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**A PROPOSAL FRAMEWORK FOR THE SUSTANABLE
MANAGEMENT OF THE MESOAMERICA BARRIER REEF SYSTEM
(MBRS)**

A thesis presented in partial fulfilment of the requirements for the
Master of Resource and Environmental Planning
at Massey University, Palmerston North, New Zealand.

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ABSTRACT

The Mesoamerican Barrier Reefs System (MBRS) a relatively isolated area, crosses four countries, Mexico, Belize, Guatemala, and Honduras. It is approximately 625 miles long and is consider to be the second longest barrier reef in the world.

As a Large Marine Ecosystem (LME) requires an equitable framework for the sustainable management that will include an intergovernmental instrument to induce an appropriate use of the natural resources and functional mechanisms for international cooperation. Other issues in the analysis that have been considered include coastal development, fisheries management, tourism and recreation, and conservation of the natural resources.

The focus of the research has been the examination of possible management approaches that can be taken as guidelines to the sustainable management of the MBRS. Taking into consideration scientific values, landscape, and community values. However the countries involved are developing and agricultural based economies and marine economic activities are not considered to be a priority for the national economies. Other concerns are the different values that each country is giving to the area of the MBRS.

Some recommendations are made in the area of professional training for Marine Protected Areas managers, the need of a wider legal framework including coastal areas as well as marine areas, strengthening communication mechanism across government agencies, industrial

sectors, and the community groups providing coherence and continuity. It will also be necessary to develop a set of criteria to assess and monitoring activities along the MBRS.

While countries such as Belize, Guatemala and Honduras are far behind in the establishment of a complete regional strategy. The suggestion is that Mexico can lead the project of the establishment of a regional cooperation system for the sustainable management of the MBRS.

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I dedicate my thesis to G. and my son Alejandro.

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GLOSSARY

Approach Planning technique for the management of natural resources.

Area A set of natural resources under a planning and management technique.

BC Biogeographic and Regional Ecosystem Classification System

BEMAMCOOR Agreement between Mexico and Belize in the management of natural resources and natural protected areas

Biodiversity A term used for the degree of nature's variety and encompassed all species of plants, animals, micro-organism and the ecosystems and ecological processes of which they are part.

CAS Country Assistance Strategy

CBD Convention on Biological Diversity

CBM Community Based Management

CCAD Central American Commission for the Environment and Development

CCAMLR Conservation and Antarctic Marine Living Resources

CCRE The Caribbean Coral Reef Ecosystem Program

Central America Geographical Region located between North and South America.

Central American Countries Belize Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama.

CEP Caribbean Environmental Program

Coastal Management The protection, conservation, rehabilitation, management and ecologically sustainable development of the coastal zone

Coastal Zone Coastal waters and all areas to the landward side of coastal waters in which there are physical features, ecological or natural processes or human activities that affect, or potentially affect the coast or coastal resources in the MBRS

CONABIO National Commission for the knowledge and use of biodiversity

CONANP National council of natural protected areas in Mexico

Conservation The protection and maintenance of nature while allowing for its ecologically sustainable use

Costa Maya south coast of Quintana Roo from Punta Herro to Xcalak

ECOSUR Southern Border Mexican College

Ecosystem A community of organisms interacting with one another and the environment in which they live.

Ecotourism Nature based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable

EEZ Exclusive Economic Zones

FIDECARIBE Bank trust of the Caribbean

FMCN Mexican Nature Conservation Fund

FONATUR National fund for the tourism development

GBRMP Great Barrier Reef Marine Park

GBRMPA Great Barrier Reef Marine park Authority

GEF Global Environmental Facility

ICMZ Integrated Coastal Zone Management

INI National Institute for Indigenous People

Intersecretarial Communications and policy mechanisms used between government agencies.

IUCN World Conservation Union

Legal statutes Laws and regulations that organise human activities

LGEEPA General law of ecological balance and environmental protection

LME Large Marine Ecosystem concept

Manatee Marine mammal that lives in shallow waters, is considered to be an endangered species

MBC Mesoamerican Biological Corridor

MBRS Mesoamerican Barrier Reef System

MPA Marine Protected Areas

National law of the sea Legal framework that regulates the water uses in Mexico

NPA National Protected Area

OCB Overall co-ordinating body concept

OECD Organisation for Economic Co-Operation and Development

OMGA Overall Management Agency Concept

PESCA Ministry of Fisheries in Mexico

Planning process A process which involves the different stages related to manage and develop a given situation with community participation defining responsibilities and commitments in a region.

Planning regulations The Acts, laws and bylaws related with planning in the federal, state and municipalities.

Political unit A free and autonomous territory capable to sign agreements with other similar units at the national or international level.

PROFEPA The office of the federal attorney for environmental protection in Mexico

Questionnaire Research instrument implemented for data collection within government agencies.

Riviera Maya north coast of Quintana Roo from Cancun to Cobá

RM Regional Management

Scientific data Information collected with a rigorous technical method

SCT Ministry of Communications and Transport of Mexico

SE Ministry of Economy of Mexico

SECTUR Ministry of Tourism in Mexico

SEDUMA State Ministry of the Environment and Urban Development in Quintana Roo Mexico
SEMAR The Navy of Mexico
SEMARNAP Ministry of the Environment, Natural Resources and Fisheries in Mexico.
SEMARNAT Ministry in the Environment and Natural Resources. In Mexico
SOICE Sector Operated Independently with Agreed Common Ends Concept
SP Strategic Planning Concept
SRE Ministry of Foreign affairs
UNCED United nation Conference on the Environment and Development
UNEP United Nations Environmental Program
VO Virtual Organisation Concept
WB World Bank
WWF World Wildlife Foundation

INTRODUCTION

CHAPTER 1

1 Background

This chapter provides the background context for the Mesoamerican Barrier Reef System (MBRS) management. The aim is to introduce to the reader the main characteristics of the second largest barrier reef in the world. The MBRS crosses four countries of North and Central America with different population characteristics, types of government, different culture, and different values.

Chapter one (1) will help the reader understand some of the constraints concerning the proposed framework for the sustainable management of the MBRS. It will also present a general view of the natural resources of the reef system.

1.1 What is a Reef?

Even though Charles Darwin defined a reef as 'as corals, which greatly differ in kind on different parts of it, are probably all adapted to the station they occupy, and hold their places, like other organic beings, struggle one with another and with external nature' (Charles Darwin, 1872, as cited by Wood, 1999, p.3). For the purpose of this research the following definition of a tropical coral reef will be used: " a reef consists of a rigid, wave-resistant framework constructed by large skeletal organisms (mainly corals and coralline algae) whose growth is driven by photosynthesis" (Wood, 1999 p.5). The cavernous structures of the

coral reefs provide habitat for thousands of species many of which are unique to these ecosystems. Reef communities are associations of species with similar ecological and environmental requirements. Cicin-San (1998) refers to reefs as the world's most valuable ecosystems in terms of their biological diversity and their productivity and a source of livelihood for many coastal communities.

The Caribbean Environmental Program (CEP) has conducted a study in the Caribbean Sea, Gulf of Mexico, the Bahamas, and the northeast coast of South America (1993), about the implication of climate change and human activities on the whole reef system. In this study, seven socio-economic issues were also studied among the impact of climate change in coral reefs. Activities such as deforestation, coastal development, runoff, overfishing and tourism are expected to cause extreme stress to coral reefs (UNEP, 1993).

1.2. Characteristics of Marine Ecosystems

The MBRS may be characterised as a Large Marine Ecosystem (LME). Marine ecosystems are complex, ecologically sensitive and exceedingly valuable places that are under enormous, and in most cases largely ignored threats. Ocean natural resources were recognised in 1992 thanks to the United National Conference on the Environment and Development (UNCED). Before that time there were few concerns for the marine environment and the increasing impacts of human induced change.

According to Sherman, (1999) the UNCED issued a declaration on the oceans, recommending that nations must:

1. Prevent, reduce and control degradation of the marine environment;
2. Develop the potential of marine living resources to meet human nutritional needs, as well as social, economic, and development goals; and
3. Promote the integrated management and sustainable development of coastal areas and the marine environment.

The UNCED declaration represents an important milestone because 170 national leaders endorsed it. Since 1992 many international agreements, treaties, declarations, and conventions for conserving natural marine resources have been designed. (Wallace, 1993 in Sherman, 1999). But today no single international institution has been empowered to reconcile the needs of individual nations with those of the global community in taking management action to ensure the long-term sustainability of marine resources and ecosystems (Myers, 1990 in Sherman, 1999).

In response, the Global Environmental Facility (GEF) has emerged as the facilitator and funding mechanism for integrating global environment concerns into a process for achieving the goals of several international conventions identified by UNCED for global action. The GEF established within the World Bank, is supporting and assisting developing countries in overcoming threats to the marine environment such as pollution, fisheries, habitats, coastal zone management, shipping, transport, and drainage basin effluents. This agency is supporting programs aimed at improving assessment and

management of shared marine resources in international waters that cross national boundaries (Sherman, 1999).

The IUCN recommended that a strategy for sustainable development of marine resources be developed in partnerships between governments, business, NGOs and indigenous people because conservation of marine resources is a societal concern not just a scientific problem. Sustainable management of marine ecosystems is critical to the natural and cultural heritage of the world because they support a great diversity of animals and plants and they also play an important role in the climatic cycles (World Bank, 1995). Examples include fisheries as a food resource, mangroves that provide places for nourishment of multiple organisms, and reefs as food resource for marine species (IUCN, WWF, and UNEP, 1991).

