this community. The Nueva Armenia Fishermen Association could capitalize on this, establishing alliances and improving sustainable tourism in this community.

## **l. Asociación de Pescadores de Nueva Armenia**

This is a community in the Atlántida Department located in front of the Cochineros Cayes in the Honduran Caribbean area, and it is presently establishing its Fishermen Association with the support of the Cochineros Cayes Foundation. For the time being, it is part of the community council.

Juan Diego Cáliz, commonly known as “Don Yito”, is a leader of the Garífuna fishing community. He stated that their dream is to have a restaurant to complement the hotel that is already operating and which still needs to develop some customer-service aspects. As with other Honduran communities, there has been much dissent among fishermen because of the actions developed by the Cochineros Cayes Foundation, such as the new regulations that have been implemented for lobster fishing and the MPA zoning. After speaking with several people, we realized that negative leaders who want to continue using damaging fishing equipment are causing the entire commotion.

These fishermen fish in the Cochineros Cayes Protected Area and its surrounding. Even though industrial fishing has been regulated or banned because it is a marine protected area, shrimp trawling is taking place within the reserve. Most of the species caught are lobster (*Panulirus argus*) and scale fish such as snappers, snook (*Centropomus spp*), and jack.

The conditions in which this group works are unique. It has the support of the Cochineros Cayes Foundation; they have adequate control and oversight, and fishermen are very enthusiastic about their tours to the Chachaguaté “community island”. Even though this is really a fishing camp in Nueva Armenia, it is a beautiful place, with great potential to develop an ecotourism project. It also has the added benefit that it is the only island still considered as community territory. The others are private or belong to the reserve.





**Photographs 8 and 9**  
**Typical Fishing Boats in the Honduran Caribbean Area**  
**Photographs: Hugo Hidalgo**

### **m. Islas de la Bahía**

The Islas de la Bahía (Bay Islands) include Roatán, Utila and Guanaja. There are 343 fishermen in 46 fishing camps. A fishing camp is a community in which there are more than two fishermen; but for the purpose of our work, we expanded this concept to mean a community with 7 or more fishermen, with the aim of approaching the concept of “group” established by the United Nations Development Program (see maps 14, 15 and 16, and table 8).



**Table 8. Fishing Communities in the Islas de la Bahía Department<sup>31</sup>**

Island	Community	No. of Fishermen
Guanaja	East End	15
Guanaja	North East Bight	7
Guanaja	Savanah Bight	21
Guanaja	Mangrove Bight	16
Guanaja	El Cayo	15
Guanaja	El Pelicano	12
Roatán	Santa Elena Mangrove bight	10
Roatán	Santa Elena The Hill	7
Roatán	Santa Elena Sico	8
Roatán	Santa Elena The Point	8
Roatán	Santa Elena North Side	9
Roatán	Santa Elena The Bight	8
Roatán	Santa Elena Bentley Bay	10
Roatán	Punta Gorda Iguana I	11
Roatán	Punta Gorda Lagarto	6
Roatán	Punta Gorda La Cola	19
Roatán	Punta Gorda Cañaveral	19
Roatán	Milton Bight	7
Roatán	Gravel Bay	7
Roatán	West End	10
Utila	Utila	35
Utila	Los Cayitos	63

Fishing (except for the industrial shrimp, lobster and conch fleet) was the traditional way to earn a living, until tourist activities became the main alternative for these communities. Fishing is mainly a subsistence activity, but there is some small-scale fishing in which products are sold to local hotels. In the Bay Islands it is important to consider that there are temporary fishermen, since many of them (artisan fishermen) engage in both tourist activities and industrial fishing or processing of lobsters and shrimp in local plants.

Most of the activity in this area is carried out in small 22-foot boats with 12-HP outboard motors (See table 9). In the Cayitos de Utila community there are larger, 30-foot boats, with 48-HP motors. These boats go outside the 12-mile zone of the Bay Islands territorial waters (Islas de la Bahía National Park). Occasionally, they work in the Tela and Cochinos Cayes banks. The boats with less sailing range work four nautical miles off the coast (see map 12).

<sup>31</sup> Communities with at least 7 fishermen were considered fishing camps, according to the UNDP "group" concept.

**Table 9. Fishing Equipment Used by Isla de la Bahía Communities**

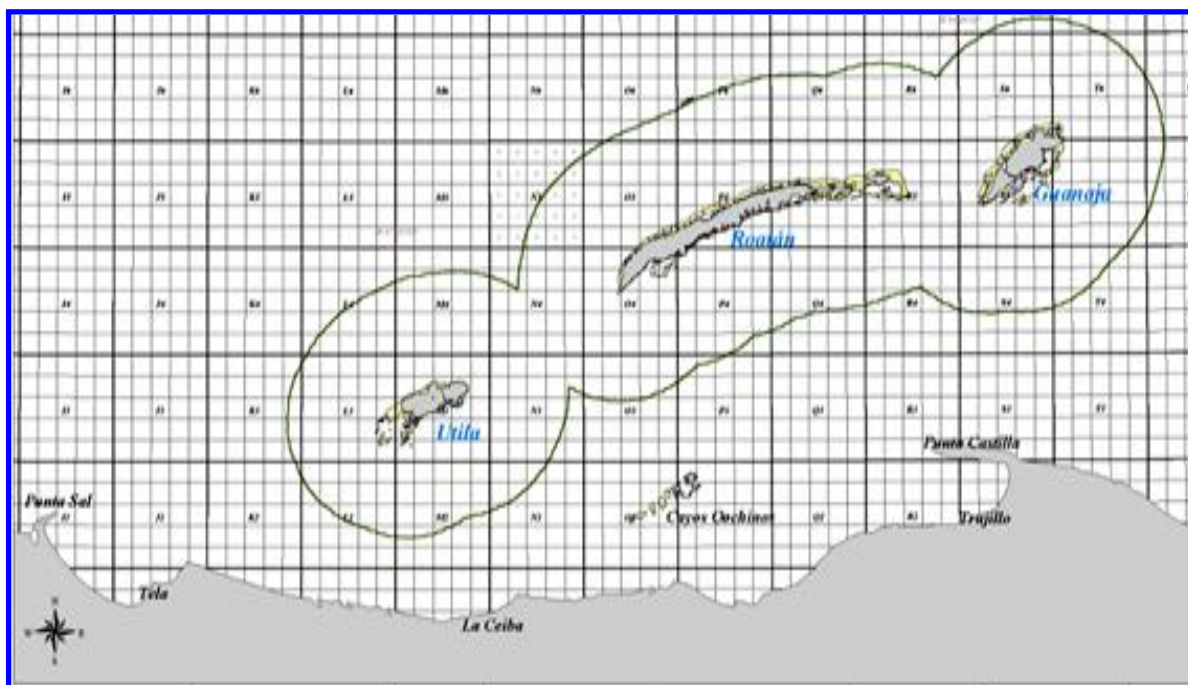
<b>Fishing Equipment</b>	<b>Number of Fishermen Involved</b>
Manual fishing line	270
Hook	100
Manual extraction	77
Harpoon	72
Seine nets	13
Funnel nets	11
Sea-floor gillnet	7
Pike Fishing Line	6
Trolling line	6
Hydraulic fishing line	4
Manual pulley	5
Pelagic gillnet	3
Sea-floor long line	1
Fishing net for open waters	1

