Prioritization of Coastal and Marine Protected Areas in the Mesoamerican Reef Region

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EXECUTIVE SUMMARY

This document describes the methodological process and the results obtained from the consultancy undertaken at the request of the Mesoamerican Reef Fund —MAR Fund—. The objective of this work was to prioritize marine and coastal protected areas in Belize, Guatemala, Honduras, and Mexico, with the purpose of defining, in a participative manner, the regional conservation priorities in the existing system of marine and coastal protected areas. The results of this prioritization will be used by MAR Fund as investment guidelines for establishing and strengthening an initial regional protected area network.

The MAR priority marine and coastal protected areas were selected by means of an interactive process that included the academic sector, NGOs, and national governmental institutions connected to the protected-area system in the four countries.

The consultancy was developed in two phases. The first phase consisted in reviewing past priority-setting exercises in Belize, Guatemala, Honduras, and Mexico, undertaken to conserve biological diversity. This document review was the basis to develop a proposal on the components, factors, and criteria that would be used to prioritize protected areas within the Mesoamerican Reef region. The proposal was analyzed by regional specialists and was agreed upon through a consultation process. The components and criteria selected by experts were used to develop a questionnaire that became the main tool to select MPAs in each one of the countries in the region. In order to ponder the MPAs, four national workshops were organized during the second phase, so that stakeholders would jointly select priority MPAs. Lastly, a regional workshop was held with MAR Fund's Board of Directors, Managers of the selected MPAs, and regional specialists, in order to review the results from national workshops and to identify, according to regional criteria, the MPAs in which MAR Fund will initially invest its financial resources.

A total of 63 marine and coastal protected areas were included in the prioritization process (54 declared and 9 proposed areas). They are part of the national MPA systems of Belize, Guatemala, Honduras, and Mexico, and they were selected by means of the MAR Fund Financial-Plan Model. By way of a public consultation process, a regional network of first-priority and second-priority marine and coastal protected areas was selected in the four countries located in the Mesoamerican Reef Region. They are: Corozal Bay Wildlife Sanctuary, Paynes Creek National Park, Port Honduras Marine Reserve, and South Water Caye in Belize; Punta de Manabique Wildlife Refuge and Río Sarstún Multiple-Use Area in Guatemala; Capiro y Calentura (Laguna de Guaymoreto), Barras del Río Motagua/Omoa Baracoa, Sandy Bay West End, and Turtle Harbour/Rock Harbour in Honduras; Santuario del Manatí and Yum Balam Flora and Fauna Protection Area in Mexico. In addition, a network of second-priority coastal and marine protected areas was selected, with the aim of supporting them in the future (Table 12).

The investment needs of each of the protected areas selected as first priorities were stated at the end of each national workshop.

LIST OF ACRONYMS AND ABBREVIATIONS

CBD	Convention on Biological Diversity
CCAD	Comisión Centroamericana de Ambiente y Desarrollo (Central American Commission on the Environment and Development)
CECON	Centro de Estudios Conservacionistas [USAC]; (Center for Conservation Studies at the Universidad de San Carlos de Guatemala)
CONABIO	Comisión Nacional para el Conocimiento y Uso de la Biodiversidad [Mexico](Mexican National Commission for Knowledge and Use of Biodiversity)
CONANP	Comisión Nacional de Areas Protegidas Naturales (Mexico) (National Commission for Protected Natural Areas)
COP	Conference of the Parties
ERP	Ecoregional Planning
FDN	Fundación Defensores de la Naturaleza, Guatemala (Defenders of Nature Foundation)
GEF	Global Environment Facility
IBA	Important Bird Area
IUCN	The World Conservation Union
MAB	UNESCO's Man and the Biosphere Program
MAR FUND	Mesoamerican Reef Fund
MAR	Mesoamerican Reef
MEFPM	MAR Ecoregional Financial-Plan Model
MPA	Marine Protected Area
NGO	Non-Governmental Organization
PA	Protected Area
PACT	Protected Areas Conservation Trust (Belize)
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity
SINAPH	Sistema Nacional de Áreas Protegidas de Honduras (Honduras National Protected- Area System)
TNC	The Nature Conservancy
UN	United Nations
UNDP	United Nations Development Program
UNEP-WCMC	United Nations Environmental Program's World Conservation Monitoring Center
USAC	Universidad de San Carlos de Guatemala
WCPA	World Commission on Protected Areas
WRI	World Resources Institute
WWF	World Wildlife Fund

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I. Introduction

The Mesoamerican Reef (MAR) is the second largest barrier ecosystem in the Atlantic Ocean. It spans almost 1,000 kilometers from the northern tip of the Yucatan Peninsula in Mexico to the Bay Island-Cayos Cochinos complex in the northern coast of Honduras. It is rich in biodiversity, with species such as spiny lobsters; Queen conch; green hawksbill, and loggerhead turtles; crocodiles; dolphins; whale sharks, and more than 60 coral species.

The Mesoamerican Reef Fund was created to protect the region's reefs from threats such as land contamination and over-exploitation of live resources. It was established as a long-term financial mechanism to provide support to activities such as protection and management of natural resources in a network of coastal and marine protected areas of high biodiversity.

The Fund's mission is to conserve the resources and natural processes of the MAR Region for present and future generations, by managing natural resources and providing technical and financial support to priority areas and to issues such as water quality, sustainable tourism, and institutional strengthening.

Owing to its objectives, MAR Fund promoted this project with the aim of prioritizing already existing marine and coastal protected areas in Belize, Guatemala, Honduras, and Mexico in a participative way, and to optimize technical and financial support through an initial regional network of protected areas.

The first phase consisted in developing a proposal of components, criteria, and factors relative to prioritizing protected areas in the Mesoamerican Reef (MAR) Region, based on a review of relevant literature. This proposal was analyzed by regional experts. The purpose of this exercise was to validate, with specialists, the criteria that would guide the establishment of hierarchies and priorities on which to order the MAR protected area system, to define a highly valuable ecological network on which to focus MAR's initial financial efforts.

Proposed criteria were taken from the Convention on Biological Diversity (CBD) and other previous prioritization efforts, as well as from the evaluation of management effectiveness of protected areas (The Nature Conservancy, The World Wildlife Fund, Belize Private Protected Areas, IUCN, SICAP, and Cortés and Arrivillaga in a private communication)

After reviewing the criteria according to the experts' suggestions, a questionnaire was developed so participants in the workshops could use it as a guide to prioritize MPAs in each country.

A second phase included four national workshops aimed at selecting priority protected areas in a participative fashion. Twenty-six PAs were selected by way of this exercise: 13 of them were considered to be first priorities and 13 second priorities. The prioritizing process concluded with a regional workshop, in which professionals with experience in the region's PAs and the MAR Fund Board of Directors came together. In this event, criteria were unified to analyze the priority-setting results from the national workshops and an initial network of short-listed PAs was established in which MAR Fund would initially invest its financial resources.

II. Objectives

GENERAL OBJECTIVE:

To establish, based on public consultation, a regional network of coastal and marine protected areas with high ecological and practical value in the four countries of the Mesoamerican Reef, and to determine the investment needs in each protected area, in order to maximize the impact on the network.

Specific Objectives:

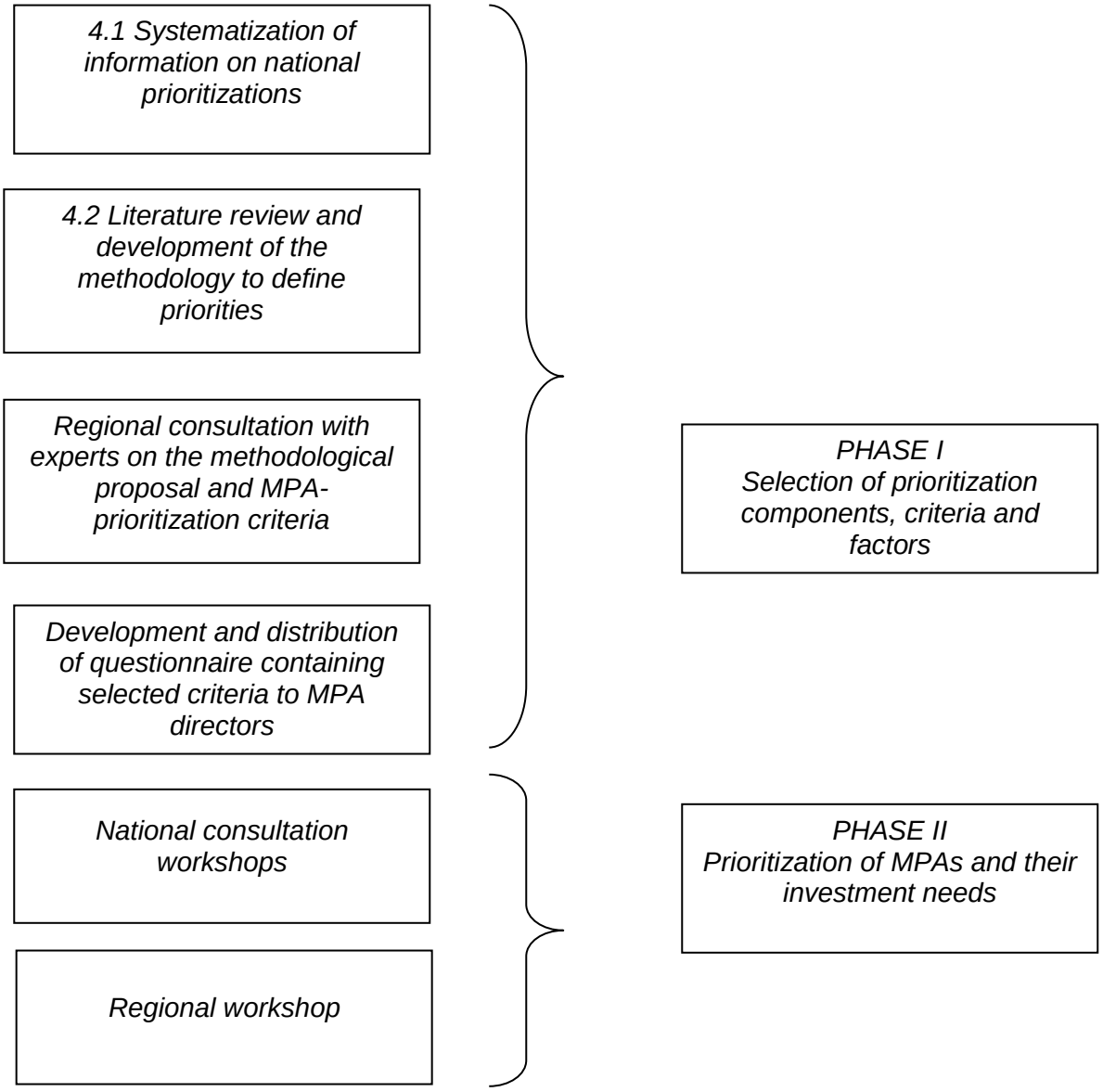
1. To compile the methodologies and mechanisms for establishing priorities and important sites for conservation.
2. To select the criteria to prioritize coastal and marine areas in the Mesoamerican Reef region, in order to strengthen a regional network with high ecological conservation value in which to focus MAR Fund's initial funding efforts.

III. Justification

MAR Fund acknowledges that conservation is generally expensive and that existing resources are limited, so to achieve its objectives more effectively, it is necessary to establish priority networks of coastal and marine protected areas within the Mesoamerican Reef area, thus optimizing the cost-benefit ratio of actions aimed at conserving ecosystems. These priorities must be assigned systematically and in a scientific and transparent way.

IV. Methodology

The methodology used to define and prioritize the 63 protected areas defined by the MAR Fund required two phases, which consisted of systematizing information on the subject matter, reviewing relevant literature, developing the methodology, consulting experts on the proposals for prioritizing components and criteria, developing a questionnaire, and holding four national workshops and a regional workshop. Following is an outline of the methodological phases that were developed:



4.1 Previous Regional Prioritization Efforts

This chapter reviews and systematizes available information on prioritization exercises previously undertaken in the Mesoamerican Reef marine and coastal areas. Documents containing information on bio-physical matters —especially on biological diversity—, threats, environmental sustainability, as well as information on their management, were reviewed. This report contains an overview on the prioritization exercises performed in Mesoamerican marine and coastal protected areas in the Atlantic Ocean, with legal declarations as of 2006. Due to the length of the analysis, it is included as Annex 1.

4.2 Selecting Prioritization Criteria

Based on consultations with experts and literature review, a proposal on the criteria and parameters to prioritize the protected areas of the MAR region was developed (Annex 2).

The steps taken to select in a participative manner the components, factors, and criteria were the following: a group of regional experts (See List of Experts, Annex 3) was provided with a table of factors, parameters, and criteria grouped in five larger components (bio-physical/biodiversity, threats, socio-cultural, institutional and funding), and subsequently, they were asked to assign a number from 1 to 4 according to the importance of the component (one being less important and four, the most important), establishing an order for the factors of each component. Additionally, each expert was asked his/her opinion on whether the proposed factor or criterion should be included or not, according to the following code:

1. If the proposed factor/criterion is adequate just as it is, no changes are made.
2. If the proposed factor/criterion is subject to change, use red fond.
3. If the proposed factor/criterion should be eliminated, mark it in green.
4. If the proposed factor/criterion does not appear in the document, it is added in blue.

Definitions

The definitions included in the proposal for prioritization components and criteria were the following:

Importance:

- Low = 1
- Medium = 2
- High = 3
- Very high = 4

Factor
Element that generates or contributes to an effect.

Parameters:
Measurement involving a variable or a set of variables, their function and their variation ranges. Measurable variable that allows the elaboration of a criterion, and that can be ranked.

Criterion:
Norm, condition or judgment guiding decision making.

Prioritization:
Establishing an order of importance according to one or several factors and criteria.

The factors and criteria analyzed by means of this consultation were summarized in a questionnaire, which was later analyzed by knowledgeable professionals from MPAs, governmental, non-governmental, civil-society, and academic institutions from the various countries in the region. The output of the final revision was a standardized questionnaire (Annex 4), which was distributed by e-mail to MPA directors before the workshops took place so that they would complete them with information on their protected areas. The previously mentioned Annex contains the questions that were included or eliminated in each one of the country workshops, according to what participants determined. The questionnaires for each of the protected areas were evaluated according to a score system developed by participants in each one of the four workshops. The next section describes the methodology applied in the workshops.

4.3 National Workshops

Below is a description of the methodology used to prioritize the declared or proposed marine and coastal protected areas in the MAR region. This methodology was used in the four national workshops with slight modifications. The list of MPAs included in the priority-setting process for each country appears in Annex 5. The methodology was applied by a multi-disciplinary group of professionals, all of whom are experts working for governmental, non-governmental, and academic institutions in each of the countries.

Objective:

The four workshops were aimed at selecting, in a participative manner, a national marine and coastal protected areas priority network within the context of the Mesoamerican Reef region.

The objective of each workshop was to identify the first- and second- priority groups of marine protected areas for each country within the context of the MAR. The initial regional MPA network (short list) will include 13 areas, distributed by country as follows:

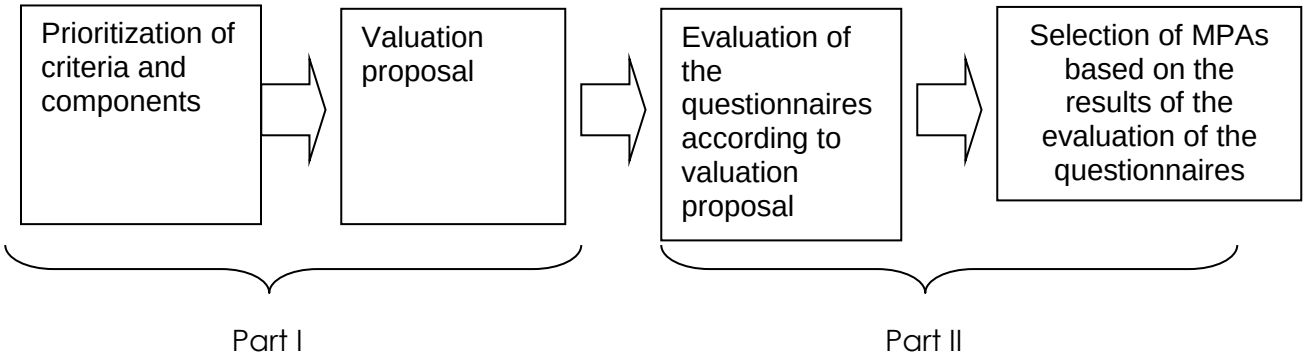
- 4 in Belize
- 2 in Guatemala
- 4 in Honduras
- 3 in Mexico

The numbers were based on total MPAs per country. As MAR Fund grows and obtains additional funds, it will be able to support more than the 13 initial MPAs in the region.

Expected Results:

During the workshop, participants prepared a numerical valuation proposal to be used at the national level when prioritizing each country's marine and coastal protected areas.