*"The oceans are becoming despoiled and every processes on which most life depends are put at risk."
(Cherfas, 1990, in Agardy, 1997).*

Issues that have generated changes in the marine habitat composition include human activities, such as tourism and recreation, transportation and oil industry (GBRPA, IUCN, and WB, 1995). Activities such as agriculture, forestry, livestock, construction of human settlements and roads, and recreation contribute in generating environmental change to reef environments and inland in river catchments also.

1.3. Management of the Marine Rim

Done (2000) defines the concept of marine protected areas as a management tool which can be used to achieve the long term goal of passing on a worthwhile marine ecosystem to coming generations. The World Conservation Union (IUCN), the United Nations Environmental Program (UNEP), and the World Wide Life Foundation strategy (WWF) define marine protected areas as "any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment". Marine reserves were first created in 1930 (Bjorklund, 1974; Allen, 1976; Powell, n.d.; Davis, 1981 in Silva and Desilvestre, 1986) and the marine protected areas were created at leisurely places. Between the 1960 and the 1970's this leisurely concept started to change and marine reserves commenced to apply protection policies in marine and coastal resources (Silva et.al. 1986). In the case of Latin America, the objective of marine reserves is mostly to create a space for tourism and recreation (Silva, 1986 p.324).

The establishment of Marine Protected Areas (MPA) has enhanced protection of the marine environment. Management efforts have also been successful in preventing depletion of marine resources. Marine Protected Areas are specially managed to protect species; the habitats that support them and ecosystems that they comprise are key tools in saving the earth's seas from over-utilization to meet people's needs. According to Agardy (1997) the ultimate goal of any MPA is marine conservation. Fifteen (15) objectives can be recognized in MPAs:

1. Maintain genetic/species diversity;
2. Promote research;
3. Allow creation of education and training areas;
4. Conserve habitat and biota;
5. Allow for baseline monitoring;
6. Protect rare/important species;
7. Promote tourism and recreation,
8. Promote sustainable development;
9. Recolonize exploited areas;
10. Protect coastlines;
11. Allow for alternative economic development;
12. Preserve aesthetic value;
13. Protect historic/cultural sites;
14. Exert political influence or assert jurisdiction; and
15. Protect intrinsic and/or absolute value of an area.

1.4 **Types of Marine Protected Areas**

Agardy (1997) recognized seven types of MPAs :

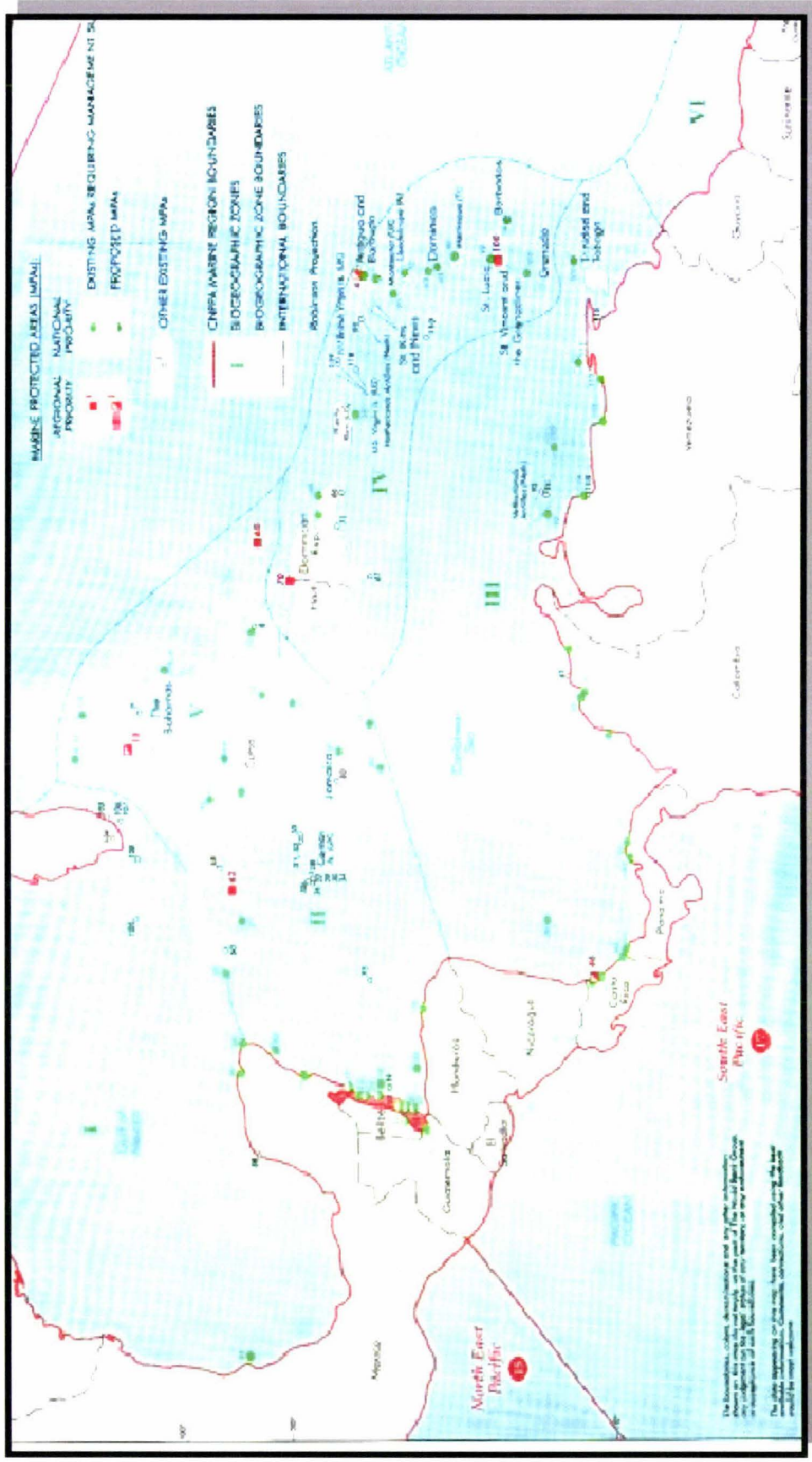
1. *Closed areas*: are areas that certain class of use is restricted for the sustainability of the resources; often they are temporary or seasonal;
2. *Research and monitoring areas*: these areas are designed either as control in experimental science or sites for monitoring environmental conditions;
3. *Sensitive sea areas*: areas that need special protection because of their ecological or socio-economic significance;
4. *Marine sanctuaries and marine parks*: areas that are established to accommodate a set of particular uses

while conserving the coastal or marine ecosystem and its processes;

5. *Regional seas and large marine ecosystem areas*; recognized by the United Nations Environmental Program (UNEP) as enclosed or semi enclosed seas that fall under the jurisdiction of more than one nation;
6. *Integrated Management areas*: these areas include state-administered coastal zone planning areas and Exclusive Economic Zones (EEZ) managed by federal authorities;
7. *High seas under the U.N. law of the sea*: areas that are under the international treaty and codified customary law which create a cooperative management regime for those states that sign and ratify these agreements.

Large Marine Ecosystems (LME) according to Alexander (1993) are extensive aggregates of fish populations which are linked together in predator-prey relationship. The minimum size of LME units may be approximately 200,000 kms². However, Sherman and Tang, (1999) states that 'the large marine ecosystems are relatively large regions of ocean space, characterized by distinct bathymetry, hydrogeography, productivity and tropically dependent populations. They extend from the near shore areas, including river basins and estuaries, out to the seaward boundary of the continental shelf or the seaward margin of coastal current systems (Sherman, 1999). The author considers that there are forty nine (49) LMEs around the margins of the Atlantic, Pacific and Indian Ocean. Among them are the US Northeast Continental Shelf, the East and West Greenland Shelves (Alexander, 1993).

The MBRS concept is relatively new and has also been used only in documents from international agencies such as the Central American commission for the Development (CCAD), The World Bank, the GEF, few international literature and some local documents. Other consulted authors refer to the Wider Caribbean without specifying any particular region. Authors such as Alexander (1993), Sherman (1999), and Agardy, (1997) consider the area "The Wider Caribbean" as a Large Marine Ecosystem, located bordering up north with the State of Florida, to the east surrounding Cuba, the Antilles and then in the south part with the coasts of Venezuela and Colombia, and to the west with Central America (Panama, Costa Rica, Nicaragua, Honduras Guatemala, and Belize) and Mexico (Agardy, 1997, and Alexander, 1993) (see map 1).



THE RESEARCH STUDY

CHAPTER 2

2 Introduction

The idea to carry out a research about the Mesoamerican Barrier Reef began from a personal interest in the barrier reef system and a professional concern about the management of shared natural resources. In the first instance there is a personal fascination for the sea. Secondly there is a desire to investigate the possible planning mechanisms applicable in the rim and of the international relations feasible to manage a resource that is shared between various countries¹.

Apart from these reasons, I have spent some time living in Guatemala and from there I visited Honduras many times even though this writer is Mexican. When I stayed in Guatemala I had the opportunity to go to "Rio Dulce", which is in the Atlantic coast of the country. I did the trip two ways: the first day was by boat through Rio Dulce and up to the Caribbean Sea where we visited the Community of Livingston. Before we got to Livingston, we stopped in some islands along the river considered to be Natural Protected Areas. The areas had that status mostly because they were isolated and only the central government had suitable transportation to access these sites.

¹ Kathryn Rountree and Tricia Laing in 'Writing by Degrees a Practical Guide to Writing Thesis and Research Papers', suggest that personal reasons can be part of the background of the research.

Living in Guatemala for almost a year and travelling around the country, I had never seen a community like the Garifunas in Livingston. They were very different from the rest of the communities in Guatemala. They were black skinned (like the majority of the Belizean inhabitants) and they spoke English. Moreover they considered themselves as being originally from the Caribbean, and not from Guatemala. It made sense when I realised that there was not a road to get to Livingston. However, there were ships coming from the Caribbean stopping in this small town.