Source: PMAIB Project

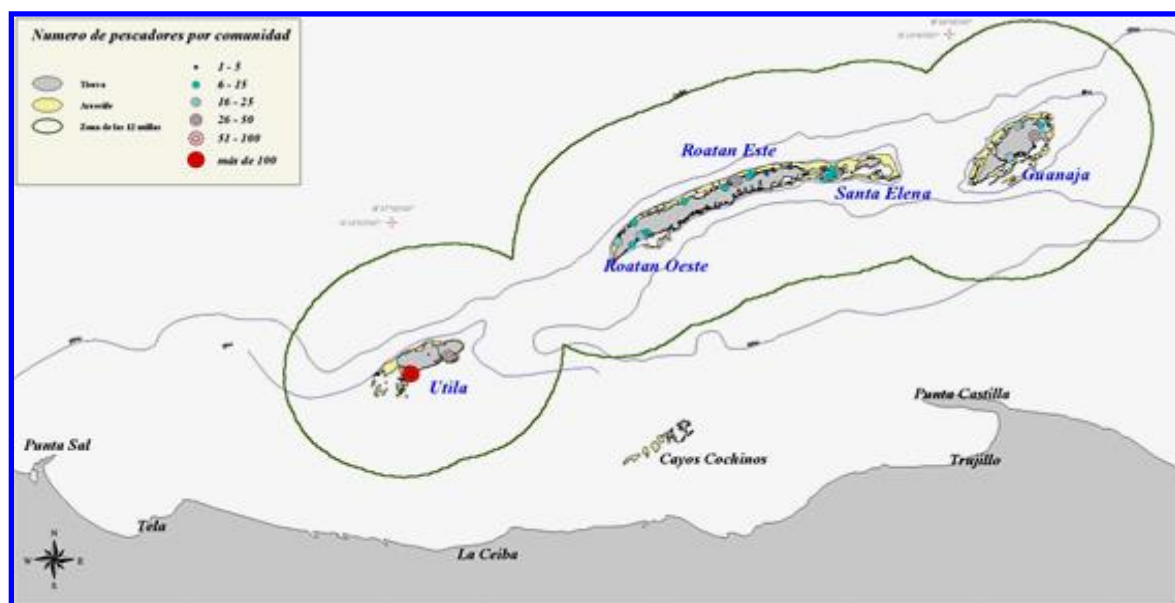
Conversely, there are also fishermen from the coastal area of La Ceiba and the nearby Garífuna communities that work in the islands, especially in Utila. They depend on the most important collection plant in the small islands known as “Los Cayitos”, owned by Elizabeth Diamond.

Fishing activities in the Bay Islands are not organized at this time, and there has been little training activity reported by fishermen. However, they would like to receive support for vessel repair and purchase of fishing equipment.

Except for the Punta Gorda and Flowers Bay Communities that are starting their fishing organizations, there is no other fishing organization in any of the three main islands of the area. At present, one of the priorities of the BICA Utila and Roatán Marine Park Association is to promote the creation of a fishing organization.

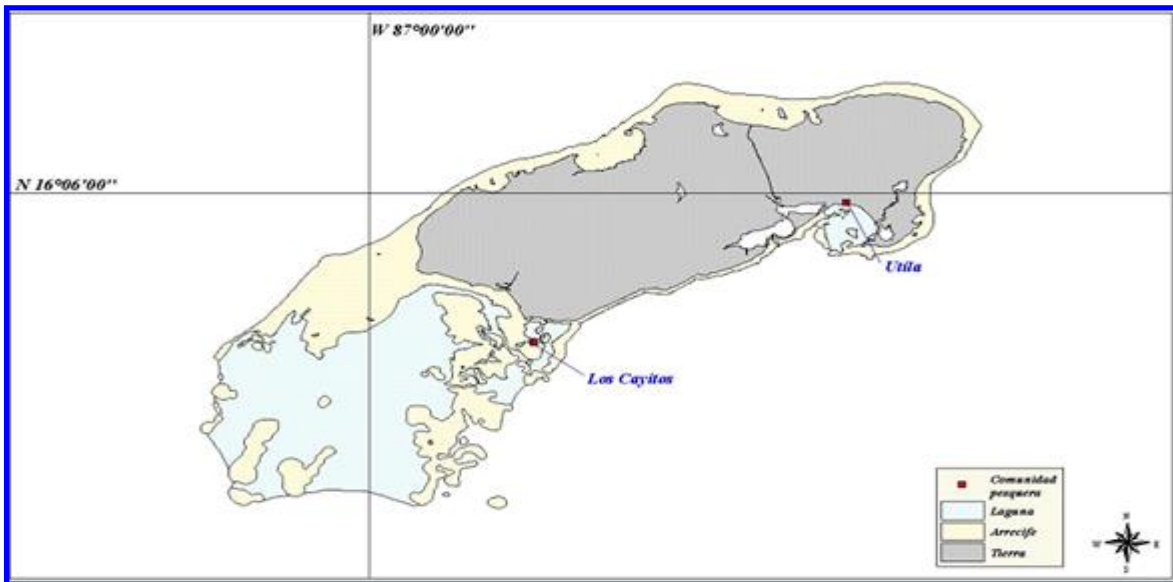


**Map 12**  
**Fishing Areas Used by Bay Island Communities**  
 Source: PMAIB Project

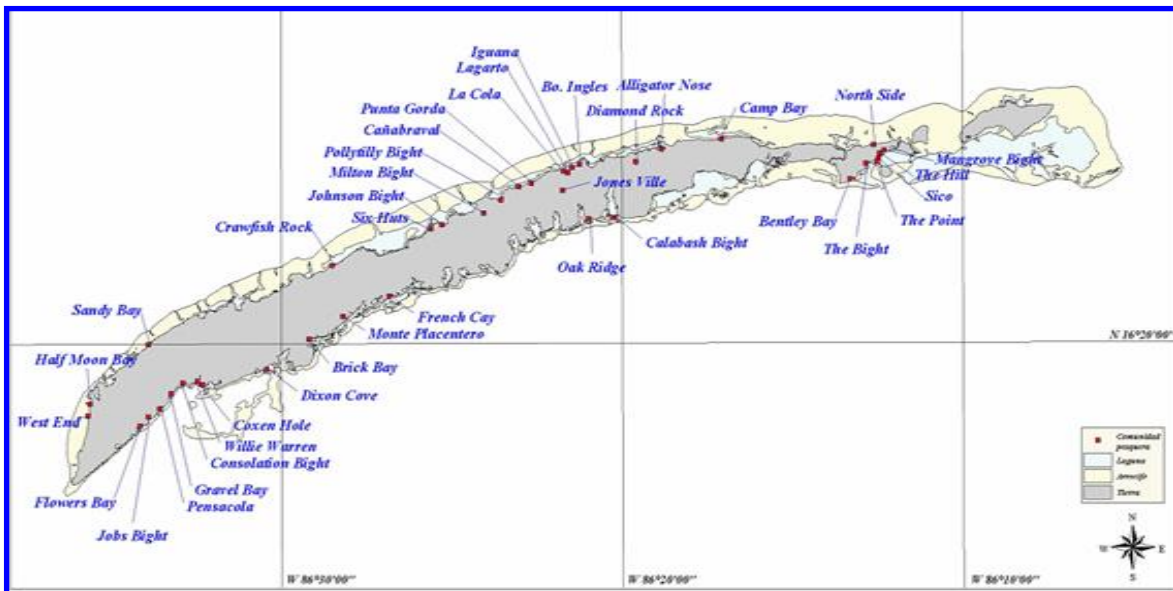


**Map 13**  
**Spatial Fishermen Distribution in the Bay Islands**  
 Source: PMAIB Project

Industrial fishing is based in the Bay Islands. They carry out their activities in Caribbean, national and foreign waters. More than 90% of their production is exported. The industrial fishing fleet is made up of 365 vessels engaging in lobster, shrimp, scale-fish and conch fishing, producing a total of 5,600 metric tons per year.