Below is an outline of the activities undertaken at the workshops:



PART I

At the end of this exercise, participants developed a numerical valuation proposal, by suggesting percentages of importance to evaluate the various components and prioritization criteria for the marine and coastal protected areas.

1. The first step entailed providing each participant with a set of color cards. Using markers and an agreed-upon voting code, participants wrote the order of priority for each proposed component, according to their criteria and experience. The following table contains the degree of importance assigned to each card color:

Table 1: Color Codes for Component Prioritization

Card Color	Code	Value
Green	Highest % of importance	5
Blue	Second % of importance	4
Yellow	Third % of importance	3
Orange	Fourth % of importance	2
Red	Fifth % of importance	1

Note: The green card was used for the highest rated component and the red card, for the least important one.

The components included in the prioritization exercise were the following:

Table 2: Components included in Protected Areas Prioritization:

Component	Selected Color Cards
Biophysical/Biodiversity	
Threats	
Social and Cultural	
Institutional	
Funding	

On each card, participants established how important components were, assigning them a color according to the color code shown in Table 1.

Once the cards were completed, the facilitator collected them. Then, the frequency with which each component appeared was established with the cooperation of all participants, and a national order of priority was set for each of the components.

2. In the second section of this exercise, participants answered the following question:

In your opinion, what percentage should be assigned to each component identified in the previous exercise, in order to prioritize marine and coastal protected areas in your country that impact the Mesoamerican Reef?

On each card, participants wrote the percentage that, based on their criteria and experience, should be assigned to each component, taking into account that the five cards should total 100%.

The color-coded cards were used again. The following is an example of how they were used, assuming that component priority was set by a participant as shown in table 3.

Table 3: Example of Proposed Component Priority, Established by Using Color Cards

Order of Priority	Component	Color of the Card	Proposed %
1	Biophysical/Biodiversity	Green	60
2	Threats	Blue	20
3	Social and Cultural	Yellow	10
4	Institutional	Orange	5
5	Funding	Red	5

Example:

Biophysical / Biodiversity 60%	Threats 20%	Social and Cultural 10%	Institutional 5%	Funding 5%

= TOTAL	100 %

Participants handed over the cards containing the name of the component and the percentage that they had assigned to it. They placed the results on a flipchart and the cards for each component were added, assigning values according to Table 1. The components with the highest numeric values were considered the most important and urgent.

3. The third phase of this workshop entailed that each participant fill out the following table:

By writing an X in the space next to the selected answer, based on each person's criteria and experience:

Table 4: Proposed Evaluation Options for Questions on the Various Components

Component	**OPTION 1**		**OPTION 2**	
Biophysical/Biodiversity	Greater priority assigned to areas with more and better conservation of key ecosystems.		Greater priority assigned to areas with less and worse conservation of key ecosystems.	
Threats	Greater priority assigned to more threatened areas		Greater priority assigned to less threatened areas	
Social and Cultural	Greater priority assigned to areas that focus the most on social aspects		Greater priority assigned to areas that focus the least on social aspects	
Institutional	Greater priority assigned to areas with more management effectiveness,		Greater priority assigned to areas with less management effectiveness	
Funding	Greater priority assigned to areas with more national and international funding resources		Greater priority assigned to areas with less national and international funding resources	

After participants discussed and analyzed the options, the facilitator asked them to select options 1 or 2 for each of the questions included in the questionnaire by consensus.

This part of the methodology was adapted to each of the participating countries, as suggested by the participants. Each question was evaluated, considering it individually in accordance with established criteria. This led to some questions being deleted from the questionnaire because they did not provide enough information or because participants considered that including them was not a priority. In other cases, a linear grading scale was not used to grade answers; instead, the Gauss curve was used in order to assign increased weight to the replies appearing in the middle of the scale. At the end of this part, participants developed a national evaluation scale or "key" to be used in weighting each questionnaire.

PART II

Questionnaire evaluation:

MPA questionnaires were evaluated during the second part of the workshop, according to the valuation criteria developed during Part I. Each participant received a questionnaire that had been completed by an MPA director.

Participants evaluated and reviewed the questionnaires based on the national evaluation scale that had been developed during the previous exercise. Each question included in the questionnaires was evaluated In a plenary session, and all the information was transferred to a Microsoft Excel worksheet that included all protected areas and questions.

Each participant presented the evaluation results pertaining to the protected area that he/she had analyzed.

The plenary then ranked the MPAs, starting with the one with the most points assigned to it, according to its components and criteria, and ending with the one with the fewest points.

The valuation results for marine protected areas were presented to participants at the end of the workshop, and conclusions were issued. Participants were asked to submit a list of the needs and gaps existing in protected areas. They were also informed that the results of the four workshops would be evaluated at a regional workshop.

4.4 Regional Workshop

The methodology that was originally proposed for the regional workshop was similar to the one used in the national workshops, with a few modifications. The 26 MPAs selected during the national workshops as first and second priorities were included for regional prioritization, with a few additional areas that were deemed to contribute to the regional view. Even though national prioritization exercises encouraged a regional point of view, the workshops inevitably introduced a national skew to selection of priorities. Therefore, MAR Fund's Board of Directors agreed on the importance of weighting the initial results according to a set of regional criteria, in order to make the final selection of areas, thus ensuring a truly regional perspective.

According to the PA-size classification included in the MAR Financial Plan Model, from a total of 26 MPAs chosen in the national workshops, only the Port Royal Wildlife Refuge is considered to be small (less than 1,000 ha), 9 areas are medium scale (between 1,000 and 10,000 ha) and the remaining 16 are large, meaning that they encompass more than 10,000 ha.

The distribution of areas per country remained the same, as follows:

Belize:	4 MPAs	Honduras:	4 MPAs
Guatemala:	2 MPAs	Mexico:	3 MPAs

Table 5: Prioritization Results in the Four National Workshops, by Country

Country	Priority Level	Name of Protected Area	Area (ha)
GUATEMALA	First Priority	Punta de Manabique Wildlife Refuge	132,900
		Río Sarstún Multiple-Use Area	35,202
	Second Priority	Bocas del Polochic Wildlife Refuge	20,760
		Chocón Machacas Protected Biotope	6,265*
BELIZE	First Priority	Sarstoon Temash National Park	16,938
		Payne's Creek National Park	14,739
		Port Honduras Marine Reserve	40,469
		Bacalar Chico Marine Reserve	11,418
	Second Priority	Hol Chan Marine Reserve	1,545*
		South Water Caye Marine Reserve	47,703
		Sapodilla Cayes Marine Reserve	15,619
		Golden Stream Private Reserve (official)	6,086*

Ranking	Priorities	Protected Area Name	Area (ha)
HONDURAS	First Priority	Barras del Río Motagua/Omoa Baracoa Wildlife Refuge	8,843*
		Capiro y Calentura (Laguna Guaymoreto) National Park	4,856*
		Jeaneth Kawas (Punta Sal) National Park	37,996
		Sandy Bay West End Marine Reserve	2,846*
	Second Priority	Santa Elena -Barbareta Protected Marine Landscape	9,580*
		Punta Izopo National Park	18,820
		Barras de Cuero y Salado Wildlife Refuge	13,255
		Port Royal Wildlife Refuge	834**
MEXICO	First Priority	Arrecifes de Cozumel National Park	11,988
		Yum Balam Flora and Fauna Protection Area	154,052
		Isla de Contoy National Park	5,128*
	Second Priority	Sian Ka'an Biosphere Reserve	651,000
		Bahía de Chetumal Manatee Sanctuary	281,320
		Western Coast of Isla Mujeres National Park, Punta Cancún and Punta Nizuc	8,673*

* areas under 1000 ha
** areas between 1000 and 10,000 ha

In contrast with national workshops, participants in the regional workshop selected only 17 from a total of 45 questions included in the national prioritizing questionnaires in order to evaluate the following regional prioritization criteria:

- Unique ecosystems,
- Regional impact,
- Income-generating potential, and
- Investment effectiveness.

However, after analyzing and discussing the methodology, it was modified by regional workshop participants, who agreed that the selection of first- and second-priority protected areas should be based on: the results of the national workshops; the experience of the experts who were participating in this workshop; the results of the TNC Mesoamerican Reef Ecoregional Evaluation, presented by Alejandro Arrivillaga; the results of the Marine Protected Area Management Effectiveness Evaluation, presented by Oscar Lara from the Mesoamerican Barrier Reef System Project (IADB-GEF-SICA-CCAD), and the analysis of the added value that MAR Fund's support can bring to the region's MPA conservation efforts.

It was decided that the various country representatives should express their opinions on the national workshop results to the full assembly of participants, and that national groups should present a justified proposal on which of their country's MPAs should be classified as first and second priorities.

Thus, each group presented an MPA proposal before the full assembly.

The results on the valuation of protected marine areas from the regional workshop are included in the following section.

V. Results

Four national workshops took place in Guatemala, Belize, Honduras, and Mexico, according to the agenda included in Annex 6. The workshops took place on the dates and places shown in the following table:

Table 6: National-Workshop Calendar

Country	Place	Date
Guatemala	Hotel Clarion Suites, Guatemala	October 19, 2006
Belize	Radisson Hotel, Belize City	November 2, 2006
Honduras	Hotel la Quinta, Ceiba, Honduras	November 9, 2006
Mexico	Cancún, Mexico	January 30, 2007

The Consultant was responsible for facilitating the workshops. Representatives of an inter-disciplinary group of professionals who are familiar with protected areas and who work for governmental, non-governmental, and academic institutions participated in them.

The workshop summoning process was coordinated by the Mesoamerican Reef Fund – MAR Fund– with the support of government entities and NGOs from the four countries, according to the following table:

Table 7: Institutions that Cooperated in Summoning to National Workshops

Country	Summoning Support Provided by
Guatemala	Fundación para la Conservación en Guatemala –FCG–
Belize	Protected Areas Conservation Trust – PACT– Forest Department of Belize Fisheries Department of Belize
Honduras	Fundación Biosfera Federal State Administration. Honduran Corporation for Forest Development -AFE COHDEFOR-
Mexico	Fondo Mexicano para la Conservación de la Naturaleza-FMCN- National Commission for Protected Natural Areas – CONANP-

The lists of workshop participants, by country, are included in Annex 7.

5.1 Guatemala Workshop

The first national workshop took place in Guatemala on October 19, 2006. The list of participants appears in Annex 7. Fourteen professionals working for governmental, non-governmental, and academic organizations participated. Participants' expectations at the beginning of the workshop appear in Annex 8.

MAR Fund considered a total of seven Guatemalan sites located in the Caribbean for this marine and coastal protected areas prioritization exercise. From these, two protected areas were to be selected as first priorities, and two as second priorities.

From the 45 questions included in the questionnaire, Guatemala decided to grade 32. The remaining 13 were eliminated because they were qualitative or because they did not apply to Guatemalan ecosystems.

The prioritization of the protected areas evaluated in Guatemala is included in table 8. Results appear in order of importance, from the highest to the lowest score. From a total of seven areas subjected to prioritization, Cerro San Gil and Bahía Santo Tomás did not participate because they did not fill out the questionnaire. The Río Dulce National Park placed fifth from the five protected areas evaluated.

Table 8: Results of Guatemala Protected-Area Prioritization, Shown by Level of Priority

Position	Priority Level	Name of Protected Area	Area (ha)
1	First Priority	Punta de Manabique Wildlife Refuge	132,900
2		Río Sarstún Multiple-Use Area	35,202
3	Second Priority	Bocas del Polochic Wildlife Refuge	20,760
4		Chocón Machacas Protected Biotope	6,265

It is worthwhile noting that Guatemala protected areas with the highest priority are also the largest ones.

Discussion:

Participants mentioned that there are some funds that finance projects recurrently, but that it is necessary to establish the areas in which no investments have been made. They also stated that investment in research is necessary in order to have adequate protected-area management. They asked whether MAR Fund had considered assigning funds to carry out research within PAs.

Participants also held that since high-level government officials were not present at this type of workshops, the efforts and investments undertaken to meet the needs determined in said workshops would not be coherent with the ones pursued by the Government.

The Guatemalan prioritization process was very complex because participants decided to weight each component and assign a different percentage to each question relating to it. Even though it required long and arduous efforts, it was ascertained that the results would not have been different if they had only been based on prioritizing the components.

Conclusions:

The Punta de Manabique Wildlife Refuge and the Río Multiple-Use Area were selected as first priorities. They are the protected areas with the greatest marine influence in the Guatemalan Atlantic Ocean.

Recommendations:

It was deemed that investing in research is necessary to ensure adequate PA management.

It was recommended that a user's manual be provided in order to complete the questionnaire. The manual could contain definitions of technical terms and it could explain what is expected from each question, so that they may be adequately interpreted.

5.2 Belize Workshop

The Belize workshop took place on November 2, 2006 in Belize City, with 22 participants from governmental and non-governmental organizations.

From the 25 MPAs submitted by Belize for their prioritization, only 17 completed the questionnaires –68% of the total.

The results of the Belizean prioritizing exercise appear in table 9. The extension of the selected areas is between 1,545 and 47,703 ha. From the 8 prioritized PAs (4 defined as first priority and 4 as second priority) only Hol Chan and Golden Stream are considered medium size, while the other six are large, with an area of over 10,000 ha (MAR Financial Plan, 2006).

Table 9: Results of Belize Protected-Area Prioritization, Shown by Level of Priority

Ranking		Name of Protected Area	Extension (ha)
1	First Priority	Sarstoon Temash National Park	16,938
2		Payne's Creek National Park	14,739
3		Port Honduras Marine Reserve	40,469
4		Bacalar Chico Marine Reserve	11,418
5	Second Priority	Hol Chan Marine Reserve	1,545
6		South Water Caye Marine Reserve	47,703
7		Sapodilla Cayes Marine Reserve	15,619
8		Golden Stream Private Reserve (official)	6,086

From a total of 45 questions, Belize participants selected 26 for their prioritization exercise; they eliminated 19 because they considered them qualitative or complementary to previous statements (see Annex 4).

Discussion:

Participants asked how many protected areas were to be included in Belize's set of priorities. It was explained to them that there would be eight.

They wanted to know if the prioritizing results of this workshop were to be used by PACT. They wanted to know specifically if, after this exercise, PACT would only support those areas prioritized in this workshop. It was explained to them that the results would be used by the MAR Fund.

Representatives from the Fisheries Department asked how they could benefit from MAR Fund.

Lastly, they asked when they would start receiving funding, and how long MAR Fund would invest its resources in prioritized areas.

Conclusions:

The protected areas selected as the initial short list in Belize were the Sarstoon Temash National Park, Paynes Creek National Park, Port Honduras Marine Reserve and Bacalar Chico Marine Reserve of Belize.

The methodology used for prioritizing included a transparent and participative process.

The Belizean prioritization results were aimed at strengthening protected areas with high biological diversity, where a need for institutional strengthening exists.

Recommendations:

It is recommended that the PA monitoring system be supported, since there are evident gaps in that area.

5.3 Honduras Workshop

The Honduras workshop took place in La Ceiba with the participation of ten professionals from the government and NGO sectors.

Nineteen Caribbean protected areas were submitted to the prioritization process in Honduras. A total of 13 questionnaires were received, so only thirteen MPAs were evaluated. MAR Fund decided to support the first eight areas that participants considered the ones with the highest priority. The results of the Honduras national prioritization workshop are shown in Table 10.

Table 10: Results of Honduras Protected-Area Prioritization, Shown by Level of Priority

Ranking	Priority Level	Name of Protected Area	Area (ha)
1	First Priority	Barras del Río Motagua /Omoa Baracoa Wildlife Refuge	8,843
2		Capiro y Calentura (Laguna de Guaymoreto) National Park	4,856
3		Jeaneth Kawas (Punta Sal) National Park	37,996
4		Sandy Bay West End Marine Reserve	2,846
5	Second Priority	Santa Elena-Barbareta Protected Marine Landscape	9,580
6		Punta Izopo National Park	18,820
7		Barras de Cuero y Salado Wildlife Refuge	13,255
8		Port Royal Wildlife Refuge	834

Selected MPAs range from 834 to 37,996 ha; Port Royal is the smallest of the 26 priority areas in the whole region. Based on the MAR Financial Model classification, one small-scale area (under 1,000 ha), four medium-scale areas (more than 1,000 ha and less than 10,000 ha), and three large-scale areas (more than 10,000 ha) in Honduras were represented in this process.

Regarding the questionnaire, participants included 29 out of 45 questions in the process, eliminating 17 because they considered them qualitative and complementary. The monitoring questions were eliminated because no system has been implemented yet.

Discussion:

Participants considered that the evaluation questionnaire was a clear and specific tool aimed at handling protected areas, covering biophysical and social aspects, threats, etc. As they were filling out the questionnaire, they realized that they were being asked to provide data that, although available, they had never analyzed before. This led them to reviewing several registries in order to provide the specific information that had been requested.

Participants stated that, generally, their country's marine protected areas have personnel-training weaknesses. This was confirmed upon reviewing the answers included in the questionnaire, since some of the participants had no knowledge about the basic concepts of ecology, biological diversity, etc. In addition, there is a constant personnel turnover, which does not allow institutional continuity.