The second trip was undertaken in a jet where I had the opportunity to see the estuary of the river at the fringe of the Caribbean Sea. It was then when I realized that on that sea, the barrier reef was along the coast of Livingston and Rio Dulce. Months later when I talked to Guatemalans friends I was made aware that very few of them knew the existence of the Barrier Reef which was crossing the Atlantic coast of Guatemala and that it was the same reef that was in Honduras, Belize and Mexico.

A few months after visiting Rio Dulce I went to Honduras. I visited for the second time the city of "Roatan," a well-known paradise for scuba divers. In Roatan, I obtained my sea diver certification and that is when I finally understood the real size of the second largest Barrier Reef in the world. By that time I was involved in conservation projects in Guatemala and was collecting information about the Honduras' experience. Through these I got the opportunity to meet people that were working in marine conservation and I visited some sites in the "Bay of Islands", Honduras.

I was able to identify that the Reef where I first dived as a child in Cozumel, Quintana Roo, Mexico, was the same Reef in the Bay of Islands, Honduras. I wanted to do more research on how to structure a 'Marine Park' or a natural protected area which will produce protection guidelines and development policies applicable to the reef and the surrounding communities in the coastal areas of the reefs. In this context, I began a literature review on authors that did research about the Reef. Most of the research was on the marine sciences.

On-line research led me to the World Bank page where I found a proposal for the sustainable management for the Reef entitled "The Mesoamerican Barrier Reef System" (MBRS) as a key ecological component of the regional project of the Mesoamerican Biological Corridor (MBC). The primary aim of the project was to conserve key terrestrial and coastal ecosystems linking North and South America. The Project focused on the reefs from Ambergris Cay in Belize to the Bay of Island, Honduras. (The World Bank, 2001). The World Bank proposal will be discussed in chapter six (6) as a program with objectives and action plans relevant to all four countries with an interest in the MBRS.

Taking into consideration the World Bank proposal, this research is based on a number of assumptions:

1. The Mesoamerican Barrier Reefs System (MBRS) crosses four countries, Mexico, Belize, Guatemala, and Honduras. It starts in Isla Contoy, Quintana Roo, Mexico; and finishes in the Bay of Islands, Honduras. (See Map 2).
2. For the purpose of this research, the MBRS is going to be considered a Large Marine Ecosystem (LME). Other management approaches will also be discussed;

3. Mexico would be the leader country in management of the MBRS;
4. The 'Proposed Project' from the World Bank will be discussed applying the developed criteria towards the end of this research.

2.1 The Research Problem

The problems include: how to manage a LME that crosses four different countries and which management approach provides the most suitable framework for the sustainable managing of the MBRS.

2.1.1 Research Questions and Objectives

The objectives of this research are as follows:

1. To examine the issues facing the four (4) countries concerned with the sustainable development and management of the Mesoamerica Barrier Reef System (MBRS).
2. To provide specific advise and recommendations to the Mexican government about developing policies for the sustainable management of the MBRS and for liasing with the other countries to achieve sustainable management;
3. To develop a management framework based on the World Bank Project.

2.2. Literature Review

To achieve the objectives of this research a review of literature on the following issues was conducted:

1. Coastal management,
2. Fisheries management,

3. Marine environment and marine parks,
4. Management of natural protected areas,
5. Community participation, and
6. Intrinsic values.

The author considers that these are the topics which are relevant in the establishment of a framework of sustainable management of a large marine ecosystem. International literature concerning marine parks and natural protected areas was also included to extend the criteria and guidelines for choosing appropriate management concepts.

A local literature review is included to give a picture of the current management of marine ecosystems in the MBRS. Analysis of governmental frameworks and legal statutes for the four (4) countries will be discussed. However, only Mexico's management structures will be analysed in detail and will provide the criteria for determining applicability of various management concepts applicable to the management of the MBRS.

2.3 *Interviews and Questionnaire*

The research about management systems will be based on answers to a questionnaire prepared for the Mexican national and local governmental authorities. It will also include respondents from other sectors such as the academic sector, the private industry and non-governmental agencies that would be involved in the management and decision-making process in the MBRS.

Departments and Ministries will complete a questionnaire consisting of thirteen (13) questions. The first part of the questionnaire deals with gathering general information about the respondents, such as the name, the age, highest educational attainment, the length of time they have occupied their positions. Because Mexico has a new government it is relevant to know the period of time the respondent has been in their particular institution and management position. This information would be useful to determine the quality and quantity of knowledge that the new government has concerning the MBRS and possible management framework.

It is important to mention that the new President, Vicente Fox has established an office named "Puebla-Panama Plan", which should be responsible for the sustainable development of the southern part to Mexico. It is likewise linked with Central America, down to Panama. The concept of the Mexican government is to have an agency that could work with the CCAD initiative of the Mesoamerican Biological Corridor (MBC). The Puebla-Panama Plan office will coordinate the agencies in Mexico that are involved in the MBC initiative.

The objective of the first, second, and third questions is to draw over information about the extent of the knowledge of the respondents on details about agreements, plans, objectives and projects for the MBRS.

The fourth question is designed to obtain information from the respondents about the identification of the constraints in the application of a cooperative model.

Question number five (5) had the intention to identify how much knowledge the involved agencies had concerning the fact that the MBRS is a natural marine resource shared by four countries. Also it seeks

to identify the main difficulties among international agreements within the context of different cultures, types of government, policy making processes and languages.

Question six (6) aims to obtain data on the number of agencies that have completed researches in the MBRS.

The purpose of Question seven (7) is to verify the extent of the respondents' knowledge about the different management approaches that are in literature. Section b) of the question is concerned about the findings in the implementation of any management approach.

Question eight (8), is mainly planned to analyse different perceptions of the MBRS from the involved stakeholders of the MBRS. Questions nine (9) and ten (10) planned to establish if there were communications strategies among the different stakeholders involved.

The objective of question eleven (11) is to compare different views from numerous agencies concerning risks in the marine and coastal environments.

The last two questions, twelve (12) and thirteen (13), are prepared to verify if the respondents have set a criteria for the monitoring and evaluation of the MBRS management actions.

2.3.1 Criteria for the application of the questionnaire

The criteria used for the application of the questionnaire are explained in table 1

Table 1 determines which department/Ministries should be respondents to the questionnaire.

Coastal and Ocean Activities	Mexican Ministries/governmental office involved
Living marine resources	PESCA, CONABIO and Fisheries community
Minerals and Energy	SE
Tourism and recreation	SECTUR, FONATUR,
Coastal infrastructure development	SCT, CNA, FONATUR, Municipal Gov., State Gov. and Community, SCT.
Waste disposal and pollution prevention	SEMARNAT, CONANP, Municipal and state government and PROFEPA.
Ocean and coastal environmental quality protection.	SEMARNAT, PROFEPA, SEMAR
Navigation and communication	SCT, SEMAR,
Beach and shoreline management.	State government, SEMARNAT, and municipal government, SEDUMA.,
Research	CONABIO, CONANP, ECOSUR, FMCN, ONG. Local Universities and International Agencies.
Mesoamerican Biological Corridor	Plan Puebla-Panama
International Agreements	SRE
Agriculture and forestry	SAGARpa
Industrial waste	SEMARNAT and PROFEPA
Alteration of wetlands	SEMARNAT
Construction of Human settlements and roads	SCT, INE, SEMARNAT, SEDESOL, and state government
Mining	SEMARNAT, and SE

Definitions:

- National Commission for the Knowledge and Use of Biodiversity (CONABIO)
- Southern Border College (Academic Institution)(ECOSUR)
- Bank Trust of the Caribbean (FIDECARIBE)
- Mexican Nature Conservation Fund.(FMCN)
- National Institute for Indigenous People (INI)
- The Office of the Federal Attorney For Environmental Protection (PROFEPA)
- State Ministry of Fishery - National Commission of Fishery (PESCA)
- Ministry of Communications and Transport (SCT)
- Ministry of Economy, the Office of Mining (SE)
- Ministry of Tourism (SECTUR)
- State Ministry of the Environment and Urban Development (SEDUMA)
- Ministry of the Environment and Natural Resources (SEMARNAT)
- The Navy (SEMAR)
- The Ministry of Foreign Affairs (SE),
- The National Fund for the tourism development (FONATUR),

- Fisheries National Commission (PESCA).
- The Deputy Ministry of International Affairs of the Ministry of the Environment, (SEMARNAT)
- The Presidential Commission for the Social and Human Development,
- The Puebla-Panama Plan Presidential Commission, and
- The Ministry of Tourism at the state of Quintana Roo (SECTUR).

2.4 Maps and photographs

Maps and photographs of the area were obtained to document some of the sites. These materials were used to form the spatial analysis of the area in some sites of the state of Quintana Roo and also to demonstrate several concerns outlined in this research.

The next figure shows the methodology used in this research.