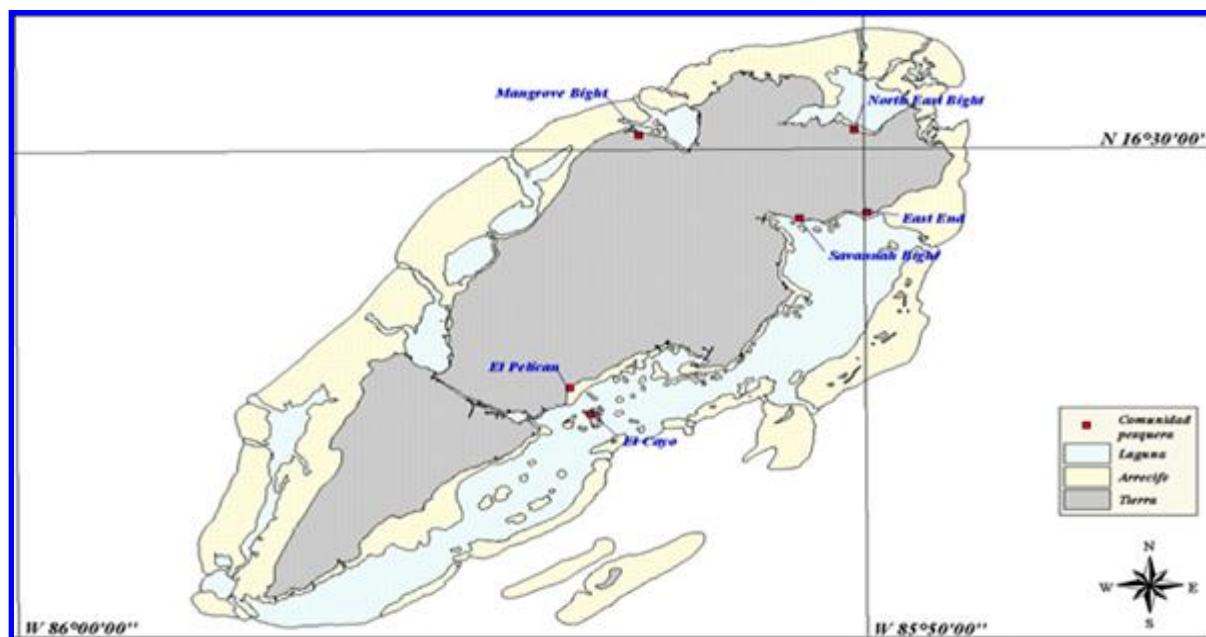


**Map 14**  
**Utila Fishing Communities**  
 Source: PMAIB Project



**Map 15**  
**Roatán Fishing Communities**  
 Source: PMAIB Project

As of this date, the Bay Islands Department has declared eight marine reserves, all of which include reefs. One is a forest area; one includes ecotourism sites and reefs; four include rain forests and coral reefs; one contains dry forest and one is a reptile refuge (PMAIB, 2000).



**Map 16**  
**Guanaja Fishing Communities**  
**Source: PMAIB Project**

## m. Trujillo Communities

This area includes 700 fishermen who had the technical support of MODERPESCA, supported by the Government of Japan through the Japan International Cooperation Agency –JICA- from 1991 to 1994.

MODERPESCA has room and board facilities for persons who receive training on topics such as repairing outboard motors and fiberglass handling, among others. It has a dining area and all the necessary facilities for a training center. In addition, it has an ice-making plant and a cold room. These facilities also have office space for DIGEPESCA, just as the building in La Ceiba does. Fishing operations in this area take place in the Honduran Mosquitia platform and near Trujillo Bay, alongside the lagoons of the Guaymoreto National Park.

This center, as many others from the south of Belize to Honduras, does not use its infrastructure fully, and it is obvious that much capacity building is needed on issues such as organization, gillnet repair, gillnet production, and maintenance of the ice-producing plant, in order to achieve more sustainable fishing, as required by MODERPESCA.

We were able to see how fish are packed at this plant so that it lasts at least ten days in ice. The product is packed in fiberglass boxes measuring approximately 1.5 x 1.5 meters. Fish are placed in layers, alternating them with ice layers. Each of these iceboxes costs US\$1,333.00. This is a simple and economic technique, and it is an alternative to building and providing maintenance to a cold room. It can also be replicated at other sites.

**Table 10a. Summary of Fishing Organizations in the Honduran Caribbean Region** <sup>32</sup>

Organization	Years Established	Number of Members	Fishermen Non-Members	Organization's Expectations	Projects Undertaken	Conflicts	Fishing Area (PA, TURF, others)	Marketing	Fishing Management
<b>Masca</b>	-	-	59	Improving their fishing gear in order to export through the Cooperative	-	Fishing area	Bahía de Omoa	No	No
<b>ASMINPANO</b>	5	35	50	Development of a fish-aggregation device project to reactivate collection and processing centre.	Obtaining outboard motors, boats and equipment and building a collection center	Leadership within the organization	Bahía de Omoa and areas bordering Guatemala in Punta de Manabique	No	No
<b>ASOVEPEPO</b>	4	200	10%		Establishing a communal bank	Reducing fishing in the area caused fishing in Belize waters	Belize's Province # 1	Retail sales and export firm (snapper)	No
<b>Cooperativa Unión Torbeña</b>	6	20	30	Strengthening their Ecotourism Project	Los Micos Resort with PROLANSTATE	Due to fishing areas and using gillnets that are too long	Laguna de Los Micos Jeanette Kawas NP coastal area	No	No
<b>Asociación de Pescadores de Triunfo de la Cruz</b>	7	90	10%	Improving their fishing equipment	No	Organizational	Jeanette Kawas NP and Punta Izopo	No	No

<sup>32</sup> Only those organizations that have been legally established were taken into account for the summary, since they are the ones with the most possibilities of being considered for MAR Fund actions.

**Table 10b. Summary of Fishing Organizations in the Honduran Caribbean Region**

Organization	Years of Activity	Number of Members	Non- members	Expectations	Projects Carried Out	Conflicts	Fishing Area (PA, TURF, others)	Marketing	Fishing Management
Cooperativa de San Vicente	3	15	40	Improving their marketing	-	Better markets	Laguna de Los Micos	No	"Yes", they basically protect the smaller-size specimens captured in the lagoon
Asociación de Pescadores Nueva Armenia	4	35	15	Improving their transportation and hotel services	Building community hotel and restaurant.	Organization	Cochinos Cayes PA	No	"Yes", just like Guatemala's Garifuna fishermen, their fishing tradition leads them to using sustainable techniques



## 8. THE MEXICO EXPERIENCE

### 8.1 Background

The first cooperative was established in the fifties in Cozumel. At present, 8 cooperatives have formal concessions and 10 fishing permits have been authorized. The difference between these two types of access to fishing is that the former one is more restricted, since it allows fishing of certain species in specific ocean and coastal areas; the latter are fishermen who are deemed “licensed”. Historically, concessions have been granted geographically, from north to south, defining longitudinal zoning that runs parallel to the Mayan Riviera coastline (see Map 17). This has helped with co-management, especially in the case of lobsters, since the concession only belongs to a specific number of fishermen and vessels in the area of the concession area and only one or two specific species can be caught.