Conclusions:

The PAs classified as first priority in Honduras were Barras del Río Motagua/Omoa Baracoa, Capiro y Calentura (Laguna de Guaymoreto), Jeaneth Kawas (Punta Sal) National Park, and the Sandy Bar West End Marine Reserve.

According to the points awarded to each area, the resulting priority areas were those reflecting the most needs. By means of this process, Honduras is supporting the MPAs that have traditionally had the least resources for monitoring and personnel training.

The group unanimously decided to substitute the Sandy Bay West End Marine Reserve for the Santa Elena Protected Marine Landscape, even though the latter was assigned a higher percentage. The reasons for this were that Santa Elena is a private area that has very little impact, and that it does not need any financial assistance.

Recommendations:

All protected areas should have records with the information requested in the questionnaire; otherwise, they should start gathering and recording it.

One of the participants suggested that it would be convenient that questionnaires be completed by a fully-identified individual, so that he/she could further explain his/her answers. She would prefer that consultants visit each protected area, as it was done in the past, instead of having individuals answer questionnaires on their own, because that would make it easier for the persons in charge to understand the questions.

It was suggested that a user's manual be sent along with the questionnaire, so that the terms and questions can be fully understood, as some of the persons in charge of the MPAs have no proper training.

5.4 Mexico Workshop

The list of participants appears in Annex 7. Eleven professionals from governmental and non-governmental organizations participated.

The México Financial Plan includes 12 Caribbean MPAs. The questionnaires were sent to the National Commission for Protected Natural Areas (CONANP in Spanish) and the Quintana Roo State authorities in charge of managing the MPAs. A total of 13 completed questionnaires were received because Laguna de Manatí and Chacmochuch filed separate questionnaires and Tulum was included. However, U'Yumil C'eh did not submit a questionnaire because it was impossible to contact the manager. It was emphasized that U'Yumil C'eh is neither coastal nor marine and, therefore, it should not be included in the list.

Three Mexican MPAs were selected as first priorities and three as second priorities. The results of this country's prioritization exercise are shown in table 11. This table indicates that from the six protected areas selected, two are mid-size and four are large. It should be mentioned that the Sian Ka'an Biosphere Reserve is the largest of the regional MPAs selected for the prioritization process.

Table 11: Results of México Protected-Area Prioritization, Shown by Level of Priority

Ranking	Priority Level	Name of Protected Area	Area (ha)
1	First Priority	Arrecifes de Cozumel National Park	11,988
2		Yum Balam Flora and Fauna Protection Area	154,052
3		Isla Contoy National Park	5,128
4	Second Priority	Sian Ka'an Biosphere Reserve	651,000
5		Bahía de Chetumal Manatee Sanctuary	281,320
6		Western Coast of Isla Mujeres National Park, Punta Cancún and Punta Nizuc	8,673

Twenty-nine out of the 45 questions included in the questionnaire were answered, and 16 were eliminated. The reasons for eliminating these questions were similar to those of other countries: that they were qualitative, that they had already been considered in other sections, that no information was available, or that they were irrelevant. (Annex 4).

Discussion:

Even though all participants agreed that the methodology was clear and that they were the ones who established the grading scale, they were surprised that Contoy Island was in the first priority group and that Chinchorro Bank had not been selected. To confirm this result, the result matrix and the questionnaires were reviewed again. It was determined that there had been no mistakes, and participants were satisfied with the results. Their misgivings included the fact that Contoy Island gave the impression of not being a mature protected area. However, reference was made to the fact that it has faced financial problems in the past few years and that, because of this, it needs support.

One of the participants asked whether the funds granted by MAR Fund could be used to solve a specific problem, even though the problem originated outside the PA. María Jose González answered that they could be used for that purpose.

Participants informed about an additional small site in Cozumel, outside the national park, which has micro-atolls. They considered that it should be included as part of Cozumel. It is a unique site and has the potential to become a protected area, as a reef island.

Conclusions:

The PAs selected as priorities in Mexico were the Arrecifes de Cozumel National Park, the Yum Balam Flora and Fauna Protection Area, and the Isla Contoy National Park.

Mexican prioritization results are aimed at strengthening the protected areas without a monitoring system or community participation, and those with a lack of funds. The proposal resulting from this exercise is to support areas that should be provided opportunities versus those that are already receiving support and that are more mature.

Recommendations:

When prioritizing, the size of the protected area should be a prime factor.

The prioritizing instrument should be improved; questions should be explained and repeated issues should be eliminated. When the questions require additions, it is suggested that they be evaluated according to values ranging from 1 to 5.

5.5 Regional Workshop

The list of participants in the regional workshop is included as Annex 9. Twenty professionals from governmental and non-governmental organizations working in the various Mesoamerican countries participated. The agenda for the regional workshop is included as Annex 10.

After presenting the workshop objectives and the expected results, participants were asked to express their individual expectations. Workshop participants' expectations are included as Annex 11. They were grouped in three large areas, which included: To achieve expected results, to validate the results from previous national prioritization exercises, and to reach a reasonable consensus on final results.

Table 12 shows the results of the regional prioritization exercise, by country, grouped by first and second priorities.

The distribution of areas selected as first and second priorities, per country, remained the same:

Belize:	4 MPAs	Honduras:	4 MPAs
Guatemala:	2 MPAs	Mexico:	3 MPAs

The four MPAs selected in Belize as first priority are large scale areas, according to the Financial Plan Model classification for the MAR Ecoregion MPA group; that is, they are areas that encompass more than 10,000 hectares. Of these, Corozal Bay (73,050 ha) is the largest one of all the country's MPAs (see maps 2 and 6).

In Honduras, the 4 MPAs that have been selected as first priority are three medium-scale ones: Capiro y Calentura (Laguna de Guaymoreto), Barras del Río Motagua/Omoa Baracoa and Sandy Bay West End (see maps 4 and 8), while Turtle Harbour/Rock Harbour are small scale (855 ha). The five first short- listed MPAs selected in Guatemala (see maps 3 and 7) and Mexico (see maps 5 and 9) are classified as large scale.

It is worthwhile noting that the ecological conservation area, the Santuario del Manatí, located in Mexico (281,320 ha) is the largest reserve in all selected regional MPAs considered as first priority in this prioritization process.

Thus, from the 13 protected areas that have been selected as first priority, one is small scale, three are medium scale and 9 are large scale.

The results of assigning first and second priorities to the 26 MPAs that were prioritized in the regional workshop coincide with 19 sites that had been identified in the TNC ecoregional evaluation, and with 15 areas identified in the Management Effectiveness Evaluations performed by the Mesoamerican Barrier Reef System Project. This overlap confirms that, by using various criteria and methodologies, selected areas have been identified as priorities repeatedly.

Table 12: First and Second Priorities Selected by Country in the Regional Workshop

COUNTRY	PRIORITY	PROTECTED AREAS	TNC Ecoregional. Evaluation (1)	MBRS Effectiveness Evaluation (2)
Belize	First Priority	Corozal Bay Wildlife Sanctuary	X	
		Payne´s Creek National Park	X	
		Port Honduras Marine Reserve	X	A
		South Water Caye Marine Reserve	X	A
	Second Priority	Half Moon Caye Natural Monument		
		Laughing Bird Caye National Park		
		Bacalar Chico Marine Reserve	X	A

COUNTRY	PRIORITY	PROTECTED AREAS	TNC Ecoregional. Evaluation (1)	MBRS Effectiveness Evaluation (2)
		Sapodilla Cayes Marine Reserve	X	A
Guatemala	First Priority	Punta de Manabique Wildlife Refuge	X	A
		Río Sarstún Multiple Use Area		A
	Second Priority	Bocas del Polochic Wildlife Refuge		
		Chocón Machacas Protected Biotope / Río Dulce National Park / Cerro San Gil Protected Area Springs Reserve	X (Río Dulce)	VGM (Chocón Machacas)
Honduras	First Priority	Capiro y Calentura (Laguna Guaymoreto) National Park	X	ML
		Barras del Río Motagua / Omoa Baracoa Wildlife Refuge		
		Sandy Bay West End (Roatán) Marine Reserve		
		Turtle Harbour Rock Harbour Marine Reserve	X	A
	Second Priority	Guanaja / Michael Rock) National Marine Park	X	
		Janeth Kawas (Punta Sal) / National Park Punta Izopo National Park	X (Janeth Kawas)	
		Port Royal Wildlife Refuge		
		Barras de Cuero y Salado Wildlife Refuge	X	A
Mexico	First Priority	Bahía de Chetumal Manatee Sanctuary	X	ML
		Yum Balam Flora and Fauna Protection Area	X	A
		Banco Chinchorro National Park- Arrecifes de Xcalak National Park	X	A
	Second Priority	Laguna Manatí-Chacmochuc National Park		
		Xcacel – Xcacelito Sea Turtle Santuary		

COUNTRY	PRIORITY	PROTECTED AREAS	TNC Ecoregional. Evaluation (1)	MBRS Effectiveness Evaluation (2)
		Arrecife de Puerto Morelos National Park / New PAs:		A
		• Xaman Ha	X	
		• Northern Cozumel and micro-atolls	X	
		• Arrecifes de Uaymil		
		• Arrecifes de Mahahual	X	

(1) Results of the Ecoregional Evaluation being currently performed by the TNC MAR Program. The sites with an X are also a priority identified by the Ecoregional Evaluation.

(2) Results of the Management Effectiveness Evaluations performed by the Mesoamerican Barrier Reef System Project. The areas indicated by each country's government as requiring evaluation were included. VGM = Very good management (81-100%); A = Acceptable (61-80%); ML = Medium low (40-60%).

5.5.1 Investment Needs

Even when investment needs in the various prioritized MPAs vary, there are some concurrences in their requests for support to strengthen institutional, governance, bio-physical, threats, training, research and monitoring aspects.

Institutional Issues

In regard to the institutional component, there are administrative financial gaps in covering operation costs. Financial resources do not suffice to cover the hiring of administrative, technical, and scientific personnel. Funds are also required for office and field equipment. Human resources are essential in order to efficiently develop operational plans and achieve institutional goals.

Several MPAs concur in requesting funds to mark boundaries and to implement the sign-placement plan in accordance with the master plan.

Governance Issues

This is an issue raised especially by Guatemalan MPAs. It refers to strengthening the application of laws, involving pertinent governmental bodies as well as civil society in these efforts. Support has been requested to implement control and overseeing programs, to systematize illicit acts, and to solve environmental problems by using techniques such as alternative conflict resolution. This implies personnel (rangers, trainers), equipment (vehicles, vessels, GIS, cameras, radios, etc.), and training and awareness programs.

Bio-physical Issues

The bio-physical component includes a collective interest to support monitoring and research, specifically pertaining to the evaluation of MPAs' natural resources. MPAs request funds to monitor ecosystems from the biological, physical, and anthropological viewpoints.

Threats

Support has been requested for rigorous Environmental Education campaigns aimed at visitors and at various sectors of the population. Issues such as respect for natural resources, opportunities, responsibility, and codes of conduct in protected areas must be publicized.

Environmental Sustainability

Support is being requested to implement equitable and participative community-development processes in the sustainable institutional, social, and financial contexts. It is expected that these productive activities will be compatible with nature conservation.

Some programs that will require funds for their implementation are: organic agriculture, native-species farming, forestry, native-species aquaculture, community tourism, artisan activities, and others.

Human and material resources are necessary to promote the participation of existing community committees and to promote the reactivation of councils of elders as ancestral organizational structures.

Training

Training is seen as a cross-cutting component in every program. It requires investment in environmental education programs, training courses, and workshops on all previously-mentioned components.

MAR Fund should design a funding strategy to cover the various needs of MPAs. It is suggested that progress be measured according to process indicators for each one of the components. The evaluation performed at the onset of the funding program, as well as constant monitoring according to established goals and objectives will evaluate investment effectiveness. It is suggested that a database be designed to include all operative elements needed to measure the annual progress of each Protected Area's planning, in accordance to their Master Plans.

Table 13 shows a summary of the investment needs mentioned by the individuals in charge of MPAs. A compact disc containing electronic files with each MPA's list of investment needs is also included as an annex to this document.

Table 13. A Summary of MPAs' Investment Needs, as Expressed by Priority-MPA Directors

Investment Needs	Description
• Facilities	Visitor center, marked trails, training hall, library.
• Salaries	Administrative personnel, technician, ranger, researchers
	Workers' benefits
• Trips and Transportation	Fuel and oil
• Overseeing and control	*Per diem* and fuel
• Cleaning and maintenance	Cleaning supplies
• Insurance	Field station, office, vehicles, boats
• Supplies	Fuel
	Office supplies, equipment, maps
	Uniforms
• Training	Computer training
	Management, overseeing, monitoring, alternative conflict resolution, ecotourism, miscellaneous.
• Communications	Telephone, Internet, radio
• Monitoring and research	Nets, field guides, GPS, climate station, water quality reagents, etc.
• Marking MPAs boundaries	Trails, signposting, visitor center, research station, exhibits, boundary markers, lawn maintenance, etc.
• Licenses and permits	
• Office equipment	Computer, printer, scanner, etc.
• Field equipment	Meteorological station, radio, digital camera, flashlights, telescope, nets, etc.
• Scientific-station equipment	Laboratory equipment, fire extinguisher , first aid kits, water purifier, laptop computer, etc.
• Vehicles	
• Control tower	
• Network-consolidation trips and search for alternative funding sources	National and international trips to attend conferences, fund-raising events, seminars, workshops.
• Work-team strengthening	Retreats, prizes, etc.

Discussion

When implementing the planned methodology at the regional prioritization workshop, participants proposed that the exercise not be repeated, but that the results of the four national workshops be reviewed and discussed, Table 5. They emphasized that, even though national workshops were transparent and participative, this was the moment to reflect on the initial results and to validate them, considering a series of regional criteria and the opinion of experts attending this workshop.

By consensus, the group decided that country representatives should meet to discuss and analyze the results of the prioritization exercises undertaken at national workshops. It was proposed that results be analyzed, establishing first and second priorities from a regional standpoint. Before arriving at a final definition of priority MPAs by countries, the proposals of each national group of experts were contrasted with the results from the Ecoregional Evaluation performed by TNC's MAR Program, and the results of the Management Effectiveness Evaluations performed by the Mesoamerican Barrier Reef System Project. (See table 12.)

Following are the most important issues discussed and agreed on, by country:

Belize:

Participants from Belize stated that the Belizean government has already defined priority MPAs. The Belizean group considered that there was a 75% concurrence between the findings of the first national MAR Fund workshop and the standpoint of the Belizean Government in regard to national MPA priorities. This is the result, they said, of a careful analysis of the scientific basis and the management effectiveness of priority MPAs. They agreed on eliminating three MPAs from the list of first and second priorities selected in the national workshop. They decided to eliminate the Sarstoon Temash National Park from the first short-listed MPAs because it has not been recognized as a priority in repeated prioritization exercises. They used the same justification to substitute the Golden Stream Private Reserve. The third area that they eliminated was the Hol Chan marine reserve because, according to the opinion of participants, it currently has enough financial sources. Instead of the three areas that they eliminated from the list, they proposed Corozal Bay Wildlife Sanctuary as first priority; they decided that Half Moon Caye Natural Monument and Laughingbird Caye National Park should be considered as second short-listed areas.

Guatemala:

Participants from Guatemala fully validated the national prioritization exercise. They only made one change to the second short-listed area group, in which they proposed to inlcude the Chocón Machacas Protected Biotope, the Río Dulce National Park and the Cerro San Gil Protected Area Springs Reserve as a single management unit, since they consider that they are all part of the same ecological system.

Honduras:

The comments of representatives from Honduras were also similar to those of most participants; they considered that the results from the national workshops should be validated and respected. However, they made small adjustments aimed at providing a regional perspective to prioritization. The first group of priorities approved at the Regional Workshop is included in Table 12. It shows that they kept three out of four first-priorities assigned at the national workshop, Table 10. One of the proposed changes was to include the Turtle Harbour/Rock Harbour area instead of Janeth Kawas, since three fourths of Utila are being considered as a RAMSAR site. They emphasized that Turtle Harbour is an MPA that needs support. They added Guanaja to the group of second short-listed areas and joined Janeth Kawas (Punta Sal) and Punta Izopo as a single system. The rest of MPAs remain as they had been considered in the original National Workshop proposal. In general, the proposals put forward by the national workshop remained in place, except for assigning first priority to Turtle Harbour, adding Guanaja as second priority, joining Janeth Kawas and Punta Izopo. The criteria used by Honduran representatives were to include areas according to their ecological roles and to their need for resources aimed at institutional strengthening.

Mexico:

The following are the MPAs proposed in the first national workshop as first priorities for the Mexican Caribbean region: Arrecifes de Cozumel National Park, Yum Balam Fauna and Flora Protection Area, and Isla Contoy National Park. However, the Mexican representatives at the regional workshop decided to approve Santuario del Manatí, Yum Balam, and the Chinchorro-Xkalak complex (which share the same social group of users) as priority areas. The line of reasoning for this change is that, according to the Mexican representatives, MAR Fund funding to these areas will surely make a difference in their management.