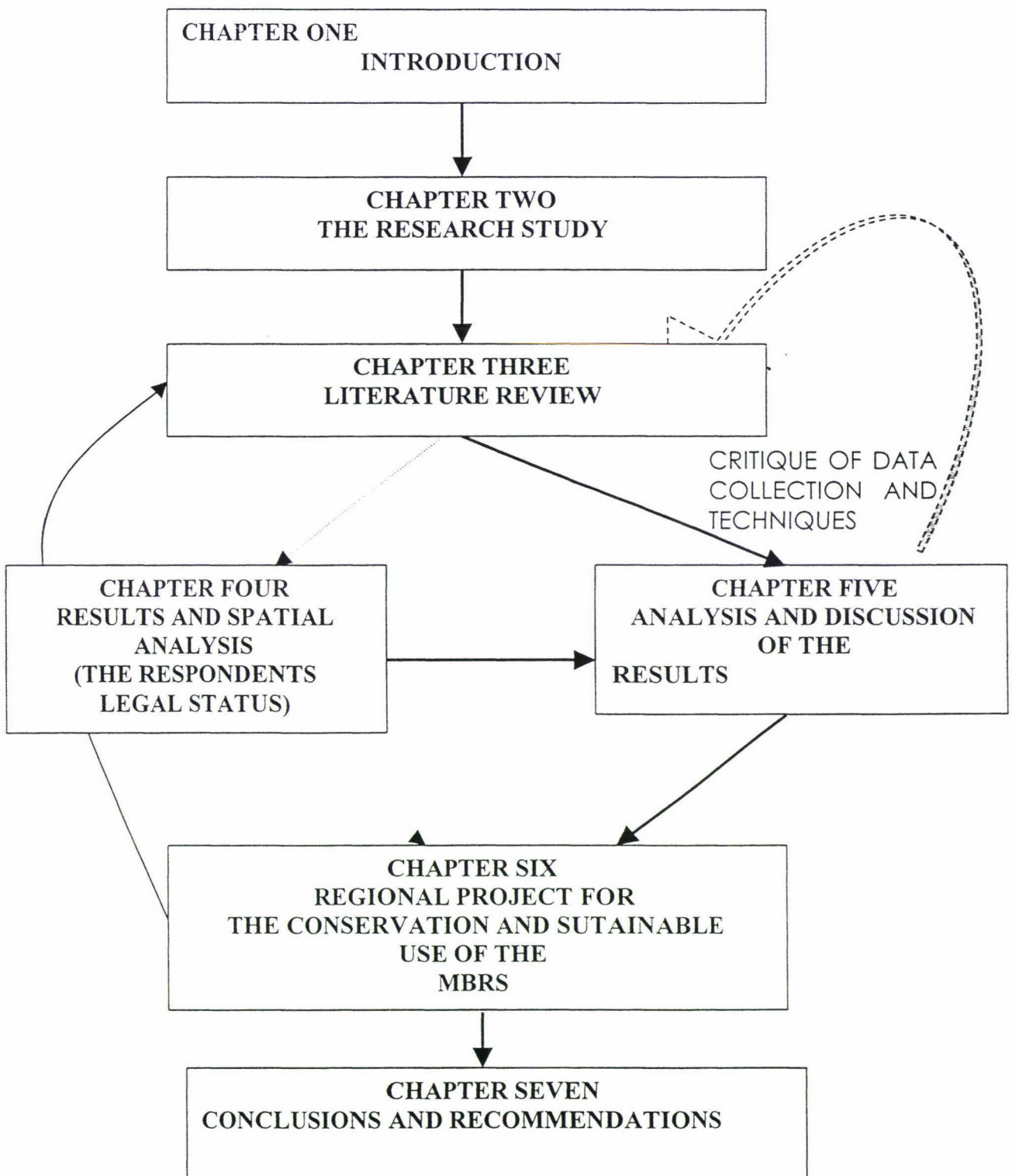


Figure 1. Shows the methodology use in the research.

2.5 The Mesoamerican Barrier Reef System (MBRS)

With a length of 720 km (World Bank, 1995), the Mesoamerican Barrier Reef System (MBRS) is the second largest in the world. It is also considered to be unique in featuring three atolls in the Belize region. The barrier reef starts in Mexico, in "Isla Contoy" and ends in Honduras, including the Bay of Islands. The long-term project of the World Bank is to extend the marine protected area down to Brazil in the future (World Bank, 2001).

The MBRS crosses four countries and is located in the region known as the 'Wider Caribbean' according to the IUCN (Kelleher, Bleakley, and Wells 1995). As shown in Map 1, the Wider Caribbean extends from the Peninsula de Yucatan down south to the coasts of Venezuela where the denominated south Atlantic region commence. The area of 'Wider Caribbean' comprises coastal areas from both, the Caribbean Sea such as Jamaica, Puerto Rico, Cuba, and Atlantic Ocean such as the coasts of Colombia, and Venezuela. Each country is within different inland regimes, which makes the analysis of the information gathered difficult when all the data is under the same marine geographic classification (The Wider Caribbean Sea).

Although the MBRS was considered to be in good condition (World Bank, 1995), in the last five (5) years it has suffered from lack of integrated management and sustainable use. Protection objectives have been minimal focussing on tourism development and economic growth (SECTUR, 1999). Improved conservation policies are needed to deal with the rapidly growing pressures from coastal development, tourism, water sports, sedimentation and over fishing. Associated with the barrier reef ecosystem are extensive areas of relatively pristine coastal wetlands, lagoons, sea grass beds and mangrove forests,

which provide critical habitats for threatened species such as sea turtles and manatees.

There have been a considerable number of different names to refer to this particular coral reef area. The Caribbean Coral Reef Ecosystem Program only refers to the barrier reef of Belize (CCRE, 2001). Since the Mesoamerican Barrier Reef has been traditionally a paradise mainly for divers, tourist operations have named the MBR as: "The Barrier Reef of Ambergris Caye" and also the barrier reef of "Banco Chincorro" (Casado, 2001). It is also known as the "Mayan Reef" (INE, 1997). These names are frequently used to refer to the reef system. Both the Barrier Reef of Ambergris Caye and Banco Chincorro are parts of the MBRS and Banco Chincorro has been lately designated as an MPA in the Mexican protected marine area system.

The World Bank named the study area as the "Mesoamerican Barrier Reef System (MBRS)" (Global Environment Facility, 2001) and this is the name that this research has agreed to adopt.

On June 5, 1997, the Presidents of México, Guatemala, Honduras and the Prime Minister of Belize signed the "Declaration of Tulum" in which they acknowledged the biological, cultural and economic importance of this shared resource to all four (4) nations. Later that year the Central American Commission for the Environment and Development (CCAD) representing the three Central American countries, including Mexico as an observer, approached the World Bank requesting support for the design of strategies and projects at the regional and national levels, for the conservations and sustainable use of the MBRS, (GEF, 2001) and drafted an Action Plan (see Appendix 1).

The MBRS is a key ecological component of the Mesoamerican Biological Corridor (MBC) for the World Bank and the Global Environmental Facility (GEF), and complements the regional initiative to conserve key terrestrial and coastal ecosystems linking North and South America. The MBC initiative includes Mexico, Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama and is being actively supported by governments in the region and the donor community (GEF, 2001).

2.5.1 Mexico

Aid from the World Bank contributes to development in the state of Quintana Roo. Development also needs to comply with the "Regional project for the Conservation and sustainable use of the Mesoamerican Barrier Reef System (MBRS)". Development will include the southern part of the state, which shares the border with Belize. The United States of Mexico is a Federation with 31 states and one Federal District. The state of Quintana Roo was until 1972 a federal territory. In 1972 the presidential mandate recognised the state as now part of the federation of Mexico.

2.5.1.1 State of Quintana Roo

The state of Quintana Roo is located in the "Peninsula de Yucatan" at the south west of the United States of Mexico. It is the only state of Mexico that has access to the Caribbean Sea. The state's most important economic activities are agriculture and fishery. According to The National Institute of Geography and Statistics INEGI, (1999) data the main crops in Quintana Roo are: sugar cane, maize, and sweet orange. Less than one percent (1%) of the territory is dedicated to agriculture. Quintana Roo has an important logging production of precious woods such as mahoganies and cedar. According to the

data, Quintana Roo still has 91.44% of its total territory of 50,844 km² covered with tropical forest. Total inhabitants of the place is 874,963 (INEGI, 2000), which represents 9% of the total population of Mexico.

Only 3,000 people are employed in the fisheries industry, which is mostly artisanal and self-consuming. The volume of fisheries represents only 10% of the total of the country's production.

Descendants of ancient Mayan civilizations inhabit the peninsula of Yucatan down to Honduras since the year D.C. 250. All through different stages of ancient civilizations, Mayans conserved their traditions of respecting their natural environment especially with the sea. This can be appreciated in the walled city of "Tulum", the site known as El Castillo (The Castle) where it have been destined to orient ships, like a lighthouse, for aiding the circulation of ships and their safe entry through the coral reef that extends in a parallel line along the coast.

The Mayan people use ancient established trade routes all along the Caribbean coast, extending throughout Yucatan, Belize, Guatemala and Honduras (see figure 2) This means of communication extended from Mexico to Honduras along the coastal line and waterways, with its hub located at the base of the Yucatan Peninsula while the maritime system was located around the peninsula as far as the mouth of the Rio Nito river in the East near Livingston. These trade routes need to be included in planning for land and marine areas.

Navigation seems to have been used for transporting merchandise such as feather ornaments, knives, animal skins, cotton cloth, dyes and medicinal herbs, among other goods. The Mayas were very familiar with the ocean currents and used these to trace their navigational routes. At the same time, the coral reefs made it necessary to mark

these routes with warning signals to prevent ships travelling here from running aground. The proximity of the sea and the network of rivers and lagoons allowed navigation to develop. Secure ships were built, where the prow and stern were higher than the waterline, making them safe and stable, and a complex system of ports, channels and signal markers was developed to ensure safe transit for these ships.

Certain constructions with no apparent purpose, located along the Caribbean coast, seem to have been placed there as signals relating to maritime activities. The Bay of Tanchah, located facing the sites of Tulum and Tanchah, was another of the key places for Maya navigation.

Quintana Roo was created as a federal territory on November 24, 1902, due to a decision issued by Porfirio Diaz. Nevertheless, the immediate historical roots of its surfacing are located in the so called "Guerra de Las Castas" (War of the Breeds) in which the Maya Indians tried to brush off the yoke of "the whites".