The cooperatives that fish in Hol Box and Isla de Mujeres are the ones that primarily catch scale fish, octopus, and shark. The ones that fish from Cancún to Chetumal focus on lobster and then on scale fish.

Regarding financial aspects, there was formerly Fishing Bank, BANPESCA, in the area. It existed while there were large-scale shrimp-fishing cooperatives. This incentive mechanism disappeared due to misuse of the credit provided to the cooperatives. From these large cooperatives, currently only licensed shrimpers in Puerto Juárez operate.

### 8.2 Project and Resource Management

There are eight areas where fishing is more prevalent in Mexico, along the whole Mayan Riviera. Twenty-four cooperatives that are members of the Federación Regional de Sociedades Cooperativas de la Industria Pesquera del Estado de Quintana Roo (Regional Federation of Fishing Cooperatives), headquartered in Puerto Juárez, fish in these areas. These cooperatives focus their fishing efforts on the following species: lobster, octopus, and scale fish.

The only area allowed for Queen conch (*Strombus gigas*) is Banco Chinchorro (See Map 18), as stated by Eduardo Pérez Catzim, the President of the Confederación de Cooperativas Pesqueras de Quintana Roo (Quintana Roo Fishing Cooperative Confederation), from Cooperativa Cozumel. This cooperative can also catch conch in Arrecifes de Cozumel National Park, but due to lack of adequate control and oversight, they have opted for not doing so because illegal fishermen would take advantage of the situation. As a result, lobster is the main product in the Riviera, as are some species of the *Serranidae* family, such as groupers, the genus *Lutjanus* (hogfish, snappers, red snappers), sharks, and octopus.

The closed season on scale-fish is from March to June in the whole Quintana Roo region; closed season on groupers comprises from March 15 to April 15.



Quintana Roo has fishing localities in:

- Holbox
- Chiquilá
- Isla Mujeres
- Punta Sam
- Puerto Juárez
- Puerto Morelos
- Cozumel
- Playa del Carmen
- Tulúm
- Punta Allen
- Xcalak
- Calderitas

And permanent fishing camps in:

- Maria Elena
- Punta Herrero
- Mahahual
- Banco Chinchorro
- Cabo Catoche
- Boca Iglesias
- Boca Nueva
- Cayo Ratón
- Isla Contoy (Map 17).

Map 17 has an example of the zoning for fishing cooperatives in the Mexican Caribbean, as well as some localities and fishing camps.



Map 17  
Fishing Areas in Quintana Roo, Mexico



**Map 18**  
**Example of Fishing Zoning in Banco Chinchorro**  
**Source: National Fishing Nautical Chart, SAGARPA**

There is longitudinal zoning along the Quintana Roo coast, so that every cooperative engages in their fishing activities in a specific area. Concessions do not extend further than 10 marine miles from the coast. Thus, the ocean is open to cooperatives that are licensed, but do not have concessions to catch scale fish, octopus and shark, among other species. This is especially evident in the Isla Mujeres National Park-Punta Nizuc-Arrecifes de Cancún National Park complex.

Fishermen who are members of cooperatives are organized in various commissions, and they can engage in control and patrolling. Generally, they are accompanied by the Procuraduría Federal de Protección del Ambiente (Federal Environmental Attorney's Office) —PROFEPA— and the Comisión Nacional de la Pesca (National Fishing Commission) —CONAPESCA—, established in 2001. This has helped to increase the capture of fishermen that operate outside their assigned fishing areas.

The advisory councils for natural protected areas have helped with the co-management of protected areas, and the groups of associated fishermen belong to the councils. This has strengthened control and oversight.

The case of Vigía Chico Cooperative, in Punta Allen community, is one of the most interesting, and has been described as one of the most successful fishing concessions in Latin America. At present, it is the cooperative with the most successful production, due to the use of “little Cuban houses” (shade) and because its fishing area is located in Ascensión Bay in the Sian Ka'an Biosphere Reserve, which is an important breeding and recruitment area for lobster and other species.

## 8.3 Marketing

Marketing in some of the Quintana Roo cooperatives is the most advanced in the MAR region, along with that of the two main cooperatives in Belize.

There already are marketing channels for live lobster export sales to international markets, for which special techniques have been developed. In addition, there are large-scale middlemen selling lobsters to hotels, mainly in Cancún.

A broker firm is in the process of being established by the four most important cooperatives in the area (Langosteros de Caribe, Cozumel, José María Ascorra and Vigía Chico). This firm will be responsible for all the transactions to local markets, hotels and international exporters. This is considered a first step to stop the dependency on middlemen.

## 8.4 Organizational Issues

The Federación Regional de Sociedades Cooperativas de la Industria Pesquera del Estado de Quintana Roo (Regional Federation of Fishing Cooperatives) is integrated by 24 of the 25 fishing cooperatives in the region, ranging from Hol Box to Xcalak; nineteen of them concentrate on catching lobster, and the rest, on scale fish, octopus, sharks and Queen conch. Each of the cooperatives contributes US\$200 to the confederation (Pérez Catzim 2007, personal comm.) and its Board of Directors is elected every two years. It has been able to secure projects sponsored by ALIANZA and other governmental support to artisanal fishing, by means of which it has been possible to establish a fishing trust.

The number of members per cooperative is limited to the number of members negotiated for the fishing concession with the Comisión Nacional de la Pesca, (National Fishing Commission) —CONAPESCA—, since it restricts the number of vessels and fishermen to no more than 50 per concession; at present, the average is 30 per cooperative. Out of 25 cooperatives, only one —the “Isla de la Pasión”, headquartered in Cozumel— does not belong to the Federation. Its primary activity is catching scale fish. It has not joined the Quintana Roo fishing organization because it does not want to work according to the standards established by that organization.

According to Eduardo Pérez, the President of the Federación de Cooperativas Pesqueras de Quintana Roo (Quintana Roo Fishing Cooperative Confederation), there are approximately 3,000 fishermen in the area, of which 10% are illegal.

This is partly due to the cooperatives’ rigid stance on members who do not follow regulations, expelling them when they do not mend their ways. They continue to fish, but they have now become illegal fishermen called “raneros” by locals, and have contributed to increasing “phantom” fishing<sup>33</sup> (Medina 2007, personal comm.). This “phantom” fishing has been favored by the increase in massive tourism, which attracts persons unconnected to fishing who, nevertheless, fish illegally, small sized, which is also promoted by the local hotel market.

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<sup>33</sup> Catch by illegal un-registered fishermen

A way to reduce this problem is by establishing “candidates”; that is, fishermen who work legally with cooperative members, and are awaiting their incorporation, which depends on their attitude toward norms established by the Confederación de Cooperativas Pesqueras de Quintana Roo (Quintana Roo Fishing Cooperative Confederation). These groups of “candidates” also make up the fishing camps, of which the most important are: Holbox, Isla Mujeres, Cancún, Puerto Morelos, Cozumel, Tulum, Punta Allen, Majahual, Xcalak, Banco Chinchorro, Cabo Catocha and Maria Elena.

According to WWF, there are 19 cooperatives dedicated exclusively to lobster, with 836 members.