In addition, protected areas such as Sian Ka'an, the national park in the western coast of Isla Mujeres and Arrecifes de Cozumel National Park were eliminated from the proposed list of priorities, since, according to participants, they have important funding sources and/or generate their own funds. Thus, they consider that MAR Fund's support to these areas will not make a significant difference in the region.

The following were included in the second short-listed group of MPAs: Laguna Manatí-Chacmochuc, Xcacel-Xcacelito, and new protected areas that have still not been declared as such, like Xaman Ha, Northern Cozumel and its micro-atolls, Arrecifes de Uaymil and Arrecifes de Majahual. The latter four are (secondary) areas that are still not protected. Some of them constitute proposals with little feasibility at this point, and others have no protection initiatives yet.

It has been suggested that special zones and regulations for fishing and tourist management activities, etc., could be established in these secondary areas. However, this poses a problem as no single institution can be identified as the administrative or the managing institution in order to define institutional responsibilities.

VI. Conclusions and Recommendations

CONCLUSIONS:

The combination of ecological, economic, social, and threat criteria used in the process to select priority coastal and marine areas, consultation with regional experts, and the ample participation of various governmental and non-governmental bodies in the Mesoamerican Reef region strengthen the prioritization results of this consultancy.

A regional network of 26 first- and second priority coastal and marine areas was selected in the four countries of the Mesoamerican Reef region in a public consultation process.

Coastal and marine protected areas with high ecological and practical value were selected to receive MAR Fund contributions for their institutional strengthening.

From a total of twenty-six protected areas that were selected through the prioritization process of this consultancy, nineteen overlapped with the Ecoregional Evaluation exercise performed by the TNC-MAR Program.

RECOMMENDATIONS:

The overlap found between the MPAs prioritized by MAR Fund and the sites identified by TNC's Ecoregional Evaluation process can be used to join regional-cooperation efforts in order to strengthen them. It is recommended that MAR Fund invest resources to provide added value to sites where there is no financial support, and to fill existing gaps. There is an opportunity for co-investment and complementarity with "special conservation areas", which will be supported by Phase II of the MBRS project.

Before providing support to these areas, it is recommended that MAR Fund perform a SWOT analysis of each of the MPAs that have been deemed as priorities and that will be the targets for resources that will strengthen their weaknesses. Similarly, management effectiveness in each priority MPA should be ascertained at the onset of the funding project, and clear indicators should be established in order to compare the results at the end of the process. This will allow evaluation of the effectiveness of MAR Fund support.

It is very important to support those areas that have not been declared protected areas in order to further their legal declarations as such.

Define the MAR Fund investment strategy, based on clearly-defined objectives.

Recommendations to improve the questionnaire:
Include a user's manual. It should contain the definitions of terms, and examples of possible answers, so that it can be properly interpreted.

VII. Lessons Learned

The summons to the workshops, with the support of national government bodies and NGOs, promoted successful participation of the key regional actors

The participative methodology stimulated the active participation of people in the workshops.

Active participation of the various national bodies in charge of managing MPAs in each one of the countries of the region enabled the validation of results and the ownership of the prioritization process.

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Annexes

Annex 1: Previous Prioritization Exercises

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LIST OF ACRONYMS AND ABBREVIATIONS

CBD	Convention on Biological Diversity
CCAD	Comisión Centroamericana de Ambiente y Desarrollo (Central American Commission on Environment and Development)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CONABIO	Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (Mexican National Commission for Knowledge and Use of Biodiversity)
CONANP	Comisión de Áreas Naturales Protegidas (México) (National Commission for Protected Natural Areas)
ERP	Ecoregional Planning
GEF	Global Environment Facility
IBA	Important Bird Area
IUCN	The World Conservation Union
MAB	UNESCO's Man and the Biosphere Program
MAR FUND	Mesoamerican Reef Fund
MAR	Mesoamerican Reef
NGO	Non-Governmental Organization
PACT	Protected Areas Conservation Trust (Belize)
RAMSAR	The Convention on Wetlands of International Importance
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity
SINAPH	Sistema Nacional de Áreas Protegidas de Honduras (Honduras National Protected- Area System)
TNC	The Nature Conservancy
UN	United Nations
UNDP	United Nations Development Program
UNEP-WCMC	United Nations Environmental Program's World Conservation Monitoring Center
WCPA	World Commission on Protected Areas
WRI	World Resources Institute
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

This consultancy has been undertaken at MAR Fund's request with the purpose of gathering information on the methodologies and mechanisms used to prioritize important protected areas in order to conserve the Mesoamerican Reef area; collecting data on the national priority sites identified by the 4 countries in the region, and comparing the results using various approaches, criteria and processes that have been or are being implemented.

MAR Fund is aware that conservation is generally costly, and that available resources are limited. Thus, it is essential to establish networks of priority coastal and marine protected areas located in the Mesoamerican Reef region in order to optimize the cost-benefit ratio of actions aimed at conserving ecosystems. These priorities must be set systematically, scientifically, and transparently.

The methodology used in this consultancy in order to define criteria, approaches and means to identify priority areas was based on a bibliographic analysis of previous experiences. This analysis was used as the basis to define future methodological steps to establish geographic priorities for MAR Fund investments.

Results show that these methodologies combine ecological, economic, social, and risk criteria, seeking long-term viability of protected areas. There are 63 protected areas located in the MAR region; 31 of them are coastal and 32 are marine. They are distributed in the four countries within the MAR region as follows: 25 in Belize; 19 in Honduras; 12 in Mexico, and 7 in Guatemala.

Based on the consultancy findings, it is considered advisable to use a participative consensus-based methodology in the four countries located in the MAR region to define key areas for biodiversity conservation, taking into account social and economic contexts. It is important to underscore the synergies that can be established among the MAR Fund in the areas that will be selected and other national or international funds in each one of those areas. It is also essential to remember the watershed effect within the region when prioritizing in order to visualize the chain of events that could pose risks to the watershed that drains into a costal area.

I. INTRODUCTION

The Mesoamerican Reef (MAR) is the second largest barrier ecosystem in the world. It spans almost 1,000 kilometers from the northern tip of the Yucatan Peninsula in Mexico to the Cayos Cochinos in the Honduras Bay-Island region. It is rich in biodiversity, with species such as spiny lobsters; pink conch; green, hawksbills and loggerhead turtles; crocodiles; dolphins; whale sharks, and more than 60 coral species.

Recognizing how important the MAR and of the natural and cultural patrimony it contains is for the regional economy, and aware of the growing number of threats to its conservation, the four countries bordering with the MAR met in Tulum, Mexico, in June 1997, to take on the commitment of protecting this very important region. The Tulum Declaration encouraged the development of an Action Plan for the conservation and sustainable use of resources in the region, and a project financed by the GEF was developed, which initiated activities on November 30, 2001.

The regional objectives of the MBRS Project focus on: (a) strengthening marine protected areas; (b) developing and implementing a standardized system for the administration of monitoring data on the ecosystem, and facilitating the dissemination of its results in the whole region; (c) promoting measures that will help to reduce MAR economic-exploitation patterns, initially centered on the fishing industries and tourism; (d) increasing local capabilities to engage in environmental management by means of education, information- sharing and training, and (e) facilitating strengthening and coordination of national policies, regulations and institutional agreements for the conservation of marine ecosystems and their sustainable use.

The Mesoamerican Reef Fund was created to achieve long-term conservation objectives. It is a financial mechanism established to provide support for protection and management of natural resources in a system of coastal and marine protected areas with high biodiversity value. It will provide technical and financial support to priority areas and to issues linked to water quality, sustainable tourism, sustainable fisheries, and institutional strengthening.

The MAR Fund promoted this consultancy to prioritize marine and coastal protected areas in Belize, Guatemala, Honduras, and Mexico. This report is the first of a series of methodological phases. The next pages contain bibliographic data on methodologies, approaches, criteria, and results obtained in the region, which are the bases to define a prioritization methodology and its subsequent application.

II. OBJECTIVES

General Objective:

To establish a regional network of priority coastal and marine protected areas with high ecological and practical value in the four countries of the Mesoamerican Reef area, determining their investment needs. This process must be based on public consultation.

Specific Objectives:

To compile the methodologies and mechanisms that will be used to prioritize protected areas and important conservation sites.

To identify the priority sites established at the national level by each of the countries in the Mesoamerican Reef area within the regional context, as a referendum for this consultancy.

To compare the results obtained in previous prioritizing exercises through different approaches, criteria, and processes already developed or in progress.

III. JUSTIFICATION

MAR Fund recognizes that conservation is generally expensive and that existing resources are limited. Therefore, to achieve its objectives more effectively, it is necessary to establish priority networks of coastal and marine protected areas within the Mesoamerican Reef area, thus optimizing the cost-benefit ratio of actions aimed at conserving ecosystems. These priorities must be established in a systematic, scientifically valid, and transparent manner.

MAR Fund has included 63 protected areas in the financial-plan model, which constitutes a very large universe that will be impossible to cover in the short term. The main output from this exercise is an investment guide developed from national analyses, but within a regional context.

IV. BACKGROUND

4.1 Global Framework Instruments

The environment as an integral part of human-growth and development processes was first considered in 1972 during the United Nations Conference on Human Environment that took place in Stockholm, when the "eco-development" concept (Céspedes, 2001) was introduced. Before then, there

had been some treaties between governments relating exclusively to strict conservation of natural resources, such as the Wetlands Convention or the Ramsar Convention, approved on February 2, 1971. The man-nature subject reemerged in the 80s under the "sustainable development" paradigm, introduced by the Bruntland Commission.

Twenty years after the Stockholm meeting, the term "sustainable development" was adopted during the United Nations Conference on Environment and Development –known as the "Earth Summit"– held in Rio de Janeiro in 1992 (Mosquera, 2000). During this conference, the countries signed a series of commitments, the most important one being Agenda 21 or Program 21, proposing an action plan to attain development compatible with environmental conservation (www.tierramerica.net).

Chapter 17 of Agenda 21 states that the marine environment, which comprises the oceans, seas, and adjacent coastal areas, is an integrated whole, and a valuable resource offering possibilities for sustainable development. The range of its programs include: a) integrated coastal and marine zone management and sustainable development of coastal and marine areas, including exclusive economic zones; b) marine environment protection; c) sustainable use and conservation of live marine resources; d) strengthening international and regional cooperation and regional coordination, and e) sustainable development of small islands.

Another of the instruments adopted worldwide during the Earth Summit was the Convention on Biological Diversity (CBD), whose objectives are: conservation of biological diversity, sustainable use of its components, and fair and equitable participation in the benefits derived from the use of genetic resources. A series of specific programs have been developed in order to apply and develop the main issues contained in the convention, among them, the International Program for Coastal and Marine Biodiversity Conservation and Use, known as the Jakarta Mandate. Its main objective is to protect oceans, seas and coastal areas, as well as to promote the sustainable use of live resources. It has five thematic areas: a) Integrated management of marine and coastal areas; b) sustainable use of live marine and coastal resources; c) marine and coastal protected areas; d) aquaculture, and e) invasive species.

This international instrument includes a series of national commitments that each government must execute, incorporating them into their plans, projects and programs, as well as incorporating the private, civil and academic sectors as participants. Four are defined in Table 1 below as being among the most important ones.

Table No. 1

Important Commitments of the Convention on Biological Diversity

No.	Commitments
1	To establish or expand protected areas in large natural areas that are unperturbed, or that are not too fragmented or irreplaceable, or that are highly threatened, as well as protected areas that shelter species that are highly threatened, taking into account the conservation needs of migratory species (by 2006).
2	To respond to the deficient representation of marine ecosystems and continental waters, taking into account marine ecosystems located outside national jurisdictions, and ecosystems in continental trans-boundary waters (by 2006 in land areas and by 2008 in marine areas).
3	To run tests at a national level on possible ways to attain conservation and its sustainability, seeking to achieve conservation goals for biological diversity (by 2006).
4	To evaluate serious threats to protected areas, and to develop and apply strategies to prevent or mitigate said threats (by 2008).

Source: UNEP/CBD/COP/8/29

The Ramsar Convention's objective is to protect wetlands, as well as their flora and fauna, especially migratory aquatic birds. The areas covered include marshes, swamps, tropical swamp forests and water-covered surfaces, whether they are natural or artificial, permanent or temporary, stagnant or flowing, with fresh water, brackish water, or seawater, including those marine water extensions whose low tide depth does not exceed six meters. Also included are the adjacent shorelines and adjacent coasts, as well as islands or marine water areas deeper than six-meters during low tide, when they are within the wetland (CONAP, 2006). In order to reach its goals, the Convention developed a series of instruments, including the incorporation of "rational use" into national plans and programs, and the establishment of national policies on wetlands.

4.2 Adopting Framework Instruments in the Region

The four countries in the Mesoamerican region within scope of action of the Mesoamerican Reef Fund have signed and ratified the Convention on Biological Diversity and the Ramsar Wetlands Convention and, therefore, their national responsibilities include applying the programs and decisions resulting from the Conferences of the Parties pertaining to those conventions (see tables 2 and 3).

Developing National Biodiversity Strategies was one of the first actions carried out by the CBD, establishing guidelines to develop protected-areas national systems and related resources, which include fresh-water, marine and coastal systems.

Table No. 2
Adhesion and Ratification dates on the CBD

Country	Signed	Ratified
Belize	06/13/1992	12/10/1993
Guatemala	06/13/1992	07/10/1995
Honduras	06/13/1992	07/31/1995
Mexico	06/13/1992	03/11/1993

Source: CBD http://www.biodiv.org/world/parties.asp

Table No. 3
Ramsar Implementation Dates

Country	Ratification
Belize	08/22/1998
Guatemala	10/26/1990
Honduras	10/23/1993
Mexico	11/04/1986

Source: www-ramsar.org

4.3 Establishing Global, Regional and National Conservation Priorities

The working frameworks designed by the United Nations and Ramsar commissions for the sustainable use of fresh-water, marine and coastal ecosystems imply undertaking multiple long-term coordinated actions. Thus, regardless how important certain ecosystems are for a single country, the financial, human, technological, and administrative resource limitations are influential in selecting a group of high value sites or areas capable of maintaining their conditions and guaranteeing the viability of their biological diversity processes and components. That is why different points of view and methodologies have been developed to approach the issue of what areas should be conserved in different countries. A description of the conceptual mechanisms used to establish national priorities is presented below.

4.3.1 Prioritizing Approaches

During the last two decades, several institutions engaged in world conservation have applied a series of approaches to undertake the task of prioritizing sites and ecosystems. Ten of these appear in Table 4, listing the variables taken into account for each approach, as well as the description of some of the classified and prioritized sites.

Table No. 4
Approaches to Prioritizing Protected Areas

No.	Name	Variables	Description
1	Maximum concentration site	- endemism - threat	Areas having at least 1,500 endemic plant species, and a loss of at least 70% of their natural habitat.
2	Important virgin land	- pristine sites	Areas having over 75% of their original natural vegetation and a human- population density under 5 inhabitants per square kilometer. 24 virgin areas have been identified.
3	Mega-diverse country	- species diversity - endemism	There are 170 countries in the world, and 70% of the planet's total biodiversity is contained in only 12 of them (Australia, Brazil, China, Colombia, Ecuador, the United States, India, Indonesia, Madagascar, Mexico, Peru and the Democratic Republic of Congo). These countries are deemed mega-diverse countries.
4	Eco-regions (WWF)	- richness of species - endemism - taxonomic singularity - rarity - ecologic or evolutionary phenomena	An eco-region is a large area of land or water containing an assembled set of natural geographically-distinct communities that: (a) share a large majority of species and ecological dynamic; (b) share similar environmental conditions, and (c) interact ecologically in a critical way for their long-term persistence.
5	Frontier Forests (WRI)	- size - degree of perturbation - diversity	It focuses on identifying and protecting the great natural intact forests still existing in the world
6	Important Bird Area	- bird habitat - groups of species - aggregation sites	It uses a specific taxon –birds– to establish worldwide conservation priorities. BirdLife has identified

No.	Name	Variables	Description
			about 7,000 IBA sites in 130 countries.
7	Internationally-Important Wetlands	- representativity - rarity - uniqueness - bird and fish habitat - threatened species	As of April 6, 2003, 1,308 wetland sites have been established in the 138 contracting parties of the Convention. These sites total 110.1 million hectares that are included in Ramsar's International Important Wetlands.
8	Worldwide natural and cultural diversity.	- natural values - cultural values	To date, 175 States have ratified the Convention on the protection of natural and cultural patrimony, which includes 172 natural and mixed sites.
9	Biosphere Reserves	- wide geographic coverage - contains conservation components - susceptible to zoning - compatible with human development	Protected-area global network established to promote a balanced relationship between humans and nature. At present, there are more than 400 sites.
10	Biodiversity Hotspots	- richness - threat	Developed by Conservation International

Source: BirdLife International, 2002; Bryant, et.al. 1997; Miltermeier, et.al. 1998; www.ramsar.org; www.whc.unesco.org.