The reconstruction of the capital city of Quintana Roo after the Tornado in 1955 and its subsequent adoption as a key city in the region was a slow process, and a year from having suffered the attack of the tornado, traces of the destruction were still noticeable.

This history of the Mayan civilization and battles fought by the indigenous groups to gain control of this region, provide a rich material for environmental and cultural interpretations. In the last page of this chapter, there a photographs which express aspects of the ancient culture of the Mayans (Figures 3 to 5) such as:

- Trade and marine routes,
- Type of houses,
- Type of Vessels, and
- Social activities

2.5.2 Belize

Belize is mainly an agricultural economy with fisheries and tourism being the next activities in generating income. Belize has eighty percent of the total area of the MBRS. It is also the smallest country with only 22,960 km². The economy of Belize is mostly based in agriculture, fishery and tourism. The population is mainly black people who came from Africa when Belize was a British colony in the early 1800's. There are five different ethnic groups in the country: the Creole, the Mestizos, the Garifunas, the Ketchi and Maya, and the new Central-American immigrants. The Creole is the larger group; they are dedicated to fishery and agriculture. The Mestizos are a mix of European and indigenous and are mainly dedicated to agriculture activities. The Garifunas are a mix of Africans and people from the Caribbean, mainly fisherman and agriculture, especially dealing on bananas crops.

It is important to say that a social group that is growing fast in number is the new immigrants from other Central American countries. This people are most of the time working as employers and do not have any identity with the place that they live or work on. Most of this ethnic group is responsible for the marine pollution and the natural environment degradation. (Silva, 2000).

The coastal zone supports fisheries (mainly lobster, conch, and finfish), and hosts the majority of tourist to the country. Land on the cays is

demand for residential or tourism development and the promotion of tourism is a pillar of the country's economic strategy (Few, 2000).

2.5.3 Honduras and Guatemala

The regions to be developed in these countries in **Guatemala** are Wadimalu, Queguache, Livingston Labuga, and Puerto Barrios, whose population are mostly Garifunas and Ladinos. The economic activity is mostly artisanal fishery. This is the only place in the country where there is Garifunas residents. Most of the inhabitants of Guatemala are Mestizos and Mayans. There are no roads to access these communities except by boat.

The Ladinos is a group of people that came to this part of the country because of available land . They are mostly peasants and some have developed skills for fishery and the commercialisation of fishery products. Young children (of age 8 and on) are the ones that participate in the fisheries activities and women are left behind. However women are the ones in charge of cleaning and putting the fish to dry. There is no reliable information concerning these communities (no census) but it is known that just few speak the official language (Spanish) and that they are growing in number.

Like Belize, these communities are often employed as servants of the 'finqueros' (wealthy man with land dedicated to fruit cultivations such as bananas, sugar cane, coffee, and tropical fruits). They frequently fish illegal species such as turtles, dolphins or manatees. These communities often fear the local authorities due to their illegal fisheries activities that sometimes go transboundary among regions that have conflicts with the Belizean authorities. The Garifunas are communities of fishery traditions. Fishing has a social meaning to them and is known that they

will do it with respect to the environment. On the other hand the Ladinos and Mestizos do not have any type of tradition concerning fisheries. Neither have they any respect for the environment.

In Honduras the Garifunas are mostly located in the Gulf of Honduras. Communities such as Bajamar with 2,500 residents live in straw and wooden huts without any urban services such as fresh water. Other fishery communities with a combination of Garifunas and Ladinos are Cortes and Atlantida.

In **Honduras** the "Regional Project for the Conservation and Sustainable use of the Mesoamerican Barrier Reef System (MBRS)" aims to protect the integrity of natural systems giving priority to protected areas along the northern coast. The project is supporting protected areas management in four protected areas: Punta Sal, Punta Izopo, Cuero y Salado and Pico Bonito. The project is also promoting sustainable development in the Bay of Islands and is establishing a large Marine Protected Area surrounding the Bay of Islands. In the cities along the Caribbean Coast of Honduras such as La Ceiba, Tela and Trujillo waste management and better access to social service is needed.

Even though there is no reliable census data that will give information about population growth in the coastal areas of Belize, Guatemala and Honduras, it is known that tourism development is attracting more people to live in the coasts. Yet Mexico and Guatemala have different situations. In Mexico the state of Quintana Roo has the mandate to develop a tourist site (Cancun) and the coasts of Guatemala in the Caribbean are isolated from the rest of the country. According to Agardy (1997) the establishment of damaging industries (which will release pollutants and toxins that can damage the marine ecosystem) can greatly contribute to the increase in human population in the

coastal areas. Another way is the development of urban areas in the coastline.

2.6 Country Profiles

Table 2

This table shows the characteristics of each of the countries of the MBR.

	Belize	Guatemala	Honduras	Mexico
Government type	parliamentary democracy	Constitutional democratic republic	democratic constitutional republic	federal republic
GNP per capita	US\$2,730	US\$1,660US	US\$760	US\$4,410
Economy	Agriculture and tourism	Agriculture and tourism	Honduras spent 1999 primarily recovering from Hurricane Mitch	Mixture with a modern free trade agreement with US and Canada
Population	249,183 (est.)	12,639,939 (est.)	6,249,598	100,349,766
Size of the country	22,960 sq km	108,890 sq km	112,090 sq km	1,972,550 sq km
Population below poverty line:		75%	50% (1992 est.)	27% (1998 est.)
Marine Authority	Ministry of Agriculture, Fishery and Cooperatives	UNIPESCA (Unidad nacional de Pesca)		SEMARNAT (since 2001 there has been changes).
Ethnic Groups	Mestizo, Creole, maya, garifuna, ladino, Negro, and others	Mestizo, Maya, Garifuna and Amerindian	Mestizo and Amerindian	Mestizo, maya, nahuatl tzotsiles, and more than 50 different ethnic groups.

Sources: The National Committee for Families and Children and UNICEF Belize, *The Right to a Future, A situation Analysis of Children in Belize*, 1993; CIA 2001, The World Factbook, and The World Bank, 2001.



Figure 2 Mayan Commercial Routes



Figure 3 Mountains, pyramids and housing

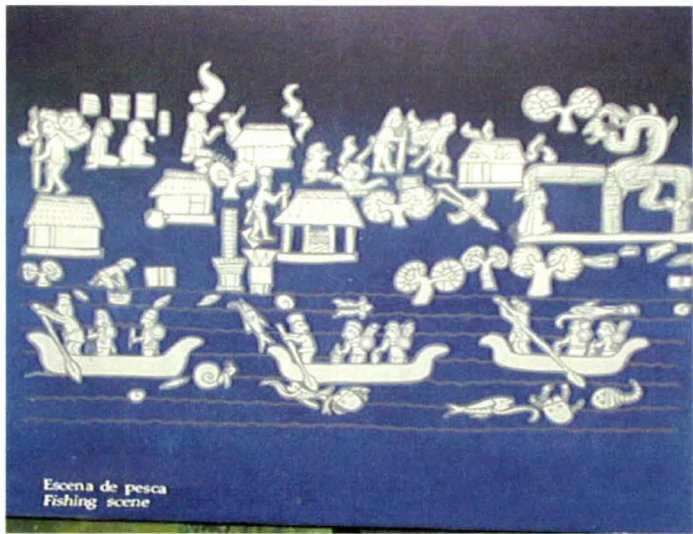


Figure 4 Fishing scene

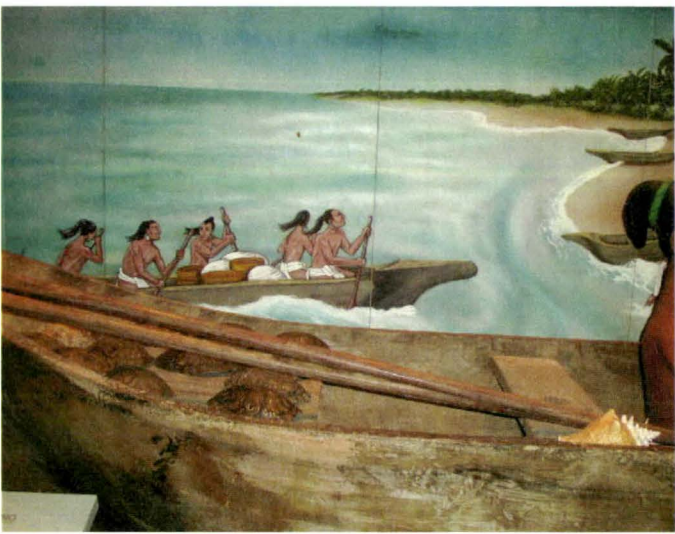


Figure 5 Vessels "Canoas" use in the Mayan culture for fishing.