**Table 11. Characteristics of Lobster Cooperatives in Quintana Roo**

Cooperatives	Members	Paid Employees	Vessels
19	836	423	451 small <sup>34</sup>

Source: National Fishing Nautical Chart 2005 and SAGARPA

The relationships among the Quintana Roo fishing organizations and the Comisión Nacional de Areas Naturales Protegidas (National Commission for Protected Natural Areas) —CONANP— and the Secretaría de Medio Ambiente y Recursos Naturales —SEMARNAT— (Environmental and Natural Resources Secretariat) are very good. The fishing sector also has a very good relationship with the Secretaría de Ganadería, Agricultura y Pesca (Livestock, Agriculture and Fishing Secretariat) —SAGARPA—. Relations are not as strong with PROFEPA, which only oversees Natural Protected Areas (NPA). This rupture in their relationship has worsened because there are no penalties established for environmental offenses unless offenders are caught red-handed within the NPA. This undermines other institutions catching offenders who must face jail time, without any substitute measures.

It appears that “disorganized” illegal fishermen have very good lawyers and allege third-party rights, insolvency procedures, and human rights violations. It would, therefore, be convenient to contact their leaders in order to incorporate them into formal fisheries.

A success attained in 1992 by the Confederation of Cooperatives, under CAFTA at the national level, was to determine that commercially important species could only be fished by cooperatives. This is one of the reasons why artisan fishing in the 900-kilometer Quintana Roo coastline is considered by experts to be one of the best organized and managed in the country, second only to the one in Baja California.

## 8.5 Training

According to the information provided by organizations and fishermen who were interviewed, the training that they need the most is in the English language for members of tourist cooperatives, who are the same fishermen who make up the fishing cooperatives.

<sup>34</sup> Small vessels are those that can carry from 2 to 4 fishermen

Other topics requested by the fishermen groups include training on ecotourism, client service, environmental education, and fisheries biology.

## **8.6 Description of Fishing Organizations and/or Communities**

Following is an overview of the fishing communities visited, from South to North. They were selected based on their geographic accessibility and their institutional development, which had been previously consulted with area experts.

### **a. Cooperativa Langosteros del Caribe**

Located in Chetumal, this cooperative was established on January 26, 1991 as the Sociedad de Cooperativas Pesqueras Responsabilidad Limitada (R.L.) de Capital Variable. This is the kind of legal organization system used by all cooperatives in the region.

The cooperative has an administrative office, a meeting room, and storage space in which they keep a lot of latrines to be placed in Banco Chinchorro, to improve fishermen's quality of life. Headquarters are in Chetumal. There are 31 members in the cooperative and they engage solely in catching lobster and conch. Guillermo Mayorga, the current President of the organization, states that they have gone through an interesting process by which they have become aware that the only way to reduce the impact of fishing is by implementing economic alternatives. Thus, they have established a tourist cooperative, and they have been able to train at least 8 fishermen members that will be able to attend tourists that will arrive as a result of the Maya coast development. This new development is a few minutes from the area and includes an important cruise-ship port at Majahual. In addition, along with four other cooperatives (Cozumel, José María Ascorra and Vigía Chico) they are establishing a broker firm that will eliminate middlemen. They are also building a collection center in their headquarters in Majahual.

The leader of this cooperative highlighted the fact that "legal" fishermen are diminishing because the children of historical fishermen now wish to work in other better-paying activities such as eco-tourism.

Formerly, this cooperative had 6 conch quotas (2,500 kilos/quota/month) for its members, but it has decreased yearly, to the current 2,000/kilos/month.

The structure used to administer the funds so that the organization remains profitable is:

From the U\$36 obtained per kilo, 26% is used for administrative expenses; 10% for the pension fund, which only this cooperative has been able to establish; 4% for the federation and the remaining 60% is distributed among members at the end of the cooperative's fiscal year.

## **b. Cooperativa Andrés Quintana Roo**

It is located in Xkcalac, and its fishing area is in Banco Chinchorro. It shows a lesser degree of development than that of the other two Chetumal cooperatives. It engages in lobster and conch fishing.

## **c. Cooperativa Banco Chinchorro**

Located in Chetumal, this was the first cooperative in the Mexican Maya Riviera region, and from it the Cooperativa de Langosteros was formed. Jorge Fernández presently leads it. Its structure is substandard compared to that of Cooperativa de Langosteros, and it needs strengthening. Its facilities reflect that its organizational level is below that of the other two Chetumal cooperatives.

## **d. Cooperativa Tulum**

This cooperative is located in the Tulum community, and its leader is Antonio Balam Catzim. He informed us that there are 25 members and 7 candidates. There are many illegal fishermen in the fishing-concession area in which they work (between Chetumal and Espíritu Santo Bay). They have had a fishing concession since 1981, before the Sian Ka 'an protected area was established. They have a store open to the public, with freezers, a weighing scale, and an area to clean shellfish, as well as a meeting room.

The organization's future activities include strengthening their tourist cabin project on the beach, near the Tulum archeological site. They have a very good relationship with SAGARPA. Their most important catch is lobster, which they sell for US\$37 per kilo. The minimum tail size is 13.5 cm. Other species caught are red snappers, cherna groupers, and groupers.

## **e. Cooperativa Vigía Chico**

It is located in Ascensión Bay, 45 minutes from Tulum by dirt road. It is the most successful cooperative insofar as producing lobster is concerned. This is partly because many of its members are working in other alternative activities, such as recreational and sport fishing, and tourist transportation. High productivity is also a consequence of its location, since its fishing area is Ascensión Bay, which is very productive, and therefore represents a comparative advantage. In addition, they use traps called "little Cuban houses", or shades, to catch lobster, which has made its management more efficient. The distribution of plots for placing the shades is determined by consensus and based on the areas where fishermen have historically worked.

This cooperative is the most profitable. It does not have a collection center, but it has an administrative office in Tulum. This is due to a stable market, which is previously contacted when the product is about to arrive at the beach. One of the current members, don Casimiro, is the son of one of the founders of the Confederation located in Puerto Juárez, which indicates this is one of the oldest cooperatives in the region.



#### **f. Cooperativa José María Ascorra**

It was founded in 1984. At present, it has 21 members, 7 of which are tourist guides in their tourist cooperative. Their headquarters are in Chetumal, and they catch lobster and Queen conch. Their fishing area is Espíritu Santo Bay, in the Punta Herrero area. They have received support from the Rare Center to teach English to the guides. At present, they consider that support for tourist activities in the Sian Ka' an-Xcalak-Chinchorro area is very important for them.

#### **g. Cooperativa Cozumel**

It was established in 1963. Its current President, Eduardo Pérez Catzin, informed that they have a concession from before the creation of the Arrecifes de Cozumel National Park, where they fish. At present, they have infrastructure that includes a retail and wholesale store, an administrative office, a cold room, an ice-making machine, a processing room, and a meeting room. Its future project is a restaurant within the cooperative facilities.

This is the only cooperative that is processing fishing products and is raising sales prices to US\$42 per kg of lobster tails. In addition, they also catch scale fish of the Serranidae group (groupers, cherna groupers, "cabrillas") (see Photograph 10.)

This is the only cooperative that has two fishing areas, since it previously fished in Espíritu Santo Bay, where it shares its fishery with Cooperativa José María Ascorra. This cooperative has the María Elena fishing camp in Punta Herrero, which is presently being supported by the Mexico COMPACT-UNDP Project (see Map 19). The cooperative has a good relationship with Arrecifes de Cozumel National Park. The Cooperativa Cozumel is also the only one that is selling live lobster to an exporting firm, at US\$ 42 per kilogram.



**Map 19**  
**Cooperativa Cozumel's fishing area**  
**Source: Cooperativa Cozumel**



**Photograph 10**  
**Common catch**  
**Photograph: Eduardo Pérez**



#### **h. Cooperativa de Morelos**

It was established in 1980, before Arrecifes de Puerto Morelos National Park was created. This was the only park whose creation was requested by fishermen. At present, there are 9 members from the original 45. They catch lobster and scale fish outside the park. The concession was granted to them in 1998.