4.3.2 Prioritizing Criteria

A criterion may be understood as a distinguishable element or a series of conditions or processes by which a specific object or situation can be judged (Nitoft, et. al. 2002). Criteria make it possible to establish differentiated categories and to decide on a group of heterogeneous ecosystems, thus determining priorities. One of the classifications draws attention to four great groups: a) biological; b) use; c) viability and d) by determining factors. Each group has a series of qualities that, combined or used independently, classify areas or sites according to a specific approach. Table 5 contains a list of the criteria for each group.

Table No. 5
Criteria to Prioritize Protected Areas

No.	Group	Criteria
1	Biological	Richness Rarity Endemism Distinctiveness Representativity Unperturbed Function
2	Use	Food Clothing Energy generation Medicines Construction Mobilization Recreation Education Potential use
3	Viability	Political Economic Institutional Logistics
4	Determining factors	Threats Agreed-on goals Intervention approaches International cooperation

Source: Jonson, 1995.

4.3.3 Priority Area Planning

Applying a series of criteria, according to one or several approaches, in order to prioritize protected areas or important sites for conservation purposes is not an exercise yielding isolated results. Quite the reverse, it is a planning process for the protected-area national system, generating viable subsystems for significant groups of species, habitats and functions.

Among the planning methodologies used are the following: a) the system plan designed by The World Conservation Union's World Commission on Protected Areas (WCPA) and b) the eco-regional plan (ERP) prepared by The Nature Conservancy (TNC). Both methodologies underscore the importance of the planning process, local-community participation, and the proper identification of priorities and needs in the field. Davey, 1998 and Groves, et.al. 2002 may be consulted to study the essential elements composing these methodologies

4.4 The Mesoamerican Reef as a Regional Priority Area for Conservation

4.4.1 Prioritizing Criteria for sites in the MAR

In 1998, the World Wildlife Fund (WWF) identified the Mesoamerican Caribbean Reef as a priority ecosystem and a worldwide important eco-region. Accordingly, it began implementing long-term conservation and management efforts in the reef. The first priority analyses focused on areas for the conservation of taxonomic-groups, which included: corals, fish, focal species and plants.

Subsequently, these areas were classified according to criteria such as: uniqueness, endemism, trophic importance, representativity, economic importance, vulnerability, and ecological rarity. Because coral reefs are so important, their evaluation included: habitat diversity, size, condition, proximity to similar habitats, breeding areas for larval stages, environmental gradients, regeneration capability, uniqueness, and dominance. The results are summarized in table No. 6.

Table No. 6
Mesoamerican Reef Priority Areas

Variable	Result
Total selected areas	137
Priority coral areas	26
Priority fish areas	53
Priority focal-species areas	37
Priority plant areas	21

Source: Appendix C (Kramer and Kramer, 2002)

4.4.2 List of MAR Priority Sites

There were 22 areas defined according to WWF methodology as having the highest biodiversity priority within the Mesoamerican Reef region. Table 7 below contains the list of areas with the prioritizing results obtained:

Table No. 7
Mesoamerican Reef Biodiversity Priority Areas

Area name	Priority Results
Northeastern Yucatan Peninsula	Very high
Central Yucatan Coast (Sian Ka'an)	Very high
Banco Chinchorro	Very high
Southern Yucatan Coast (from Xcalak to San Pedro)	Very high
Atolón Lighthouse	Very high
Turneffe Islands	Very high

Area name	Priority Results
Glovers Reef	Very high
Gladden Spit	Very high
Bay Islands	Very high
Southern Cozumel Coast	High
Central Yucatan Coast (Mahahual)	High
Chetumal and Corozal Bays	High
Belize City Complex	High
Sapodilla Cayes	High
Port Honduras	High
Gulf of Honduras (Temas and Dulce Rivers)	High
Río Lagartos	Priority
Cancún Corridor	Priority
Tulum Corridor	Priority
Central Barrier Reef	Priority
Tela-Manabique Coast	Priority
Río Plátano	Priority

Source: Appendix C (Kramer and Kramer, 2002)

The purpose of these priority areas is to achieve consolidation of the protected-area regional system; to land use planning and adequate land use, especially in reference to tourism development; to manage key watersheds and to reduce coastal water contamination; to manage fisheries through market links (eco-certification), and strengthen fishing regulations, and to strengthen local capabilities, regional coordination and communications, in order to support the work being undertaken.

However, these areas constitute very large geographical spaces and, therefore, MAR Fund requires that a new exercise be conducted in order to sieve out the marine and coastal areas that generate the greatest conservation impact at the regional level, in order to allocate their funds to programs within them.

V. METHODOLOGY

The methodology used in this consultancy in order to define the criteria, approaches and means used to identify the priority areas within the national systems of protected areas in each country in the Mesoamerican Reef region, was based on a bibliographical analysis of various experiences.

This analysis is the basis to define future methodological steps aimed at defining MAR Fund's geographic investment priorities.

VI. RESULTS

6.1 The Belize Case

Belize is located between parallels 15º 53'- 18º 30'N and 87 º 15'- 89º 15'O, bordering to the north with México (Quintana Roo and Campeche states). The rest of the territory borders with Guatemala (Petén and Izabal departments, the latter in the extreme south). The country's shape is more or less rectangular, and it spans 280 km from north to south and 109 km from east to west. Its total area, including the cays, is 8,860 square miles (22,960 sq. km). Including its territorial sea waters, it measures a total of 18,000 sq. miles (46,620 sq. km). The country is divided into six districts, 9 municipalities, and more than 240 villages.

Belize has such a spectacular variety of reefs within its territory that it cannot be compared to the rest of Mesoamerica. Mangrove swamps make up about 3.4% of the national territory and protected areas constitute almost 36% of its land area and 13% of its marine area.

6.1.1 Marine and Coastal Protected Areas

There are 25 protected areas that have been legally established in Belize within the coastal and marine category, (7 coastal areas and 18 marine areas), covering a total of 306,521 hectares, as shown in table 8 below.

Table No. 8
Belize Marine and Coastal Protected Areas

No.	Protected area	Size (ha)	Classification		Management category
1	Half Moon Caye	3,954		Marine	Natural Monument
2	Blue Hole	414		Marine	Natural Monument
3	Hol Chan	1,545		Marine	Marine Reserve
4	Glovers Reef Marine Reserve	35,067		Marine	Marine Reserve
5	Laughing Bird Caye	4,095		Marine	National Park
6	Sarstoon Temash	16,938	Coastal		National Park
7	Bacalar Chico	11,418		Marine	Marine Reserve and National Park
8	Shipstern	8,228	Coastal		Private Reserve (Not official)
9	Gladden Spit	10,513		Marine	Spawning aggregations
10	South Water Caye Reserve	47,703		Marine	Marine Reserve
11	Sapodilla Cayes	15,619		Marine	Marina Reserve
12	Swallow Caye	3,631		Marine	Wildlife Sanctuary
13	Port Honduras	40,469		Marine	Marine Reserve

No.	Protected area	Size (ha)	Classification		Management category
14	Corozal Bay	73,050		Marine	Wildlife Sanctuary
15	Caye Caulker	3,974		Marine	Marine and Forest Reserve
16	Payne's Creek	14,739	Coastal		National Park
17	Golden Stream Private Reserve (official)	6,086	Coastal		Private Reserve (official)
18	Gales Point Manatee	3,682	Coastal		Wildlife Sanctuary
19	Gra-gra Lagoon	534	Coastal		National Park
20	Caye Glory	547		Marine	Marine reserve
21	Caye Bokel	558		Marine	Marine reserve
22	Dog Flea Caye	576		Marine	Spawning Aggregations
23	Sandbore	521		Marine	Spawning Aggregations
24	South Point	533		Marine	Spawning Aggregations
25	Burdon Canal	2,127	Coastal		Natural Reserve
		306,521	7	18	

Source: Financial-Plan Model for the Group of Marine and Coastal Protected Areas of the MAR Eco-region.

6.1.2 Methodological Approaches Used to Prioritize

National initiatives to prioritize areas in Belize have been based on the use of a "protected-area point system". This system involves a two-part questionnaire: a) evaluation of the bio-physical characteristics and b) evaluation of land-use characteristics. The final result may be evaluated separately or jointly, and it provides a global idea of the area's conservation value. This system was originally developed by Jean Merman for the Belize Association of Private Protected Areas (BAPPA). Subsequently, the system was applied to all protected areas, including marine ones. The questionnaire has evaluation ranks from 0 to 15 points and includes 11 factors listed in table 9 below:

Table No. 9
Evaluation Factors for Belize Protected Areas

Component	Factors
Biophysical	Location within the protected area network
	Size of area
	Special habitats
	Special characteristics and properties

	Condition of habitats
	Species
Land Use	Land tenure
	Existing base information
	Management
	Land-use activities
	Infrastructure

Source: Belize National Protected Areas System Plan (2005)

6.2 The Guatemala Case

Located in the center of the American continent, Guatemala borders to the north and west with Mexico; to the east with Belize, the Caribbean Sea (Atlantic Ocean) and the Republics of Honduras and El Salvador, and to the south with the Pacific Ocean. The country's area is approximately 108,889 sq. km., and it is located between parallels 13°44' to 18°30' to the north and meridians 87°30' to 92°13' west of Greenwich. Guatemalan borders are 1,687 km long; it has a 962-km border with Mexico; a 266-km border with Belize, a 256-km border with Honduras, and a 203-km border with El Salvador. Its coastlines are 403 km long, 63% of which are on the Pacific Ocean. The country is divided into 22 departments and, in turn, these are divided into 331 municipalities. (FIPA/USAID, 2002).

6.2.1 Marine and Coastal Protected Areas

There are 7 coastal and marine protected areas that have been established in Guatemala's Atlantic region (6 coastal areas and 1 marine area), covering a total of 306,521 hectares, as shown in Table 10.

Table No. 10
Guatemala Marine and Coastal Protected Areas in the Caribbean Region

No.	Protected Areas	Size (ha)	Classification		Management Category
1	Río Dulce	13,000	Coastal		National Park
2	Bahía Santo Tomás	1,000		Marine	Definitive Close Season Zone
3	Chocón Machacas	6,265	Coastal		Protected Biotope
4	Bocas del Polochic	20,760	Coastal		Wildlife refuge
5	Cerro San Gil	47,433	Coastal		Protected Area Springs Reserve
6	Río Sarstún	35,202	Coastal		Multiple Use Area
7	Punta de Manabique	132,900	Coastal		Wildlife Refuge
		256,560	6	1	

Source: Financial-Plan Model for the Group of Marine and Coastal Protected Areas of the MAR Eco-region.

6.2.2 Methodological Approaches Used to Prioritize

There have been several initiatives implemented in Guatemala to define and limit, on biological grounds, the areas or ecosystems in which to focus technical and financial efforts that will promote and reinforce their conservation and sustainable use. Two of these initiatives are general and cover all of the country's ecosystems, and two are specific for the wetland ecosystems. These are:

a) National Policy and Strategies for the Development of the Guatemalan System of Protected Areas (SIGAP in Spanish), 1999.
b) National Strategy and Action Plan for Conservation and Sustainable Use of Guatemalan Biodiversity, 1999.
c) National Inventory of Guatemalan Wetlands, 2001
d) Prioritization of the National Diagnostic on Guatemalan Wetlands, 2004.

The SIGAP development policy prioritizes 20 areas including wetland ecosystems, establishing a category system that focuses efforts according to: area consolidation, management strengthening, infrastructure administration and development, legal incorporation to the SIGAP, and study of new areas. Five Caribbean areas have been prioritized (see table 11).

On the other hand, the diagnostic document "Getting Acquainted with the Guatemalan Protected Areas System (SIGAP)", developed by the National Biodiversity Strategy in 1999, groups related areas according to their ecosystems, calling them bioregions. The country was divided into 26 bioregions, which later were prioritized on the basis of the ecosystems' diversity, viability and representation gaps. The results of this analysis identified seven priority bioregions, the Izabal-Caribbean area was one of them.

Two years later, in 2001, academicians engaged in inventorying the country's wetlands and in ranking them according to five threat factors ranging from (1), equivalent to a community in critical danger to (5), equivalent to a community that is demonstrably safe. The inventory contains 191 wetlands, seven of which belong to category 1 (in critical danger), 60 are in non-critical danger, and 35 are rare, but not in danger.

A wetland-prioritizing exercise took place in 2004, overlapping criteria of previous studies. As a result, 19 areas were reported as areas of interest, where efforts should focus. Of these, five are in the Caribbean (see table 11).

Table No. 11
Priority Areas for Conservation of Guatemala's Caribbean Region

Name of Area	Prioritizing Approach	
	SIGAP Policy	Wetlands Diagnostic
Río Dulce National Park	xx	xx
Bocas del Polochic Wildlife Refuge	xx	xx
"Chocón Machacas" Manatee Conservation Biotope	xx	
Cerro San Gil Protected Area Springs Reserve	xx	
Punta de Manabique Wildlife Refuge	xx	xx
Lago de Izabal (this is not a protected area)		xx
Río Sarstún Multiple Use Area		xx

Source: Sandoval and Freire, 2004.

6.3 The Honduras Case

The Republic of Honduras is located between parallels 13 and 16, latitude north; it borders with the Caribbean Sea to the north, Nicaragua, the Gulf of Fonseca and El Salvador to the south, and Guatemala to the west; it has an extension of 112,088 sq. km., and it is divided into 18 departments. Honduras has a great wealth of coastal and marine ecosystems. On the Pacific, the mangrove ecosystem covers about 500 sq. km., spreading over the entire coast, except for small portions of beach. The coast on the Caribbean is 671 km long, and it includes coastal lagoons, mangroves, and more than 200 small islands and cays. It provides a habitat for diverse forms of life, and at the same time, it is the country's main tourist resource.

6.3.1 Marine and Coastal Protected Areas

There are 19 protected areas (between legally declared and proposed) in Honduras (12 coastal and 7 marine) covering a total of 1,005,918 hectares, as shown in the following table.

Table No. 12
Honduras Marine and Coastal Protected Areas in the Caribbean Region

No.	Protected Area	Size (ha)	Classification		Management Category
1	Raggedy Cay	2,589	Coastal		Marine Reserve
2	Raggedy Cay Southwest Kay	2,528		Marine	Natural Marine Monument
3	Cayos Cochinos	48,925		Marine	National Park
4	Guanaja Pine Forest	2,680	Coastal		Forest Reserve
5	Roatán West Forest	1,500	Coastal		Marine Protected Area
6	Isla del Cisne	793		Marine	Marine Reserve
7	Turtle Harbour - Rock Harbour	855		Marine	Marine Reserve
8	Michael Rock (Guanaja)	2,647		Marine	National Marine Park
9	Sandy Bay West End Marine Reserve	2,846		Marine	Marine Reserve
10	South West Cay / Half Moon Cay	2,589		Marine	Wildlife Refuge
11	Santa Elena	9,580	Coastal		Wildlife Refuge
12	Isla de Barbareta	10,107	Coastal		Biological Reserve
13	Barras del Rio Motagua/Omoa Baracoa	8,843	Coastal		Wildlife Refuge
14	Barras de Cuero y Salado	13,255	Coastal		Wildlife Refuge
15	Port Royal Wildlife Refuge	834	Coastal		Wildlife Refuge
16	Punta Izopo	18,820	Coastal		National Park
17	Capiro y Calentura (Laguna de Guaymoreto)	4,856	Coastal		National Park
18	Río Plátano	833,675	Coastal		Biosphere Reserve
19	Janeth Kawas (Punta Sal)	37,996	Coastal		National Park
		1,005,918	12	7	

Source: Financial-Plan Model for the Group of Marine and Coastal Protected Areas of the MAR Eco-region.

6.3.2 Methodological Approaches Used to Prioritize

The exercises developed in Honduras have focused on priorities within the network of protected areas already in existence, or on proposing new sites for biological diversity conservation (TNC).

6.4 The Mexico Case

The Republic of Mexico is located between 32° 43' and 14° 31 north latitude. It borders with the United States of America to the north, with Belize, Guatemala and the Atlantic Ocean to the south, the Gulf of Mexico to the east, and the Pacific Ocean to the west. It has an area of 1,967,183 sq. km., and it is constituted by twenty-nine states, one district and two territories.

6.4.1 Marine and Coastal Protected Areas

12 coastal and marine areas have been legally established by Mexico in the Caribbean region (6 coastal, 6 marine), covering a total of 1,284,740 hectares, as shown in table 13.

Table *No. 13*
Mexico Marine and Coastal Protected Areas in the Caribbean Region

No.	Protected Area	Size (ha)	Classification		Management Category
1	Banco Chinchorro	144,360		Marine	Biosphere Reserve
2	Sian Kaán / Uaymil/ Arrecifes de Sian Ka'an	651,000	Coastal		Biosphere Reserve
3	Isla Contoy Isle / Isla Contoy Beach	5,128		Marine	National Park
4	Yum Balam	154,052	Coastal		Flora & Fauna Protection Areas
5	Western Isla Mujeres Coast Punta Cancún / Punta Nizuc	8,673		Marine	National Park
6	Puerto Morelos Reef	9,067		Marine	National Park
7	Cozumel Reefs	11,988		Marine	National Park
8	U-Yumil C'EH	638	Coastal		Wildlife Reserve
9	Manatee Sanctuary	281,320	Coastal		Ecological Conservation Area
10	Xcalak reefs	17,949		Marine	National Park
11	Xcacel - Xcacelito	362	Coastal		Sanctuaries
12	Laguna Manati y Chacmochuch	203	Coastal		National Park
		1,284,740	6	6	

Source: Financial-Plan Model for the Group of Marine and Coastal Protected Areas of the MAR Eco-region.