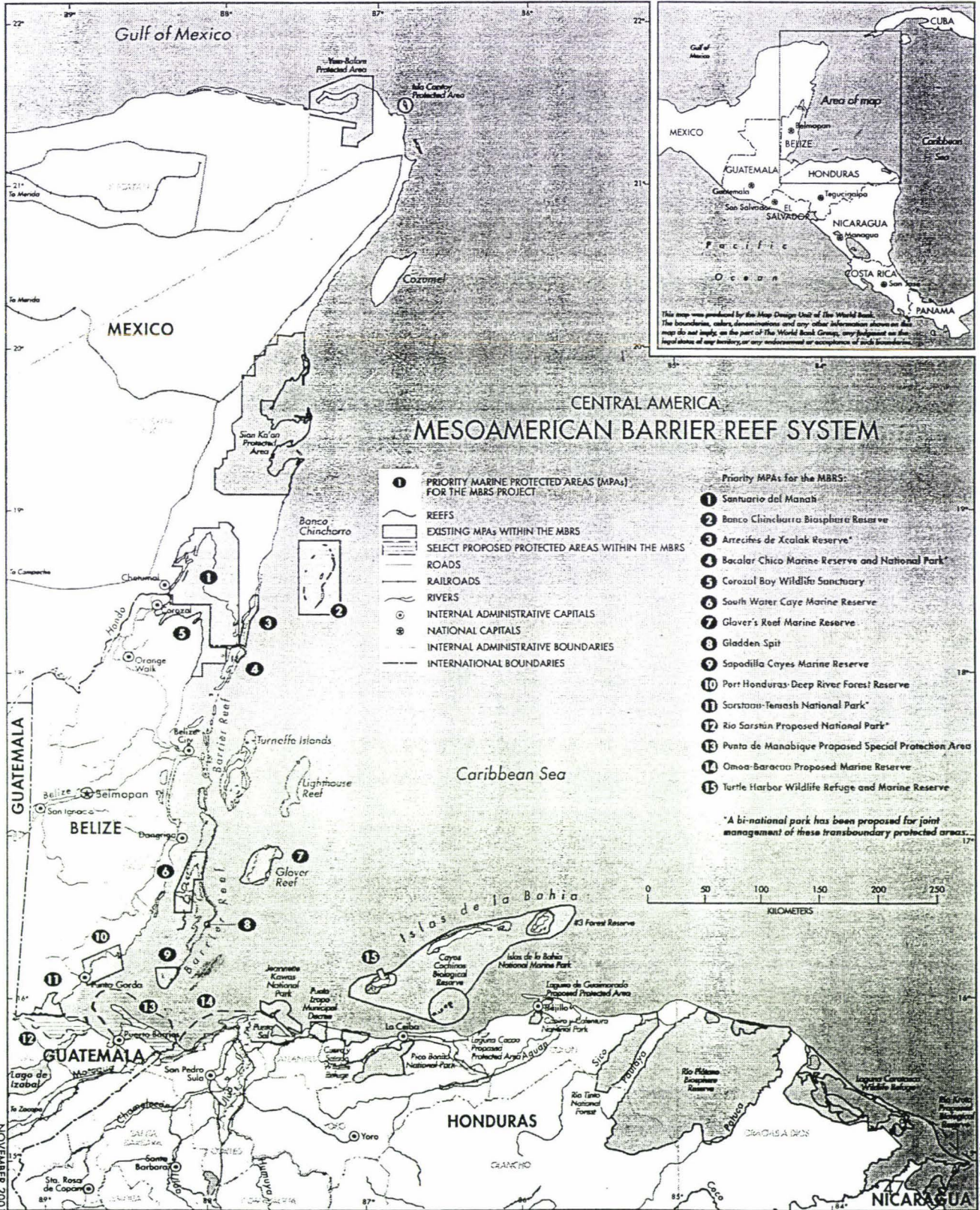
Figure 6 The "Costa Maya" Port (View from Mahahual beach).



Figure 7 The beach of Mahahual



Figure 8 Sand that was taken from the sea to give space to small vessels



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LITERATURE REVIEW

CHAPTER 3

3

Introduction

One aim of the literature review is to examine management approaches to determine their suitability as a management framework for the MBRS. Other objectives are:

- To identify possible management framework, in particular those under Mexican jurisdiction;
- Demonstrate potential acceptance by those making decisions; and
- Design a set of criteria to assess the management proposal from the World Bank

For these reasons this research examines fourteen (14) different management approaches suitable for an area such as the MBRS. In the next section contrasting management mechanisms will be defined and discussed in terms of their applicability to this management context.

Public participation, community participation, zoning, and design of protected areas, are some of the approaches that can be implemented in managing and protecting ocean and coastal resources. Models such as co-management, community based management, collaborative management, and adaptive

management also support most of the management objectives for marine areas. All these approaches enable communities to participate in processes to sustainably manage marine and coastal resources. Other management approaches include: (1) individual sector operating independently without common ends; (2) a sector operating independently with agreed common ends; (3) virtual organisations; (4) overall co-ordinating bodies; and (6) an overall management agency (e.g. The Australian Great Barrier Reef Marine Park Authority).

"Management implies... an effort to make the best use of the resource; it also implies a degree of conservation of the resource, and... conservation means something different to each of us. Conservation may mean to harvest fish at the maximum sustainable yield to get maximum employment or maximum ecosystem returns."

(Arenas, Virgilio and Robinson, Carlos in Sherman et.al. 1999 P.343)

The discussion about the applicability of management approaches is divided in three (3) sections. The first section considers management approaches that include the local communities as part of the management process. The second section includes a discussion of the various approaches investigated by the Australian government. The third section deals with regionalism, the strategic planning approach, and the ecosystem approach. In the discussions the concepts are defined. That is followed by an analysis of the criteria and guidelines from each approach that would contribute to the problems of the management of the MBR ecosystem.

One principle of management is the achievement of consensus between the objectives of different fishing sectors and government organisations. For example, the Regional Fisheries Council of Galicia, Spain was created to provide a forum where different governmental bodies and fishing organizations meet to devise fishing policies, and whose policies and abilities extend over internal waters, territorial seas and EEZ. (Suárez de Vivero, J.L., Frieyro de Lara, M., and Jurado-Estévez. 1997). However, the creation of a new organization would involve additional costs and difficulties in any management model. Attempts to reduce costs and to combine different interests across stakeholder groups such as the international tourism industry, mining, NGO's and the governmental agencies at national and local, sub-national levels.

The MBRS is a large marine ecosystem with the land adjoining the area of interest being managed under an existing separate management regime as discussed in Chapter 2. The simplest solution is to extend the scope of the land management systems into the sea and alter them as applicable to deal with issues that are unique to marine environments. Yet this is not possible in the MBRS ecosystem because:

1. The MBRS crosses the boundaries of four nations: Mexico, Belize, Guatemala and Honduras. Therefore, four (4) different land resources and different government systems would need to be linked.
2. There is a lack of scientific information about the MBRS.

3. There are two different management strategies for the Marine Protected Areas (MPA): (a) an ecosystem approach to the MPA that are spatially connected, and (b) a regional approach to the ones located in the transboundary area of the MBRS.
4. The common understanding of what the World Bank initiative is for the MBRS as stated by 'sustainable management' within activities such as fishery, tourism and recreation, mining, conservation and coastal development.

3.1.1 Co-management Concept (COM)

The co-management concept describes situations in which responsibility and authority is shared between the government and the community to manage communal natural resources. (Pomeroy, and Williams, 1994 in Pomeroy, and Berkes, 1997). It was first applied in the fisheries management context. To be successful, the co-management approach needs a clear commitment from governments to share power and authority with local governments and local communities. Like Jentoft (1998) said, "co-management is about creating opportunities".

The Brundtland Report advocates that communities should have greater access to and control over decisions affecting their natural resources. Co-management provides an opportunity for communities to manage resources in cooperation with national government agencies, economic institutions and local government. Co-management has worked for fisheries resource management as fisheries are commonly regarded as an "open access resource" that is difficult to allocate property rights. The same open access resource conflict happens with other natural resources at the sea and coastal

areas, such as water, minerals, navigations rights, and natural resources that are not static such as birds, sea mammals, etc.

Conflict about use of open access resources is exacerbated when the sea and coastline is shared between nations. In the particular case of the MBRS, the 2000 kilometres of the reef is shared between four countries and within these, natural resources are also shared. One example is the manatee, which lives in the Chetumal Bay. The Bay is shared in the south part with Belize (see map 3).

Pomeroy (1997) believes that co-management will not work everywhere; it should be viewed as an alternative management strategy to a centralized management system. Brown & Pomeroy (1999), suggest that each situation should be unique, and there should not be one single management model to suit all systems. These authors consider co-management as a middle course between pure state property management and pure communal property systems. (Pomeroy et al. 1997).

On the other hand, Noble (2000) suggests that co-management should consider institutional arrangements as a way of improving participatory democracy and compliance. He believes that cooperative regimes work as mechanisms for economic development by involving affected stakeholders in the management and planning process, and by circulating some of the benefits derived from this back into local communities.

Co-management emphasizes institutional reforms, institutional strengths, decentralization of the resource management, and participation of all the stakeholders involved. It is a more adaptable management that can support market changing conditions, and re-

circulating back to the communities some of the wealth that is generated (Noble, 2000). Perhaps the most important reason is to generate a sense of trust, respect and understanding between parties. One of the main roadblocks to co-management has been people's general mistrust of government (Brown and Pomeroy, 1999).

Authors such as Brown (1999) and Noble (2000), suggest that a pilot project should be implemented, where all partners gain experience. Each case of co-management is different and there is not one specific model to follow for the implementation techniques in one area. Others suggest the need of legal basis. For example, there are only two well-documented cases of long standing marine fishery co-management arrangements that work: in Norway and in Japan and both of them have legal basis. (Pomeroy, et al. 1997). One problem with establishing the MBRS is the difficulty of creating legal basis for co-management that is appropriate for the four (4) countries. Only Mexico and Belize have had experiences of implementing the co-management approach in fishery management. (Eloy Soza, respondent from Ecosur, 2001).

3.1.2 Adaptive Management Concept (AM)

The concept of adaptive management although conceived by Holling (1973) but has been substantially developed by Walters and Hilborn (1979). Fifteen years later Halbert (1993), introduced it as an approach for short-term decision making about experimental harvesting of fisheries (Sherman and Tang, 1999). The adaptive management approach in that context referred to the manipulation of the population of certain species in order to improve the conditions of other stock, which are of higher value. The manipulation can be used in the case of coastal pollution. In theory, adaptive management

programmes may be applied to LMEs. Environmental protection and preservation measures could be adopted and enforced as part of this approach. For example, in Australia adaptive management is used to limit the damage caused by the crown-of-thorns starfish, on the Great Barrier Reef Marine Park (GBRMP) (Alexander, 1993).