Its President, Ramón Povedano, and its Treasurer, Cristóbal Vásquez, state that their future project is establishing a restaurant on the second floor of their facilities, which will consist of a closed space where products will be sold to the public, with two refrigerators/freezers and a weighing scale. Observations determine that there is still some work to be done in this cooperative in order for it to achieve the progress attained by the Cooperativa de Langosteros or the Cooperativa de Cozumel. One of the main expectations of this cooperative is to secure the support they need to establish seed capital for their marketing efforts.

#### **i. Cooperativa Makax**

This is a cooperative based on Isla Mujeres that has 15 members plus an additional 28 fishermen who depend on the members. Its leader is Alberto Méndez. The organization has been working for 12 years and it is almost exclusively engaged in deep-sea diving — with compressor— for harpooning scale fish. This is called technological fishing; previously they skin-dived, which naturally regulated populations of fish in the area. However, after the first compressor arrived on the island, they abounded and, with them, decompression accidents. As a result there has been less management of fisheries.

The training they consider a priority, as do the other cooperatives in Isla Mujeres, is diving instruction. This cooperative's territorial waters encompass the Caribbean Sea outside the lobster-concession areas where the Cancún cooperatives fish.

The cooperative's facilities include a rudimentary unloading area, processing facilities that are being built, as well as an office and a storage area, for which they have received support from the ALIANZA governmental project.

#### **j. Cooperativa Justicia Social**

This cooperative is also located in Isla Mujeres, and Baltasar Gómez, "Don Chayo", leads it. He is a versatile leader who proudly showed us how they were able to acquire the first de-compression chamber as a social service for artisanal fishermen. The cooperative is building a restaurant, a cold room, as well as unloading, processing and storage areas. All of this will come about as a result of the organization undertaken by cooperative leaders. It is important to mention that Isla Mujeres is the only place where fishing areas and concessions are rotated, since there are 9 cooperatives in a small area around Isla Mujeres Marine Park, Cancún and Punta Nizuk.

#### **k. Hol Box Cooperatives**

There are 7 cooperatives in this area engaged in catching octopus and sharks. Lobster and scale fish are also caught. The following are among these cooperatives: Yum Balam, Lázaro Cárdenas, Chiquila, Vanguardia del Mar, and Hol Box.

**Table 12. Summary of Fishing Cooperatives in the Mexican Caribbean Region**

Organization	Years Established	Number of Members	Fishermen Non-Members	Organization's Expectations	Projects Undertaken	Conflicts	Fishing Area (PA, TURF, others)	Marketing	Fishing Management
<b>Andrés Quintana Roo</b>	12		Over 50%	Improving internal structure	No	Illegal fishing, internal organization	Banco Chinchorro PA	No	Yes
<b>Banco Chinchorro</b>	16		Over 50%	Improving offices and organization	No	Illegal fishing, members' empowerment	Banco Chinchorro PA	No	Yes
<b>Langosteros del Caribe</b>	15	31	Over 100%	Establishing firm to eliminate middlemen, building a collection center	Establishing communal bank, improving member security, building office, improving fishing equipment	Illegal fishing	Banco Chinchorro PA	No	Yes
<b>Tulum</b>	25	25	Over 40%	Completing ecotourism project, improving infrastructure	Building ecotourism cabins	Lack of members' empowerment	Xcalak to Tulum	No	Yes
<b>Vigia Chico</b>		23	Over 25%	Establishing a company	Sports fishing	No	Ascensión Bay	No	Yes
<b>José Maria Ascorra</b>	25	21	Over 50%	Improving guides' English proficiency	Building office	No	Ascensión Bay, Pto. Morelos	No	Yes
<b>Cozumel</b>	44	17	Over 50%	Establishing a company, finishing the restaurant	Their organization's business development	No	Ascensión Bay, Arrecifes de Cozumel Park.	Yes	Yes
<b>Pto Morelos</b>	26	9	Over 50	Completing the restaurant and the processing plant	Building processing plant and restaurant	Internal, with their General Assembly.	Arrecifes de Pto. Morelos National Park	No	Yes
<b>Makax</b>	12	15	28	Completing improvement of infrastructure.	Improving facilities		Isla Mujeres - Punta Nizuk-Cancún	No	Yes
<b>Social Justice</b>	15	22	Over 50%	Completing restaurant and sales outlet	Divers hyperbaric chamber, restaurant, processing plant	Fishing rotation in small areas	Isla Mujeres Park-Punta Nizuk-Cancún	No	Yes

## **9. CONCLUSIONS**

### **9.1 Background**

- a) The oldest fisheries in the region are the ones belonging to the Garífunas in Belize, Guatemala and Honduras, which are eminently fishing communities.
- b) It is estimated that more than 60% of fishermen in the region are not members of an association, and that one of the reasons why efforts aimed at fishing activities in the region are unsustainable is because there are no strategies designed to integrate all fishermen into existing groups, preferably, or to organize them according to their interests.
- c) The concept of functional units for fishing management is only found in Mexico. This concept is a considerable step toward organizing and managing fisheries, since it allows more detailed efforts based on micro-regions and target species.
- d) The numbers of fishermen who are members of an association, by country, are the following: Belize, 2026; Guatemala, 900; Honduras, 1000; Mexico 1006. There are a total of 4,932 associated fishermen in the region, considering a  $\pm 5\%$  margin of error.
- e) It is estimated that 57% of fishermen in the area are not associated: Belize, 250; Guatemala, 2500; Honduras, 2000; Mexico, 1728, totaling 6,478 with a  $\pm 5\%$  margin of error.

### **9.2 Project and Resource Management**

- a) Insofar as the historical use of territories is concerned, we find that concessions on ocean rights or ocean possessions have only been legally granted in Mexico, where there are concessions for the use of fishing resources. There are some interesting cases regarding use rights, such as the fishing concessions in some lobster cooperatives in Quintana Roo (Langosteros del Caribe, Cooperativa Cozumel, Vigía Chico), the zoning of fishing areas in Guatemala (Amatique Bay by way of the Gentlemen's Pact), and the special rights granted to traditional fishermen of protected areas, which are included in the Protected Area management plans in the 4 countries.
- b) The use and customary zones, or historical fishing territories are disseminated throughout the region, but they are more prevalent in Mexico and in the Garífuna communities in the region, due to the type of localized fishing. An interesting example is the Gentlemen's Pact in the Guatemalan Caribbean region, which was recently incorporated into the laws of the country, but that has been very weak insofar as its actual application is concerned.

- c) Fishermen from the 4 countries agreed that one of the greatest challenges faced by fisheries in the MAR region is the lack of control and oversight. This is a weakness in fisheries control because restrictions, norms, and regulations must be respected.
- d) Based on consultations, it is considered that oversight and control is very weak in the Trujillo region in Honduras. The work area is very large, and it would be very difficult to implement a fishing co-management project at present. This is confirmed by the fact that there are no marine or coastal protected areas in the zone, except for the internal coastal areas in the Laguna de Guaymoreto.

### **9.3 Marketing**

- a) In regard to marketing, with the exception of some cooperatives in Mexico and Belize that are already marketing and exporting their products, groups of fishermen generally do not engage in systematized commercial activities due to several factors, including insufficient training, lack of seed capital, and absence of storage and processing infrastructure. In addition, training is needed so that they can develop and recognize the capabilities of each individual, in order to place them in key positions within their organizations.
- b) In every country, except Mexico, there is collection, processing and ice-producing infrastructure that has been abandoned and/or are operating at 25% of their capability.