6.4.2 Methodological Approaches Used to Prioritize

In 1998 the Mexican National Commission for Knowledge and Use of Biodiversity (CONABIO in Spanish) implemented the *Mexican Priority Marine Regions Program*, in which a group of 74 experts from the academic, governmental, private, social, and conservation non-governmental organization sectors gathered for the first time to attend multi-disciplinary workshops. This group classified 70 priority areas, considering environmental, economic, and threat criteria. Of these areas, 43 are on the Pacific Ocean, and 27 in the Gulf of Mexico and the Caribbean Sea. The latter comprise 50% of Mexico's territorial area on those coasts (Arriaga, et. al. 1998). Nine of these areas are located in the Mesoamerican Reef target region, as shown in table 14.

Table No. 14
Priority Marine Areas of the Mexican Caribbean, 1998

No.	Priority Area	Classification			Code
1	Dzilam-Contoy			AB	AB, area with high biodiversity
2	Punta Maroma-Nizuc	AB	AA	AU	
3	Tulum-Xpuha	AB	AA	AU	AA, area with some degree of threat to biodiversity
4	Sian Ka'an		AB	AA	
5	Bahía Chetumal		AB	AA	
6	Xcalak-Majahual		AB	AA	AU, area with some sectors under use
7	Arrow Smith			AFI	
8	Cozumel	AB	AA	AU	AFI, area with lack of information
9	Banco Chinchorro		AB	AA	

Source: Arriaga, et.al. 1998.

Another of the priority exercises undertaken by Mexico in 2005 involved expert evaluations of coastal, marine and deep-sea areas. Area and site polygons were redefined during these workshops and consultations, while characterization and evaluation data (see table 15) were gathered, and a preliminary evaluation by eco-region was completed. There are eleven areas in the priority list and the final data is still being refined (see table 16).

Table No. 15
Contents of a site characterization and evaluation template

Broad Issues	Evaluated and Described Variables
General Site Characteristics	Geological and physiographic
	Oceanographic
	Physicochemical

Broad Issues	Evaluated and Described Variables
Biological Diversity	Taxonomic groups with numerous species in the site
	Key species and arguments for their consideration for inclusion
	Flag species
	Endemic species in the site (national or regional)
Biological Importance of the Site	Elements that make this site unique at the global, national, and regional levels
Impacts and Threats	Real and potential activities of the highest impact
	Inadequate use practices of natural resources
	Indirect impact of distant factors
	Conservation or sustainable-management programs or activities undertaken in the site (and the sector that is implementing them)
	List of species in any category of protection
	Invasive species
	High commercial-value species
	Exotic species

Source: CONANP, 2005.

Table No. 16
Marine and Coastal Priority of the Mexican Caribbean, 2005

Priority Sites Identified	Main Argument for Conservation	Importance
Isla Contoy	Main nesting, feeding, and refuge site for Mexican Caribbean marine birds	Important
Chacmochuch – Arrecife de la Cadena	One of the main reproduction, breeding and shelter centers of numerous fish, mollusk and crustacean species that are ecologically and commercially important	Important
Laguna Makax	Pipefish are endemic to Laguna Makax, which is a unique attribute at the global level	Very important
Nichupté lake system	Important lake system for biodiversity in the adjoining reef area	Important
Coastal Wetlands and Reef at Puerto Morelos		Important
Cozumel	Great physiographic diversity in the reef	Important

Priority Sites Identified	Main Argument for Conservation	Importance
Akumal-Tulum underground rivers and coves	Presence of Mexican blind brotula *(Ogilbia pearsei*) and Yucatan blind swamp eel *(Ophisternon infernale)*	Very important
Sian-Ka´an.	A combination of flooded forests, wetlands, *cenote* sinkholes, bays, coastal pastures and reefs, and the existence of an active sustainable development program that, as it should be, includes the human population. A UNESCO World Heritage site.	Extremely important
Chetumal Bay	It has the most important manatee population at the national level	Very important
Xcalak-Mahahual	It is the most important aquatic-bird nesting site in the area	Very important
Banco Chinchorro	Banco Chinchorro is one of the largest structures of its type in the Caribbean watershed.	Extremely important

Source: CONANP, 2005.

VII. DISCUSSION AND CONCLUSIONS

1. In the course of time, there have been various exercises to prioritize sites and areas for conservation in the Mesoamerican region. These exercises have been conducted according to factors and criteria established by various scientists, protected-area administrators and related sectors. However, the areas identified in the Mesoamerican Reef area are numerous, so it is necessary to undertake a new exercise in order to focus MAR Fund resources on areas with high biodiversity value.
2. The methodologies used to prioritize conservation sites are based on a combination of ecological, economic, social, and risk factors, seeking the long-term viability of protected areas.
3. There are sixty-three protected areas located in the Mesoamerican Reef area of influence, 31 of them are coastal areas and 32 are marine areas. They are distributed in the four countries of the region as follows: Belize, 25; Honduras, 19; Mexico, 12, and Guatemala, 7.

VIII. RECOMMENDATIONS

1. It would be advisable to use a participative methodology that seeks the consensus of the four countries involved in the MAR region, in order to determine the areas that are key to conserving biodiversity, taking into account social and economic contexts.
2. It is important to consider the synergistic effect that may be achieved during the development of the MAR Fund support in the areas that will be selected and other national or international funds in each area.
3. It is necessary to consider the watershed effect in the region when prioritizing protected areas, in order to visualize the chain of events that could pose threats to the coastal and marine ecosystems, but that originate up the watershed.

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Annex 2: Components, Factors, Parameters, and Criteria Proposed for Prioritization of Marine Protected Areas in the Mesoamerican Reef Region

Components	Importance				Factor	Parameter	Criteria	Comments
	1	2	3	4				
BIOPHYSICAL / BIODIVERSITY					Size of the Protected Area	Area (# hectares)	Larger area, higher priority	
					Transboundary protected areas	Location in transboundary regions	PAs in transboundary areas have a higher priority	
					Availability of information and monitoring system	Monitoring intensity (No. of years, No. monitoring stations, and key parameters)	Larger amount of monitoring data, higher priority	
					Vulnerability	Resilience to natural and human disasters	Higher resilience, higher priority	
					Preservation of key environmental services for the region	# of inhabitants that depend on the PA for subsistence	Higher the number of inhabitants benefited, higher priority	
					Presence and condition of key ecosystems (coral reefs, mangroves, spawning aggregations, seagrass beds, estuaries, rocky areas, beaches)	Presence / Absence	Higher presence of key ecosystems, higher priority	
					Contamination Level	Level of physical-chemical contamination	Lower contamination, higher priority	
					Habitat status	% of intact ecosystems (level of intervention)	Higher extension of intact ecosystems, higher priority	
					Endangered, rare, or threatened species	Presence/ Absence	Higher presence of endangered, rare, or threatened species, higher priority	
					Unique Ecosystems	Presence / Absence	Unique ecosystems higher priority	
					Species of commercial importance	Catch volume	Higher catch volume, higher priority	

Groups	Importance				Factor	Parameter	Criteria	Comments
	1	2	3	4				
THREATS					Range of threats	Range in % of the PA	Lower range of threats, higher priority	
					Permanence of threats	Time of permanence	Less time of permanence of threats, higher priority	
					Impact of threats	Level of impact	Less impact of threats, higher priority	
					Likelihood of the occurrence of threats	Frequency of occurrence	Less likelihood of occurrence of threats, higher priority	
					Invasions	Number of people	Fewer people, higher priority	
					Illegal activities	Frequency of illegal activities	Lower frequency of illegal activities, higher priority	
SOCIAL AND CULTURAL					Source of employment	Number jobs generated by the protected area	Higher number of jobs, higher priority	
					Community dependence on PA resources	# of People that depend on the PA sustainably	Higher number of people, higher priority	
					Plant or animal species with social, cultural or economical importance	Number of species	Higher number of species, higher priority	
					Scenic beauty of the PA	Presence / Absence	More scenic beauty, higher priority	
					Recreational value	Number of visitors/year	Higher number of visitors that does not exceed the carrying capacity, higher priority	
					Alternative conflict resolution	Application of methods of alternative conflict resolutions	More application of methods of alternative conflict resolution, higher priority	

Groups	Importance				Factor	Parameter	Criteria	Comments
INSTITUTIONAL	1	2	3	4				
					Management effectiveness of the PAs	Management effectiveness index	Higher management effectiveness, higher priority	
					Suitable and qualified personnel	Training level of personnel	Higher schooling level, higher priority	
FUNDS					Budget	Budget satisfies management needs of the PA	More needs satisfied, higher priority	
					Financial resources	% National financial resources	Higher number of national financial resources, higher priority	
					Financial resources	% International financial resources	Lower number of international financial resources, higher priority	
					Financial management	Level of Financial Management according to the PA's objectives	The better financial management according to the objectives of the protected area, the higher the priority	
					Financial stability	Likelihood of long-term financial sustainability	More financial sustainability, higher priority.	

Annex 3. List of Country Experts Consulted to Evaluate Prioritization Proposals

No.	Name	Institution	Country
1	Godsman Ellis	BACONGO	Belize
2	Omar Gale	COMPACT	Belize
3	Dwight Neal	FoN	Belize
4	Noel Jacobs	MBRS	Belize
5	Valdemar Andrade	PACT	Belize
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25	Jean Luke Betoulle	FUNDARY	Guatemala
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28	Juan Carlos Villagrán	TNC	Guatemala
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30	Nestor Windevoxhel	TNC	Guatemala
31	Carlos Morales	WWF	Guatemala
32	Claudia Ruiz	WWF	Guatemala
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34	Emmy Diaz	Consultora Ambiental	Guatemala
35	Carlos Rodríguez	CI	Guatemala
36	Leonor Rodríguez	FCG	Guatemala
37	Calina Zepeda	BICA	Honduras
38	Adrián Oviedo	HCRF	Honduras
39	Juan Carlos Carrasco	REHDES	Honduras
40	Sandra Mendoza	TNC	Honduras
41	Julio Cárcamo	TNC	Honduras
42	Ninoska Freije	DIGEPESCA	Honduras
43	Sergio Midence		Honduras

No.	Name	Institution	Country
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46	Raúl Zelaya		Honduras
47	Ricardo Steiner	REHDES	Honduras
48	Conrado González	COHDEFOR	Honduras
49		SINAPH	Honduras
50	Ivonne Oviedo	CONAPH	Honduras
51		SERNA	Honduras
52	Alfredo Arellano	CONANP	Mexico
53	Rocío Esquivel	CONANP	Mexico
54	David Gutiérrez	CONANP	Mexico
55	Mari Carmen Garcia	CONANP	Mexico
56	Marie-Claire Paiz	TNC	Mexico
57	Ignacio March	TNC	Mexico
58	Juan Bezaury	TNC	Mexico
59	Luis Bourillón	COBI	Mexico
60	Lorenzo Rosenzweig	FMCN	Mexico
61	Concepción Molina	FANP	Mexico
62	Carlos García Saez	Consultant	Mexico
63	Renée Gonzalez	FAMP	Mexico
64	Ernesto Arias	CINVESTAV	Mexico
65	Jorge Herrera	CINVESTAV	Mexico

Annex 4: Questionnaire filled out by each protected area to establish priorities. Highlighted cells indicate questions that were deleted by those participating in the workshops.

	Question No.	GUA	BZE	HND	MX
1	Please indicate the size of the protected area:				
2	Please indicate the distance between the MPA and other sites in good conservation condition, that support the existence of the MPA.				
3	Please indicate if the MPA has representative samples of the following ecosystems (it is possible to mark more than one answer):				
4	Please provide an estimated number of hectares of angrove in the MPA.				
5	Please provide an estimated number of hectares of coral reefs in the MPA.				
6	Please provide an estimated number of hectares of sea grass beds in the MPA.				
7	Please provide the number of spawning aggregation sites in the MPA.				
8	Please mark with an X the estimated percentage of intact ecosystgems in the MPA.				
9	Which of the following unique elements does the MPA contain?				
10	How many rare species does the MPA host (Example: Shark whale, manatee, Acropora, etc.)?				
11	If you replied to question 10, please list the species.				
12	Does the MPA have endangered or threatened species?				
13	If your answer was positive, please list the species.				
14	What is the vulnerability of the species in the MPA to biologic invasions or disturbances?				
15	Please indicate which of the listed threats affect the biological integrity of the MPA. You may choose more than one answer..				
	If you chose at least one threat in the previous question, please reply to questions 16, 17, 18 y 19:				
16	What has been the extent of this (these) threat(s) in the last five years?				
17	What has been the impact of this (these) threat(s) during the last five years?				
18	What is the permanence of this (these) threat(s) during the last five years?				
19	Will this (these) factor(s) still be a threat in the next five years?				
20	Is the MPA affected by pollution?				
21	If your answer to the previous question was "yes", what are the main sources of pollution?				
22	Does the MPA have a monitoring system that supports management?				
	If your answer to the previous question is "yes", please answer the following questions:				
23	Which of the following components are monitored?				

	Question No.	GUA	BZE	HND	MX
24	How many variables are being monitored?				
25	How many years of records do you have to date?				
26	Are the monitoring data used for management of the MPA?				
27	Please indicate which situation best describes the availability of human resources and needs of the MPA:				
28	What is the level of community support and participation in the management of the MPA?				
29	Does the community depend on any of the following resources of the MPA?				
30	How many direct and indirect sources of employment, compatible management, are generated by the MPA?				
31	How many plant and animal species of social, cultural, or economic importance are found in the MPA?				
32	What species of commercial importance are captured in the MPA?				
33	Please mark with an X if the MPA provides any of the indicated environmental services.				
34	What is the average number of visitors per year?				
35	Is the carrying capacity for visitors known?				
36	If your answer to the previous question is 'yes', please indicate the estimated carrying capacity for the MPA.				
37	What is the average number of research projects developed annually in the MPA?				
38	How is the MPA classified according to the most recent management effectiveness evaluation developed by the governmental authority?				
39	Mark with an X the level of formal education of the manager/director of the MPA.				
40	Please mark with an X the number of years of experience of the manager/director.				
41	Please mark with an X the level of experience of the parkguards in the MPA.				
42	Please mark with an X the frequency of training courses offered in the MPA during 2005.				
43	Has the MPA received financing from non-governmental sources during the last two years?				
44	What are the possibilities of maintaining links to past external sources of funds?				
45	The percentage of budget funded during 2005 compared to 2006 was:				

Question was deleted.