Sherman and Tang (1999) state that adaptive management can only work if it becomes an integrated part of resource management and is used as an ongoing technique to monitor and directly manage interventions and harvesting techniques. Holling (1973) considers adaptive management to be an approach that "can absorb and accommodate future events in whatever unexpected form they may take" (Holling, (1973) in Burgman, and Lindenmayer, 1998).

Adaptive management also includes integration of multiple values with the interest of decision-making. Alexander (1993) states that the adaptive management process acknowledges a multidisciplinary research that would focus on local priorities. In this scenario both researchers and stakeholders must collect the data that is needed.

The adaptive management approach needs to be incorporated in different stages of the planning process. For example, Burgman, et al (1998) believed that management strategies should be adaptive in the sense that uncertainty and surprise are an integral part of anticipated responses. These authors also agree that trial-error is an integral part of adaptive management.

One of the key elements of adaptive management is the strong link between management planning and policy making on one hand, and monitoring and empirical validation of planning assumptions on the

other. (Burgman, et al. 1998). Stakeholders need to agree on the management strategies (Lal, Lim-Applegate, and Scoccimarro, 2001).

Adaptive management policies seek to establish some optimum or reasonable balance between learning and short-term performance. In adaptive policy design, it is essential to value uncertainty (instead of considering knowledge as valuable) as an important step to improve long-term management performance in relation to objectives such as harvest and profits. (Walters, 1986). Miller (1999) notes that social and psychological issues are an integral component of environmental problems and need to be considered in implementing the adaptive management approach.

In the case of marine regions, the assumption from literature is that fish resources are the most valuable resource in terms of economic value. However, in the case of Mexico, Belize, Guatemala and Honduras, fishery resources represent a low-income value because most of these countries' main economic activity is agriculture and not fisheries. Also, women are segregated from this activity (Bañuelos, 1999). However, local communities of Quintana Roo, Mexico often make their living out of selling seashell craft work as shown in Figure 9



Fig. No. 9 The marine crafts from Quintana Roo State

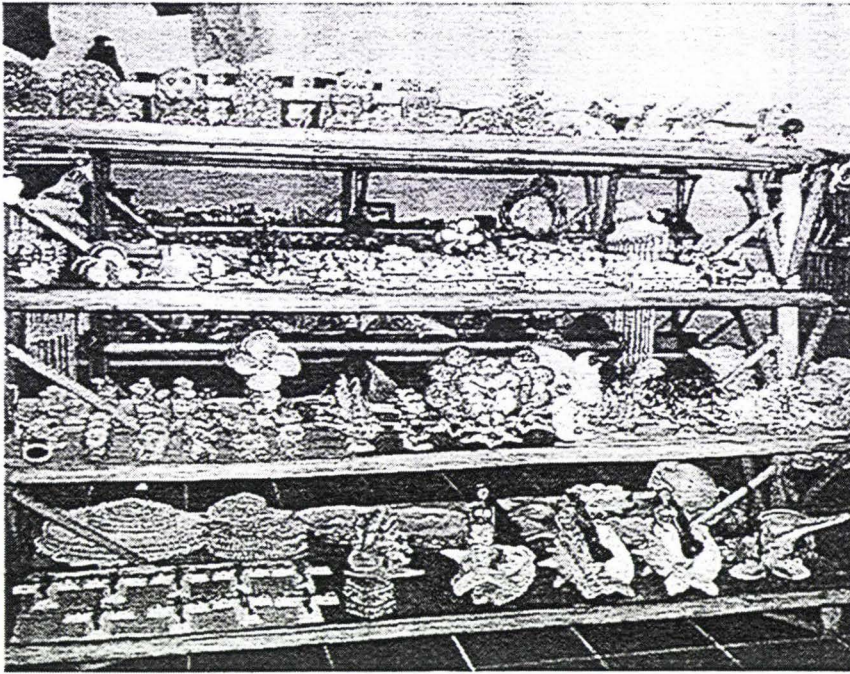


Figure 9 The marine crafts from communities in the state of Quintana Roo

If the adaptive management approach were to be implemented in managing the MBRS, considerable effort would need to be made to work with local communities, and understand their values in relation to the MBRS. Planners would need to design coordination systems that accommodate community values. A new legal framework would be needed to ensure this, because current legislation provides only basic consultation.

3.1.3. Community Based Management Concept (CBM)

The community based management approach sometimes referred to as 'collaborative management approach' is based on different types of community participation. Beaumont (1997) in Salm, Clark, and Siirila (2000), identifies six (6) category of community participation:

1. *Persuasion or passive participation*, where public participation is encouraged without raising expectation of participation in

- the planning or decision-making process. This type of consultation is typical of statutory participation approaches;
2. *Participation through consultation* where groups from the society or community groups provide input to the government agency on the proposal of a conservation area. Such consultation process does not concede any share in decision-making. Until recently, this was the approach taken by the Great Barrier Reef Marine Park Authority (GBRMPA) (Salm, Clark, and Siirila, 2000);
 3. *Participation for material incentive*, in which people participate by contributing resources, for example in return of food, cash or other material incentives. An example is the way the city council works with the community in the city of Curitiba, Parana, Brazil (National Council for Science and the Environment, 2002);
 4. *Functional participation* is participation that is seen by external agencies as a means to achieve project goals. People may participate by forming groups to meet predetermined objectives related the project. In the Mafia Island Marine Park in Tanzania, local communities participate through Village Liaison Committees (Salm, et al. 2000);
 5. *Interactive participation* is seen as a right and not just as a means to achieve project goals. People participate in joint analysis, development of action plans and formation of local institutions. A good example of this approach is in the Island of San Salvador in the Philippines, (Christie & White, 1994 in Salm, et al. 2000) where communities are working together with the government in facilitating partnership between local people and government for area management.

6. *Self-mobilization* is where people take initiative independently of external institutions. Examples exist in the Maluku Islands of Indonesia (Zerner, 1994 in Salm, et al. 2000).

Various authors have identified a series of principles to ensure success in the implementation of community based approaches. Some are international experiences and others are New Zealand experiences (Horsley, 1998). These experiences may be summarized as follows:

1. Participants need to develop common goals that are decided collectively with equity and respect;
2. Central and local government authorities need to build process of consensus and political will with the communities;
3. The communities must agree to have legal and long-term agreements;
4. Both parties need to specify which structures have the authority to make decisions about matters that are central to effective management;
5. It is necessary to be adaptable to change over time;
6. It is important to seek a balance between larger scales for management that permit the implementation of policies;
7. Community based management requires that decision making and implementation is informed by both local knowledge and information that is provided by the government;
8. Financial resources and appropriately trained staff are needed;
9. Both parties need capacity building, development of skills, knowledge and understanding;

10. Participants must develop a mutually acceptable system of representation according to their rights, interest and costumes; and
11. Alternative dispute settlement mechanisms should be used for conflict management where any type of conflict, misunderstanding or statements arises.

Community based management has been used mostly in the land management context (forest management). There are some examples where community-based management has been applied in fisheries management like the case of the Salomon Islands (Crean, 1999). In this experience from the Salomon Islands, the community-based management has been compared to a centralised management system. The research focused on the re-establishment of the communal ownership of the resource (fisheries) in a centralized government regime, which can be applied to other sea natural resources.

Mechanisms such as community-based management can be implemented in the MBRS. However, there are issues that need a detailed analysis before a strategy of community-based management will be implemented. Some of the issues that need further analysis in the MBRS are: data concerning the characteristics of the natural resources, different community values, and more information regarding natural resources property rights in the four (4) countries.

3.2 Sector Managing Concepts

The following approaches namely; (1) sector operating independently with agreed common ends, (2) individual sector operating independently without common ends, (3) virtual organisations, (4) an overall co-ordinating body, (5) and an overall management agency,

are the processes this author considers as the way MBRS is managed nowadays.

3.2.1 Sector Operating Independently With Agreed Common Ends Concept (SOICE)

Sectors and sector management agencies continue to work independently, but in pursuit of a common and agreed set of desired outcomes. "The planning 'ends' are developed jointly but the means for achieving these ends are left to the discretion of individual sectors" (Australian Government, 1999). In the case of Mexico, the sector operating independently with agreed common ends is what the Ministry of the Environment is doing today.

3.2.2 Individual Sector Operating Independently Without Common Ends Concept (ISOINCE)

Under this model, individual sectors and sector management agencies pursue outcomes, which seek to maximise returns for their particular sectors. It is well known that different sectors may pursue similar outcomes. However, there are no formal processes in place for cross-sector communication and coordination (Australian Government, 1999). This management approach is exemplified by the situation in Belize, Guatemala and Honduras where the agency or sector that has the information concerning the strategies of the MBRS (in most cases the government agencies and industrial sectors) is the one that operates in the area without any agreements with other sectors, either from the government or from the private industry.

3.2.3. Virtual Organisation Concept (VO)

This term is used to describe loosely coupled networks of sector and agency organisations sharing common visions and values (Mortimer, 1997 in Australian Government, 1999). Goals, values and codes of conduct are agreed and there is sharing of expertise and experience to coordinate the delivery of desired outcomes. The organization exists only as a collection of collaborative initiatives and does not rely upon major new and expensive bureaucratic structures. Examples of virtual organisations can be found in various partnerships, committee structure and co-management arrangements (Australian Government, 1999). An example of this approach is the partnership in which Mexico and

Belize are working now in the management of common area such as the Bay of Chetumal.

3.2.4 An Overall Co-ordinating Body Concept (OCB)

A separate agency or body is established with an overall coordinating and facilitating role. The agency/body does not normally have direct management responsibilities. Its primary role is overall policy setting, facilitation, research and possibly providing funding assistance (Australian Government, 1999). An overall co-ordinating body would be difficult to establish in the MBRS because the agency would need to coordinate across four (4) countries and within each country, coordinate with different agencies and sectors such as government agencies, fisheries communities, and other stakeholders such as inland and industrial coastal sectors.