### **9.4 Organizational Issues**

- a) Notwithstanding the efforts of organized fishermen to strengthen their organization, it must be mentioned that:
  - Without political will and if there are no changes in the national budgets of the bodies in charge of control and oversight;
  - If models or processes by means of which illegal fishermen can be incorporated into existing or new organizations are not implemented;
  - If a new association mechanism or a mechanism “compelling” fishermen to associate, such as communal or corporate licenses is not established, and
  - If their productivity is not changed and aimed at alternate activities,

it will be very difficult to implement effective co-management of Protected Areas in the MAR region, since “phantom” fishing will continue, demoralizing organized groups of fishermen who are trying to achieve sustainable development and to follow due process.

- b) Fishing organizations in the MAR region follow these legal forms of association: Confederations of cooperatives, associations of cooperatives, cooperatives, associations (except in Mexico), fishing commissions under the COCODES and councils (Guatemala and Honduras).

- c) Fisheries in the MAR region have a first-tier organizational level, which are assembled in 4 second-tier organizations: Confederación de Cooperativas Pesqueras de Quintana Roo (Quintana Roo Fishing Cooperative Confederation), the Belize Fisheries Cooperative Association, Red de Pescadores del Caribe y Lago de Izabal (Caribbean and Lago de Izabal Fishermen's Network), and the Red de Pescadores del Atlántico de Honduras (Honduras Atlantic Fishermen Network).
- d) There are considerable differences in the second-tier organizations in Mexico and Belize and the ones in Guatemala and Honduras. These differences are also evident among small associations in Belize, Guatemala, and Honduras.
- e) As to financial issues, we also observed that, in general and with the exception of some cooperatives in Mexico and Belize, establishing seed capital and patrimonial funds is not a priority. Only some leaders promote it in their cooperatives. The true fishermen still need to be somehow motivated and empowered so that they establish communal banks and generate adequate financial controls, such as accounting records and certificates attesting to profits being delivered, among others.
- f) Honduras has the weakest fishing organization in the area. This is especially evident in the Bay Islands, where fishing organizations are very limited. This is an opportunity to prioritize the work being undertaken by MAR Fund in the area, seeking to uniform fishing dynamics in the region.
- g) We consider that the initiative that has been implemented in southern Belize—from Monkey River to Punta Gorda including small fishing communities with approximately 25 fishermen, such as Barranco and Punta Negra— seeking to establish a Network similar to the one in Guatemala, is a worthwhile effort that must be supported as a mechanism for fishing co-management and to ward off bi-national conflicts.
- h) There is a good opportunity to strengthen this model and to replicate it in the bi-national Guatemala-Honduras area, thus integrating a regional fishing organization in the Gulf of Honduras.

## 9.5 Training

It is important to mention the need to provide technical support in organizational strengthening and fisheries management to reach the objective of administering community marine reserves, as it is currently lacking in many fishermen's groups.

According to the statements of leaders of organizations and institutions who were interviewed, the main training needs are:

- a) Fishing biology, English proficiency (Mexico), marketing, establishing communal banks, eco-tourism, and project development and management.

## **10. RECOMMENDATIONS**

These will be divided into a general category, which are recommendations on the criteria that should be followed in order to make MAR Fund's work more efficient. Then, specific recommendations are provided aimed at strengthening fishing management.

### **10.1 General**

- a. To select a fishing organization that is located within a protected area or that is associated to it.
- b. A fishing organization with a medium organizational or administrative level (this will guarantee MAR fund's financial and management investment), and will also strengthen organizations that are seeking sustainability.
- c. Spread ethnic-oriented support (Guatemala-Honduras-Belize), due to the considerable number of afro-descendants and Garífuna fishermen in the region.
- d. To support, whenever possible, those organizations making the greatest fishing efforts and with the best organization, such as the large cooperatives in Belize and Mexico.
- e. It is recommended that MAR Fund prioritize its support to bi-national areas, or those areas with the greatest fishing efforts, such as the Sarstún-Sarstoon/Temash, the central fishing province in Belize, Omoa-Punta de Manabique, and the Garífuna communities living in the Atlántida Department (Ceiba, Honduras).
- f. The large numbers of Guatemalan fishermen, and their impact on Belizean fisheries, and consequently on the MAR region, suggests that this area should be considered a priority.
- g. It is recommended that projects in Guatemala be managed by the Fishermen's Network, since it has more experience than its members in administrative, financial, and managerial issues. This, in turn, will strengthen the Network, so that it can gradually train its members on how to manage funds and other aspects of project management.

### **10.2 Background**

- a) Garífuna fishing communities in the region, because they are the oldest and the ones that have used selective fishing techniques systematically, should be the first ones benefited by the project. They also have the appropriate concept of space-territory and a proper focus on conservation.
- b) A strategy to group together fishermen who are not organized and to incorporate them into other associations must be developed. The possibility of regionalizing a norm authorizing licenses only to organized groups should be evaluated.
- c) To evaluate the Mexican model used to establish fishing management functional units, in order to incorporate them into Belize, Guatemala, and Honduras, facilitating the establishment of community fishing reserves.

### 10.3 Project and Resource Management

- a) In regard to fishing concessions, it is suggested that the Japan case be evaluated. According to this model, responsibility for everything that happens in the area of the concession is borne by the group. However, in the Mexican case, a concession of a marine territory indicates that only an “x” number of fishermen may fish a “y” number of species with a “z” number of vessels. This is a less restrictive management mechanism.
- b) It is recommended that work be undertaken with the following communities, which are engaged in fishing co-management by concession, or in a similar system within the region:

#### **Mexico:**

- Campo Pesquero Maria Elena, through the Cooperativa Cozumel, because this is an area in which fishermen are being strengthened by means of the COMPACT Project in Mexico, and because these fishermen are working under one of the most developed organizations in Mexico, Cooperativa Cozumel.
- Cooperativa de Langosteros in Banco Chinchorro. As in the previous case, we consider that this is a cooperative that has been directing its efforts toward fishing sustainability, and have had a positive impact in decision making.
- Cooperativa Tulum, because it is trying to decrease its fishing efforts by means of alternate projects, such as eco-tourism.

#### **Belize:**

- Punta Gorda Fishermen Association, which could strengthen their actions with the Sarstún fishermen in one of the most conflictive areas, and with approximately 200 fishermen.
- Monkey River Fishermen Association; this is a small group supported by the COMPACT Project and, thus, we consider that their efforts can be doubled with MAR Fund, and that results could be seen in the short term.

#### **Guatemala**

- Asociación de Pescadores Tradicionales Garífunas: which has had experience managing coral patches and with which FUNDAECO has planned a project to co-manage reefs, much as a municipal marine reserve.
- Asociación de Pescadores del Río Sarstún, which is very interested in controlling its fishing area in the Sarstún river. This has added value because it is a bi-national area where considerable efforts are being undertaken to create synergies with Punta Gorda fishermen, in addition to having a Maya Q'eqchi' component.



- Asociación de Pescadores de Cayo Quemado; its leader, Hortensia Reyes, has been promoting that her community avoid non-selective fishing equipment, such as seine nets. Additionally, this community has the advantage of working in a place where there are many species, so that a co-management project in the area would provide support with an eco-systemic approach.
- Comisión de Pesca de Santa Isabel, along with the Comisión de Pesca de Estero Lagarto, two groups that we would define as a priority, since they are working in a small area in La Graciosa inlet, and in the Santa Isabel pond within the Punta de Manabique Protected Area.