Annex 5: List of Protected Areas Included in Prioritization, according to the Financial-Plan Model for the group of MAR MPAs

Name	Country
Río Dulce National Park	Guatemala
Bahía Santo Tomás Definitive Close Season Zone	Guatemala
Chocón Machacas Protected Biotope	Guatemala
Bocas del Polochic Wildlife Refuge	Guatemala
Cerro San Gil Protected Area Springs Reserve	Guatemala
Río Sarstún Multiple Use Area	Guatemala
Punta de Manabique Wildlife Refuge	Guatemala
Raggedy Cay Marine Reserve	Honduras
Raggedy Cay Southwest Kay Natural Marine Monument	Honduras
Cayos Cochinos National Park	Honduras
Bosque de Pino de Guanaja Forest Reserve	Honduras
Bosque Oeste de Roatán	Honduras
Isla del Cisne Marine Reserve	Honduras
Turtle Harbour - Rock Harbour Marine Reserve	Honduras
Michael Rock (Guanaja) National Marine Park	Honduras
Sandy Bay West End Marine Reserve	Honduras
South West Cay / Half Moon Cay Wildlife Refuge	Honduras
Santa Elena Wildlife Refuge	Honduras
Isla de Barbareta Biological Reserve	Honduras
Barras del Río Motagua/Omoa Baracoa Wildlife Refuge	Honduras
Barras de Cuero y Salado Wildlife Refuge	Honduras
Port Royal Wildlife Refuge	Honduras
Punta Izopo National Park	Honduras
Capiro y Calentura (Laguna de Guaymoreto) National Park	Honduras
Río Plátano Biosphere Reserve	Honduras
Janeth Kawas (Punta Sal) National Park	Honduras

Name	Country
Half Moon Caye Natural Monument	Belize
Blue Hole Natural Monument	Belize
Hol Chan Marine Reserve	Belize
Glovers Reef Marine Reserve	Belize
Laughing Bird Caye National Park	Belize
Sarstoon Temash Nationa Park	Belize
Bacalar Chico Marine Reserve	Belize
Shipstern Private Reserve (Not Official)	Belize
Gladden Spit Spawning Aggregations	Belize
South Water Caye Marine Reserve	Belize
Sapodilla Cays Marine Reserve	Belize
Swallow Caye Wildlife Sanctuary	Belize
Port Honduras Marine Reserve	Belize
Corozal Bay Wildlife Sanctuary	Belize
Caye Caulker Marine and Forest Reserve	Belize
Payne's Creek National Park	Belize
Golden Stream Private Reserve (Official)	Belize
Gales Point Manatee Wildlife Sanctuary	Belize
Gra-gra Lagoon National Park	Belize
Caye Glory Marine Reserve	Belize
Caye Bokel Marine Reserve	Belize
Dog Flea Caye Spawning Aggregations	Belize
Sandbore Spawning Aggregations	Belize
South Point Spawning Aggregations	Belize
Burdon Canal Natural Reserve	Belize
Banco Chinchorro Biosphere Reserve	Mexico
Sian Kaán / Uaymil/Arrecifes de Sian Ka'an Biosphere Reserve	Mexico
Isla Contoy/Playa de Isla Convoy National Park	Mexico
Yum Balam Flora and Fauna Protection Areas	Mexico

Name	Country
Western Coast of Isla Mujeres Punta Cancún/ Punta Nizuc National Park	Mexico
Arrecife de Puerto Morelos National Park	Mexico
Arrecifes de Cozumel National Park	Mexico
U-Yumil C'EH Wildlife Reserve	Mexico
Santuario del Manatí (Manatee Sanctuary)	Mexico
Arrecifes de Xcalak National Park	Mexico
Xcacel – Xcacelito Sanctuaries	Mexico
Laguna Manatí y Chacmochuch National Park	Mexico

Annex 6. Standard Agenda Used in National Workshops

Mesoamerican Reef Fund –MAR Fund- and Fundación para la Conservación de los Recursos Naturales y Ambiente – FCG

WORKSHOP: PARTICIPATIVE PRIORITY-SETTING FOR COASTAL AND MARINE PROTECTED AREAS IN GUATEMALA

AGENDA

8:00	Opening	Ileana C. López, MAR Fund
8:15	Welcome and presentation of the participants	FCG
8:30	General Information: Objectives of the Workshop, agenda and expectations / Working rules	Ileana C. López, MAR Fund
9:00	Overview of regional priority-setting exercises. MAR Fund prioritization process of MPAs	Ileana C. López
9:30	Coffee/Tea	
10:00	Workshop methodology	Ileana C. López
10:30	Participants propose a numeric valuation system for the priority-setting process of coastal and marine protected areas	Individual contributions, group consensus
11:30	Participants evaluate the coastal and marine protected areas based on the numeric valuation system developed in the previous exercise	Breakout groups
12:30	Participants prepare results of the valuation process for national coastal and marine protected areas	Plenary session
13:00	Conclusions and acknowledgements	Ileana C. López
13:15	Lunch	

Annex 7. List of Participants in National Workshops, by Country

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Annex 8. Participants' Expectations for National Workshops

Guatemala
To cooperate by providing information on MPA prioritization in Guatemala
To include the Sarstún River as MPA
To encourage biological research at MPAs
To promote community participation
To prioritize fishing shallow areas
To learn about prioritization methodology in order to apply it
To establish tasks in the MAR region
To be able to visualize the main funding needs in the region
To include Bocas del Polochic as a priority MPA
To include coral-reef areas
To avoid duplicating efforts, but instead, to integrate them
To promote the participation of volunteers
Belize
To obtain information about MAR Fund benefits
To achieve coordination among MPAs
To learn about financial priorities in Belize's MPAs
To list investment areas
To ascertain how the financial process works
To establish the feasibility of natural resources and their conservation
To identify priority support needs in Belize's MPAs
To identify the need to establish a coordination mechanism
To participate and to cooperate
To select priority sites within general ecosystems and in the whole country
To have an interactive section
To identify priority areas at the end of the workshop
To develop a list of MPAs for Belize
To define a list of priorities
To contribute to and to participate in selecting key areas
To learn, to contribute and to work
To contribute to the process aimed at establishing priority MPAs
Honduras
To secure support for its protected areas
To strengthen MPAs
To establish 4 priority MPAs
To learn how to become a member of MAR Fund
To establish commitments
To constitute alliances
Mexico
To prioritize protected areas in the Mexican Caribbean
To use participative methodology for prioritization
To learn about MAR Fund's funding mechanisms
To cooperate in the prioritization process
To develop a list of conservation priorities

Annex 9. List of Participants in the Regional Workshop

Organization	Name	E-Mail Address
ESA-CONSULTORES	Sergio Midence	sermidence@gmail.com
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MAR Fund	María José Gonzalez	mjgonzalez@marfund.org
Consultant	Ileana Catalina López	icathylopez@gmail.com

Annex 10. Regional Workshop Agenda

Mesoamerican Reef Fund – MAR Fund

WORKSHOP: "Participative Regional Priority-setting of Coastal and Marine Protected Areas of the Mesoamerican Reef"

11 April, 2007 Time: 8:00 to 15:00 hours
Princess Hotel, Guatemala City

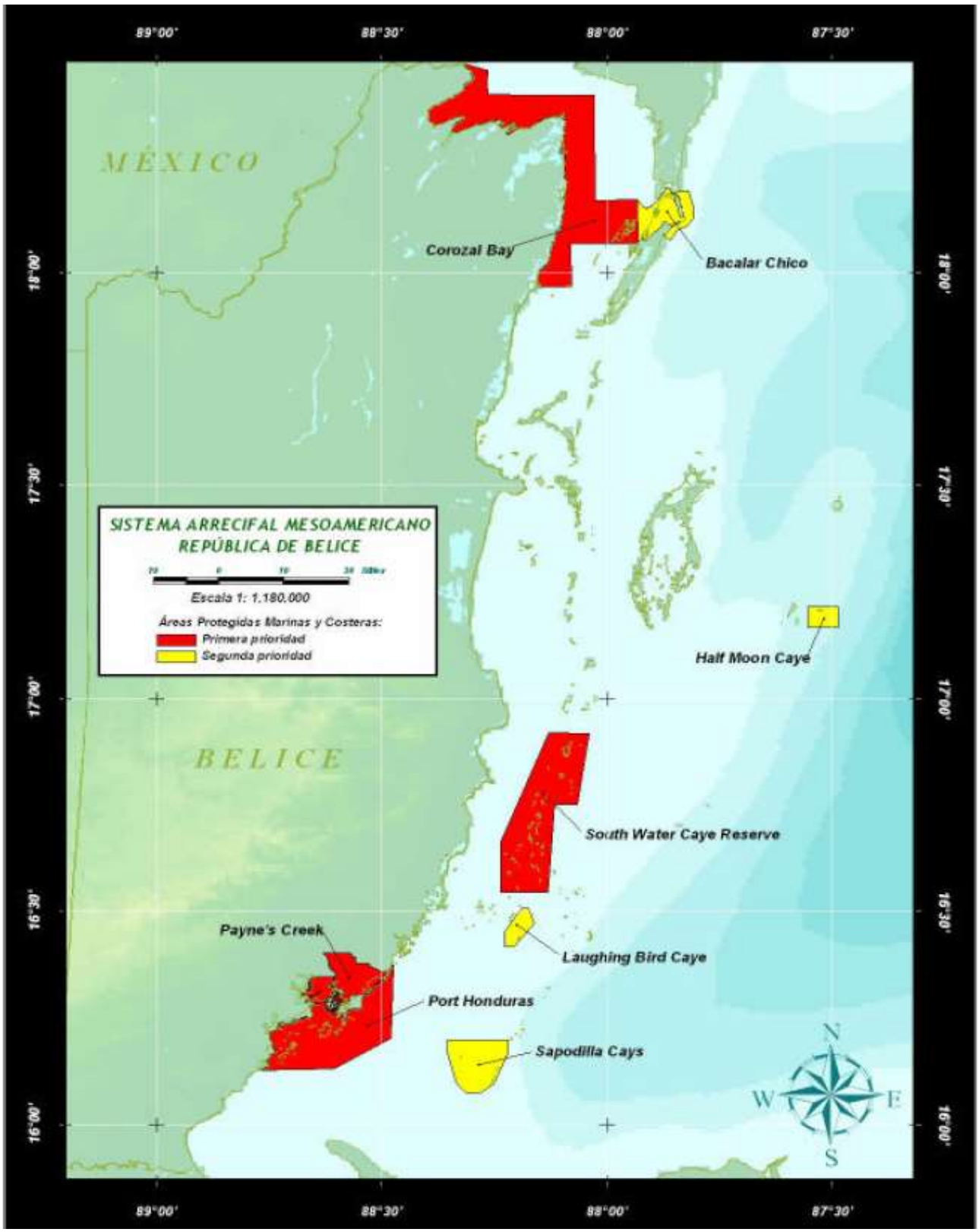
AGENDA

8:00	Workshop Opening	M. J. González
8:15	Welcome / Introductions	MAR Fund
8:30	General Information: Workshop objectives, Agenda and expectations / Ground rules	Ileana C. López,
9:00	Overview of regional priority-setting exercises. MAR Fund priority-setting process of MPAs	Ileana C. López
9:30	Coffee/Tea	
10:00	Workshop methodology	Ileana C. López
10:30	Participants propose a numeric valuation system for establishing priorities of coastal and marine protected areas	Individual participation / Group consensus
11:30	Participants evaluate the coastal and marine protected areas based on the numeric valuation system developed in the previous exercise	Work groups
13:00	Lunch	
14:00	Participants present results of the valuation process of MPAs	Plenary
15:30	Investment priorities for the region	Ileana C. López
16:00	Conclusions and acknowledgements	M. J. González

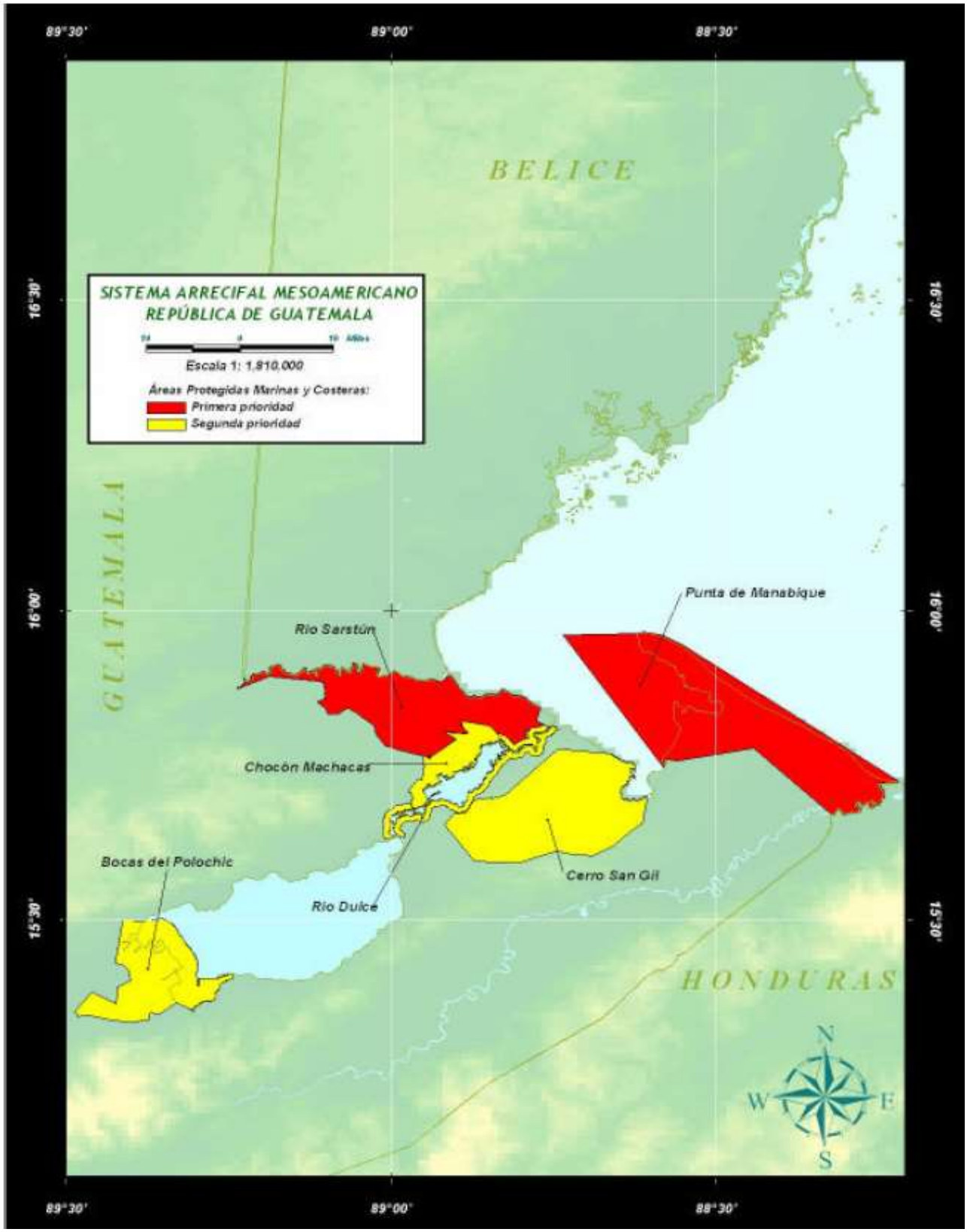
Annex 11. Participants' Expectations for the Regional Workshop

Expectations
Not to waste time, but to get to the point
To achieve concrete results
To be in agreement with results
To be a selfless regional team
To cooperate and coordinate
To achieve expected output
To validate prioritized areas
To define clear criteria in order to select Marine Protected Areas
To establish clear criteria
To attain added value, with no more exclusions
To secure MAR Fund effectiveness. To consolidate MPAs
To achieve reasonable consensus on regional prioritization for the PHASE I System
To identify areas that really need support
To identify areas that need support
To identify MAR Fund priority MPAs
To have representativeness; adequate prioritization of country's MPAs
To establish national priorities and cooperation opportunities in order to maximize funding

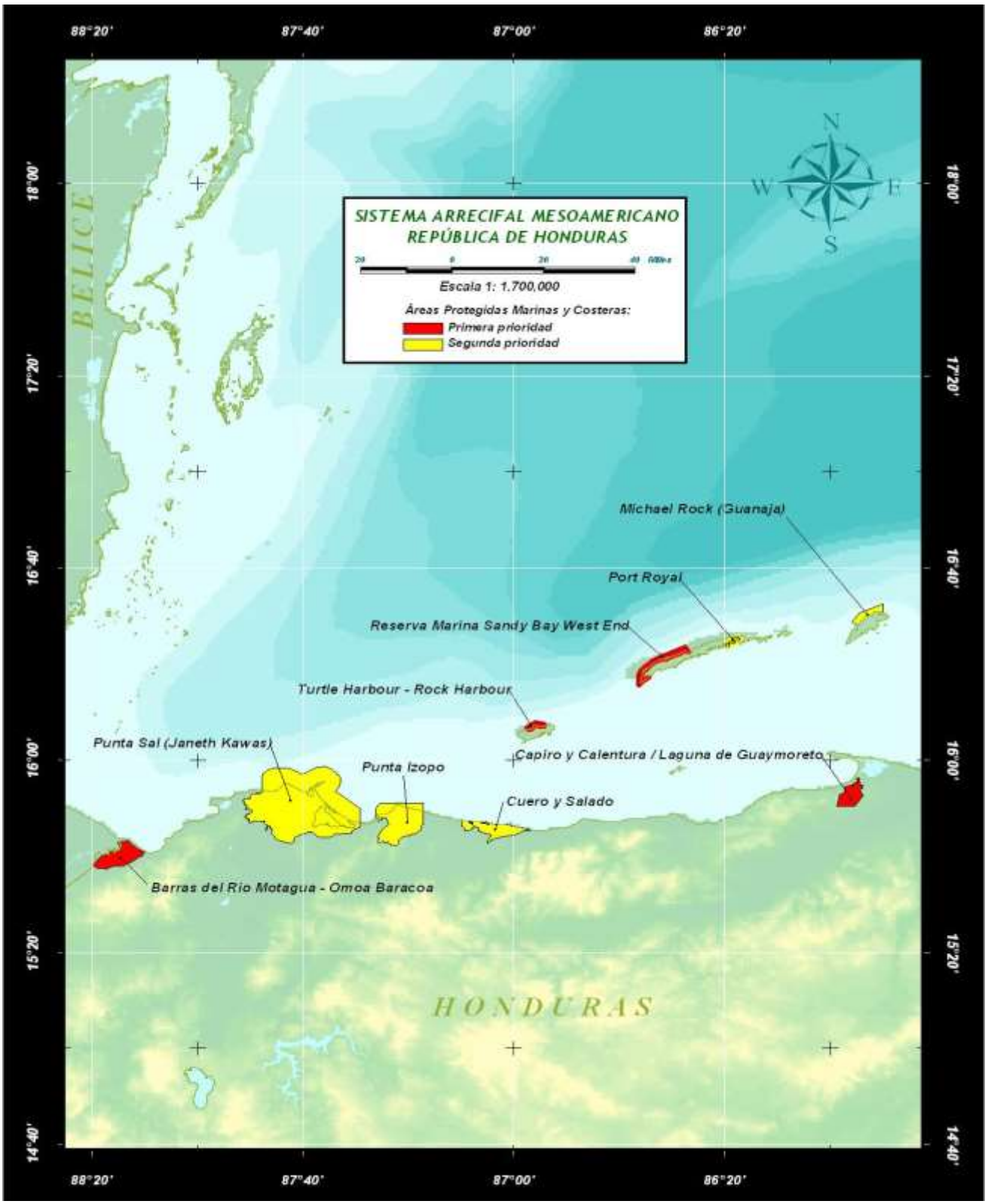
Map 1: Coastal and Marine protected areas (legally established and proposed) in the Mesoamerican Reef Region.