## **Honduras**

- Pescadores de Nueva Armenia, which already has a medium organizational level (a community eco-tourist restaurant and hotel) and the support from Fundación Cayos Cochinos
- Pescadores de Omoa, which has the initial infrastructure to improve their marketing and wish to work in an artificial-reef project in Bahía de Omoa. In concrete terms, the convenient thing to do in this area would be to implement fish-aggregation devices, in order to reduce the time fishermen need to get to their work area and to protect resources.

## **10.4 Marketing**

- Individuals with the proper characteristics must be identified within the organization, so that they can “leave” their fishing activities, just as others have done. Some are engaging in tourist activities, and some in marketing. This is not aimed at eliminating middlemen, but at providing increased dynamism to offer and demand of products, so that the structures in many of these organizations become operational. Marketing must be linked to buying sizes that are larger than the first catch and quotas that maintain prices. We must remember that scarcity determines price, but we can only achieve this if we have a higher percentage of fishermen participating in associations and regulated by fishing administrations. This ensures proper management of this resource and a change in the extraction approach to one aimed at management and conservation.
- Training members of the General Assembly of fishermen organizations is very important, in order to make them aware that their role as fishermen will “disappear” and that they will become new professionals. This is the only way in which the fishing sector will be empowered (the case of ASOVEMEPO) and fishermen can become office workers and micro-entrepreneurs. A fisherman must “forget” fishing and must find the jobs of marketing, finding markets and transporting products attractive.
- Support must be provided in order to strengthen fishermen groups, so that they feel like the true owners of collection and processing centers, and so that they can operate in way intended when they were established: to improve the quality of fishermen’s lives.

## 10.5 Organizational Issues

- a) Organizations must be provided orientation, so that they can change their closed-organization approach to an open-organization one that starts recruiting illegal fishermen by means of a systematic qualification process for them to become “candidates”.
- b) To generate exchanges among second-tier organizations and their leaders in the MAR Region, in order to exchange experiences and overcome weaknesses.
- c) To generate the strategic plans for each organization, so that they guide their actions in the medium term (5 years) and so that their progress can be evaluated.
- d) To develop business plans for each organization, by means of which mechanisms for communal bank are established.
- e) To strengthen the BICA Utila and the Roatán Marine Park efforts to start fishing organization in the Bay Islands.

## 10.6 Training

- a) The main recommendation is that training be theoretical and practical, that it be provided according to the needs that have been identified and that it be implemented by means of modules allowing the evaluation of previous modules and of the progress achieved through their already-active projects.
- b) It is also recommended that training on fishing biology, the English language for tourist services, marketing, ecotourism, administration, finances, and project development and management be provided.
- c) In addition, it is recommended that some first-tier organizations such as the Cooperativa de Langosteros del Caribe or the Cooperativa Cozumel be sub-contracted to implement the training courses related to organizational strengthening and marketing, in conjunction with independent consultants or other organizations. This is a way of establishing the “fisherman to fisherman” methodology, which is more effective to transfer information in a way that is readily accepted by the fishermen groups.
- d) In reference to training on establishing communal banks and seed capital, regrettably, we are quite worried because we perceive that there is no real empowerment in most fishing organizations -except for some Quintana Roo and Belize cooperatives- on the role of the members of the Assembly in reference to the establishment of seed capital. As an example we can mention that an organization with 50 members paying a monthly fee of \$5 can attain a \$3,000 seed capital by the end of the year. This could be used as counterpart funds for a project, or as a sum to start negotiations to that aim.
- e) An organization such as the Red de Pescadores de Guatemala could be generating \$6000 a month, thus ensuring its sustainability. However, work must be

accomplished from another perspective, with the fishermen's families (Perspectivas Rurales, 1999). The existing social relationships among the various groups, their families, their backgrounds, natural rivalries due to social classes, and their savings habits must be fully understood. From that perspective, I consider that it is necessary to address the concept of this training from a gender point of view, which places women –as natural brokers for fishing activities- as the core in the financial management of these resources, if communal banks are to be established.

- f) Training on organizational strengthening is also essential. It must include all the elements, such as responsibilities of the Board of Directors, a proper knowledge of the roles of the General Assembly and the By-Laws, and a definition of a five-year strategic plan for the organization. Organizations do not apply and know nothing about assigning responsibilities, establishing the roles for each member, forming groups with specific interest and increasing the number of members. It is important to explain to the General Assembly and to the Board of Directors that clans are natural in organizations, but that they must be reconsidered, in order to apply a "common good" approach.
- g) In the case of the English course, we suggest implementing a course with students' total immersion during 3 months, in a place where only English is spoken, such as Belize. This intensive course would allow rapid progress of participants to Level 5 English.

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## 12. ANNEXES

### 12.1 Interview Guide for the Diagnostic on the Situation of Fishermen Groups in the MAR Region

#### Group background:

- How and how long ago did the group of fishermen come together?
- How many members are in the group?
- What is the total number of fishermen in your group's area of influence? What is the number of fishermen who do not belong to any association?
- What are the group's expectations?
- Have they developed a fishing project or any other kind of project?
- What were and what are the prices of species caught, and what are their sizes? Optional.
- What are the main conflicts faced by the group?

#### Group Characteristics:

- What are relationships like with Governmental and Non-Governmental Organizations?
- Where do the members of the group work: in a protected area, outside a protected area, in a coastal or ocean zone, etc.?
- Current use of fishing resources (table with fishing seasons)
- Size and location of their fishing area.
- Who do they market their products with?

#### Group's Fishing Management:

- Have you thought about managing fishing or have you ever managed fishing?
- Give an example of fishing co-management.
- Is there any applicable territorial model, such as the "Gentlemen's Pact" in Guatemala?
- Do you know what community participation in managing and administering fishing resources is?

#### Group's Organizational Issues:

- Do you have an accounting system in your office? Do you have an accountant-administrator? Do you have legal capacity? Is your group a cooperative, an association, etc.?
- What is the seed fund used by your organization?
- How is this seed fund constituted? By members' contributions (communal bank), donations, etc.?
- What do you think are your needs as to your technical and organizational capabilities (training)?

## 12.2. MAIN CONTACTS WITH RECOMMENDED GROUPS

Most fishermen contacted do not have an e-mail address, and sometimes it is difficult to contact them through their mobile telephones, so it is better to contact them through the organizations supporting them.

Country/Contact	Telephone / E-mail	Position
<b>BELIZE<sup>35</sup></b>		
Daniel Castellanos		President, Monkey River Fishermen Association
Armando Ramírez		President, Punta Gorda Fishermen "Association"
<b>GUATEMALA<sup>36</sup></b>		
Julián Arana	(502) 54030445	President, Asociación de Pescadores Garífunas
Gladis Ramírez	(502) 53955035 / 53039822	President, Comisión de Pesca Estero Lagarto
Eustaquio Ochoa	(502) 59083304	President, Comisión de Pesca de Santa Isabel
Hortensia Reyes	(502) 55149535	President, Asociación de Pescadores de Cayo Quemado
Abraham Castro	(502) 52020411	Asociación de pescadores de Barra Sarstún
<b>HONDURAS</b>		
Juan Diego Cáliz <sup>37</sup>		President, Asociación de Pescadores de Cayos Cochinos
Sr. Jonson <sup>38</sup>		President, ASMINPANO
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