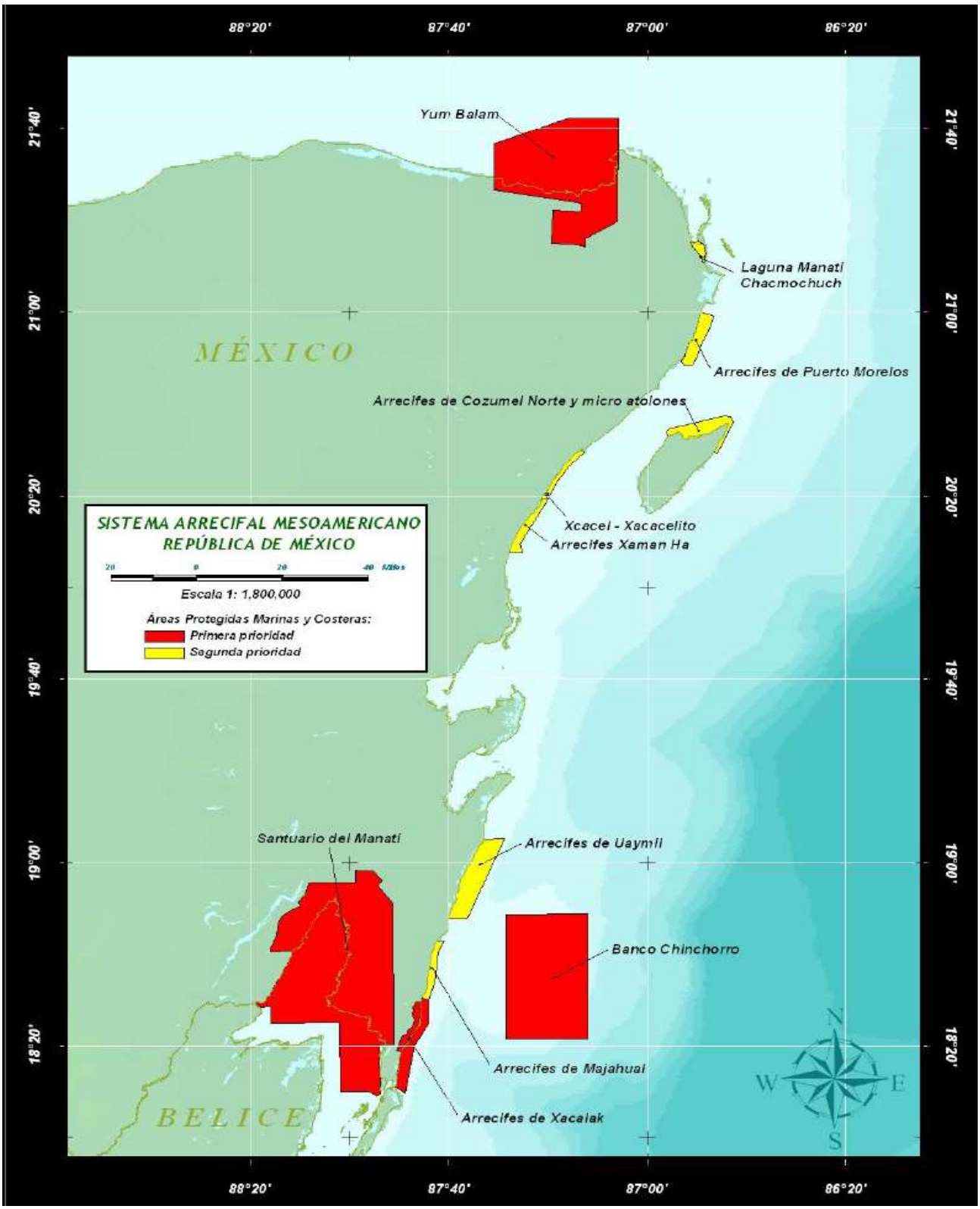
Map 2: View of short-listed coastal and marine protected areas in Belize. Initial short list areas in red; second short list in yellow.



Map 3: View of short-listed coastal and marine protected areas in Guatemala. Initial short list areas in red; second short list in yellow.

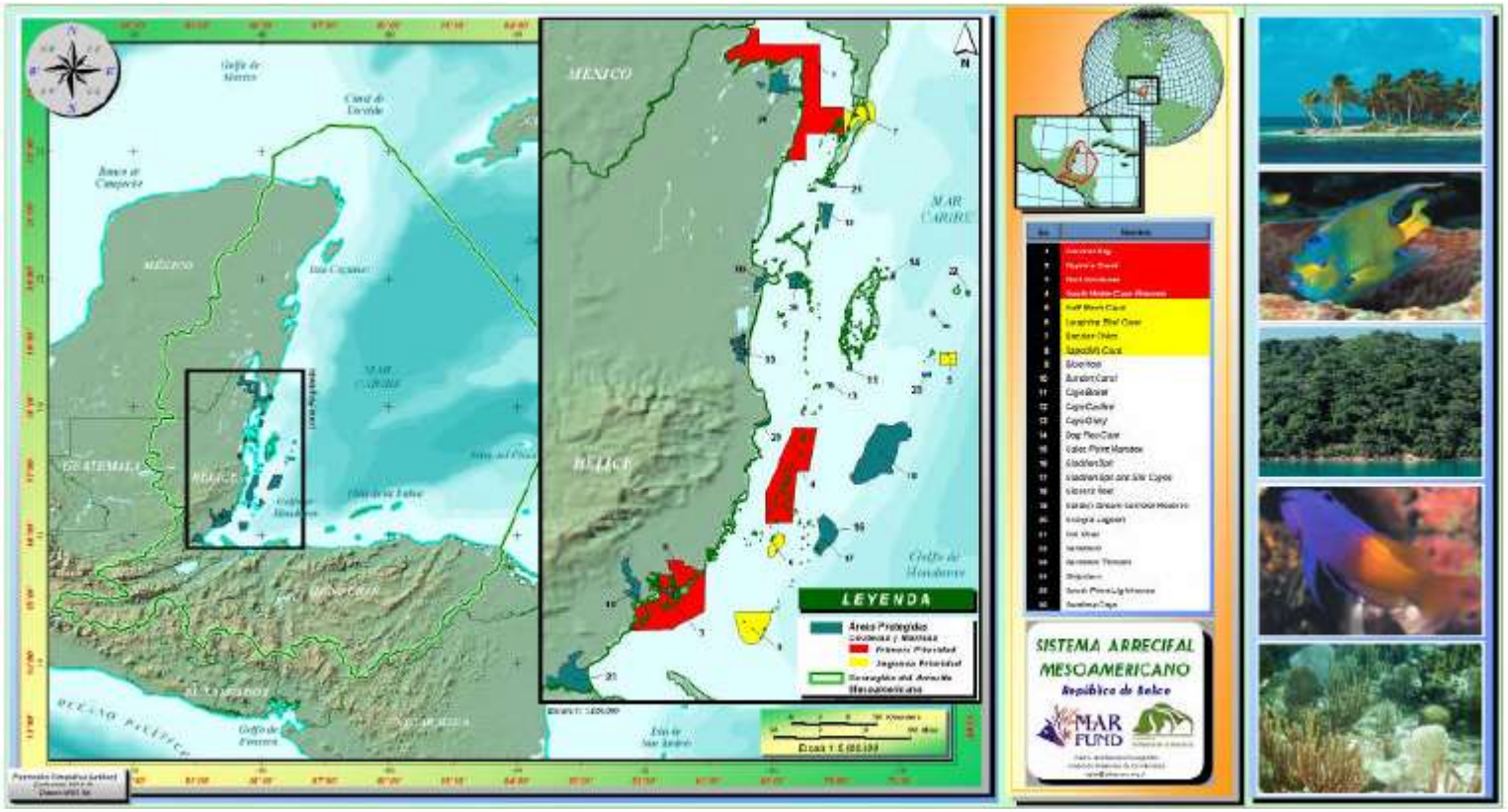


Map 4: View of short-listed coastal and marine protected areas (legally established and proposed) in Honduras. Initial short list areas in red; second short list in yellow.

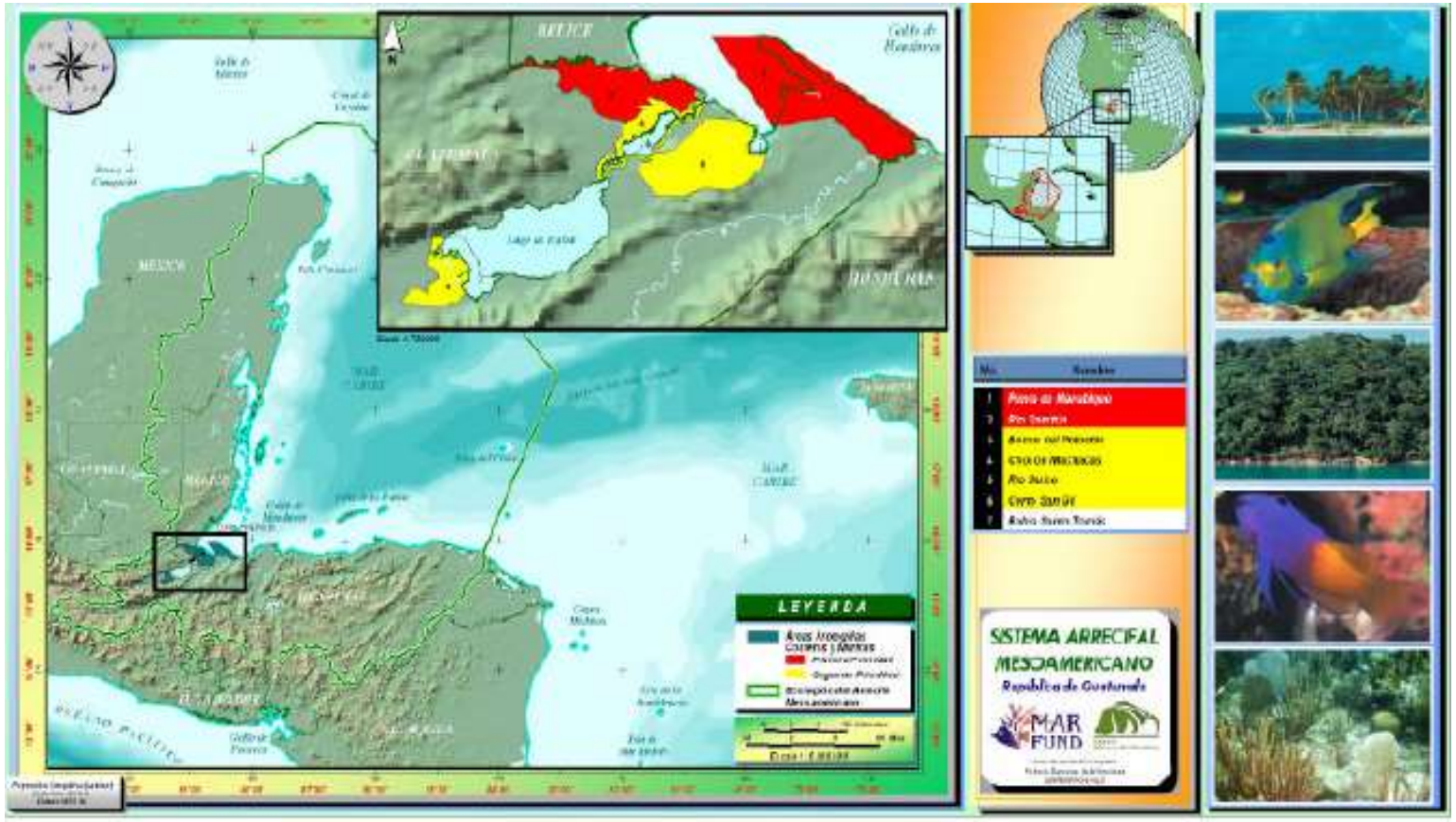


Map 5: View of short-listed coastal and marine protected areas (legally established and proposed) in Mexico. Initial short list areas in red; second short list in yellow.

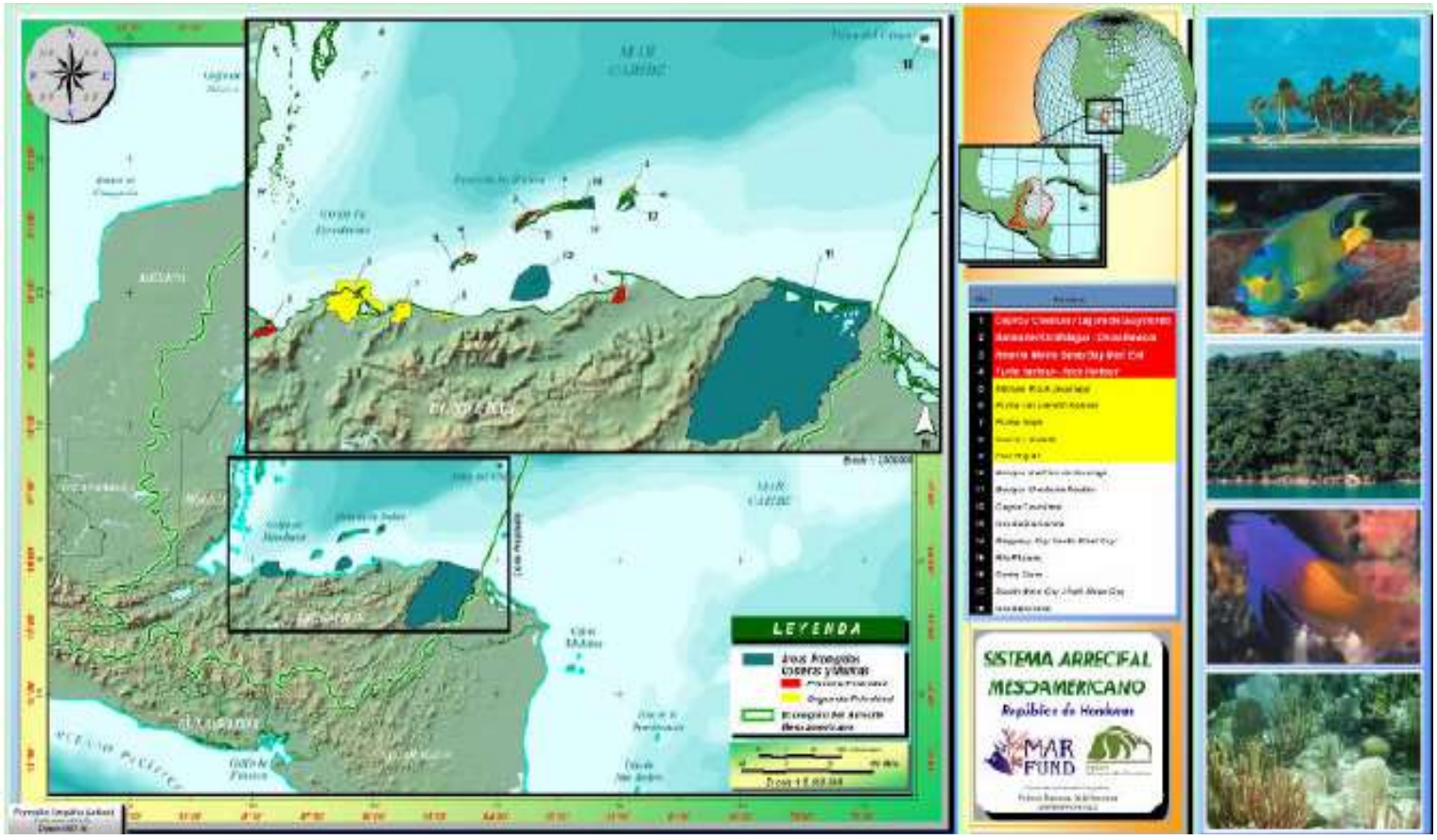
Map 6: General perspective of the location of short-listed coastal and marine protected areas in Belize.



Map 7: General perspective of the location of short-listed coastal and marine protected areas in Guatemala.



Map 8: General perspective of the location of short-listed coastal and marine protected areas (legally established and proposed) in Honduras.



Map 9: General perspective of the location of short-listed coastal and marine protected areas (legally established and proposed) in Mexico.