3.2.5 An Overall Management Agency Concept (OMGA)

Under this model a new agency is established with direct sector management responsibilities. An example is the Great Barrier Reef Marine Park Authority (Australian Government, 1999). The overall management agency would subsequently entail a high cost for countries that are considered to be underdeveloped.

In the case of the MBRS an overall management agency could be an international agency such as the World Bank or it could be an agency from one of the countries involved. For example, the Mexican Ministry of the Environment (SEMARNAT) could perform this task.

3.2.6 Cross-Sectoral Management Concept (C-SM)

Cross-sectoral management is a continuous process that aims to integrate the wide range of decisions at various spatial scales. Spatial scales may include political institutions, academic institutions, and the ocean related fields (agricultural, industry, urban development, freshwater management, forestry, mineral & energy, and transport). The cross-sectoral management process should also cross different levels of decision making such as the global level, regional, sub regional, national, state/country/province, community, and individual level (IUCN, 1993).

The sectoral management approach is founded in individual groups of uses that link these groups in management activities (Smith, 1999). The IUCN (1993) describes the cross-sectoral approach as a set of actions that must be undertaken in order to provide a planning and management framework. At the same time this framework will provide the tools for the integration and resolution of competing interests.

This approach is applicable in the MBRS context because it places a strong reliance on separately organised management system for each of the major sea use categories such as marine transport, trade, fisheries, naval activities, marine leisure pollution and conservation (Smith, 1999). Strong management agencies or organizations with well-defined objectives and good communications skills are important to generate sustainability. Countries involved in management of the MBRS have centralized governments (e.g. Mexico). This affects the ability of governments to devolve power to regional coordinating bodies. A common weakness of centralised governments is that power is distributed between key governments agencies at the national level.

For example, fieldwork for this research indicated poor coordination between the Ministry of Foreign Affairs and the Ministry of the Environment in the Mexican government.

Another problem in applying the cross-sectoral approach is the integration of policies across different sectors of industries in the various countries. Communication mechanisms would probably be complicated and difficult to understand especially to the local communities with poor education standards.

3.3 Other Management Concepts

3.3.1 Large Marine Ecosystem Concept (LME)

Some authors (Alexander, 1993 and Sherman, 1999) have defined the Wider Caribbean as a large marine ecosystem (LME) (for more details refer to Chapter 1). The LME approach is an ecologically based unifying approach to the assessment, monitoring, and management of marine resources (Sherman, et al. 1999).

Sherman et al (1993) in Bisbal, (1995) give some consideration to the idea that LME approach should integrate the physical environment, the biological communities, pollution, and socio-economic considerations. The result of such combination should be a total ecosystem approach necessary to take meaningful management actions.

The LME approach provides an ecological framework for achieving sustainable management objectives in marine ecosystems. The LME approach focus on five issues:

1. Assessing and monitoring ecosystem productivity,
2. Changes in the biodiversity of fish community that can generate effects in the food chain,
3. Components of the pollution and continuous assessment of the ecosystem health indicators,
4. Practical applications from the scientific findings from the ecosystem to the analysis of social and economic values, and
5. A government management perspective in which more than one government is involved in the management activities (examples of this issue are the Yellow sea ecosystem and the 21-national membership Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). (Sherman, et al. 1999).

Modifications to the size of the LME, the extension of the area, and the fact that the MBRS is not in the same political unit are some of the problems in the applications of the LME approach. However despite this problem, there is one concern that can be considered of high priority and that is the lack of scientific data of the MBRS (World Bank, 2001). ECOSUR has reported to have nearly one hundred research documents that are not properly classified, which means that they are not accessible. Most of these documents are concerned about at least one aspect of the coral reefs of the MBRS (E. Sosa, pers. comm. 17.5.01).

3.3.2. Regional Management Concept (RM)

The regional management approach is usually based on catchment wide or ecosystem wide areas, which may be classified as closed ecological systems. Larkin (1996) in Charles, (2001) suggest that a

regional or an ecosystem approach has three (3) essential components:

1. Sustainable yield of products for human consumption and animal foods,
2. Maintenance of biodiversity, and
3. The protection from the effects of pollution and habitat degradation.

A regional management approach requires no legal statutes, because the regional approach is based on agreements or cooperation between the organizations involved in the decision-making about shared common resources (Goodhead, and Johnson, 1996).

For a regional approach to be successful in the MBRS context, two areas need to be addressed. Firstly, should be maritime boundaries delimited to establish Exclusive Economic Zones (EEZs). Secondly, EEZs should be effectively managed to ensure sustainable yield of natural resources. It is important to mention that among Caribbean states and Central American countries, boundaries are very difficult to establish and enforce in the marine environment because countries are hardly separate within the Caribbean Sea (see map 1).

In the particular case of the MBRS, a regional approach could be implemented specially because one of the countries within this area, Mexico, could be the leader with an international mandate as suggested by Haas (2000).

3.3.3 Integrated Coastal Zone Management Concept (ICZM)

Integrated Coastal Zone Management (ICZM) is a dynamic process by which decisions are taken for the use, development and protection of coastal areas and resources. To achieve societal goals, the ICZM approach requires cooperation between user groups and all national, regional and local authorities concerned with management of coastal and ocean resources (Knecht, 1993 in Yañez-Arancibia, 1998).

The term ICZM implies a conscious management process that acknowledges the interrelationships among coastal and ocean users and the environment in which they interact. It is considered to be a process where decisions are made concerning the conservation and sustainable use of the coastal and ocean resources and space (Cicin-Sain, 1998). The ICZM concept is often used to analyse the implications of development, conflicting uses, and interrelationships between physical processes and human activities. It promotes linkages and harmonization among sectoral, coastal and ocean activities (Knecht, 1993 in Yañez-Arancibia, 1998).

One important consideration is the necessity of an understanding of marine ecology, ocean processes and their interactions with the terrestrial and atmospheric system. The ICZM approach also needs supporting strategies to take into account the socio-economic constraints, and the link between them, the cultural processes and the natural environment (IUCN, 1993).

The MBRS is part of a major project 'the Mesoamerican Biological Corridor' (MBC), which links together the ecosystems of the southern part of Mexico with those of Central America. The MBC Project has set

aside the management considerations for the coastal and marine areas, which now have become part of the MBRS project. The ICZM approach would be an ideal approach to link together the various initiatives associated with the MBRS. An area as large as New Zealand (from southern Mexico to Panama) could be sustainably managed as one ecological unit.

3.3.4 Biogeographic or Regional Ecosystem Classification System Concept (BC)

International organizations such as the IUCN have used the ecosystem approach to design protected areas in many countries. An example is the Florida Everglades Natural Protected Area. The ecosystem classification is an environmental-oriented approach that aims to protect everything within a geographically defined area (Cole-King, 1993).

Biodiversity can be conserved and managed at a range of spatial and temporal scales using this approach. The definition of ecological boundaries and the nature or structure of the ecosystem is a relevant key element in the biogeographic management approach (IMCRA, 1998). Done (1998) agrees that the ecosystem approach is one of the best approaches to preserve marine species. However, needs of species in a marine protected area should be well defined in order to set limits and human activities (Charles, 2001).

The idea of creating a core zone and buffer zones to conserve and manage an ecosystem in a sustainable way still needs some consensus and coordination of policies among sectors in order to be successfully implemented. Perhaps the best-known zone marine protected area is the Great Barrier Reef Marine Park (GBRMP) in Australia (Charles, 2001).

Another example is the Soufriere Marine Management Area, located in the Caribbean in St. Lucia. This MPA incorporates zones for fishing, yacht mooring, recreation, non-take reserves and multipurpose use (Charles, 2001).

3.3.5 Strategic Planning Concept (SP)

The main characteristic of the strategic planning approach is that managers may focus on the future. The strategic planning concept considers that the planning process is based on forecasts and prophecies which produce scenarios of future or trends while acknowledging uncertainty. Khakee (1998) notes that the planning process needs to be more flexible and should put forward several alternative plans, which would consist of what he calls 'commitment packages' to deal with uncertainties of the future. The main characteristic of commitment packages is that different alternatives can be changed as new information comes along.

Smith (1999) considers that under the strategic planning concept activities in the marine rim such as military operations, waste disposal, marine science, conservation, and coastal engineering could be integrated in a strategic planning approach. He also believes that with the strategic planning approaches in the marine environment could be easily linked to the land use planning system. A strategic planning approach has been implemented in management of the United Kingdom marine environment.

Flexibility of management techniques and conflict solution protocols would be the main characteristic of the strategic planning approach. Evaluation should be done in the context of different possibilities of action plans. This variability of scenarios could also be considered as a

weakness of this model. Mutual trust among planners, decision-makers and other actors must be needed across different interests in a project such as the MBRS. It would be essential to build mechanisms to anticipate adverse environmental impacts, assess environmental impacts, and provide a public decision-making framework (Therivel, 1992).

3.4 Conclusions

Fourteen (14) different approaches have been discussed in this chapter. An approach must be considered as methods of thinking and tackling management problems associated with using the MBRS. All of these approaches have strengths and weaknesses in terms of their applicability to the MBRS management context. Some concepts are still experimental while others are valid established management approaches. Some approaches have little applicability when considering management of a large marine ecosystem such as the MBRS. There is not one effective model for all the different sustainable management situations. The research reveals that stakeholders need to achieve consensus before defining common problems and objectives.

Decisions makers of the MBRS must recognize the need for the implementation of more than one approach to the planning and management strategies. They must recognize that an ecosystem such as the MBRS needs a management approach or approaches that will include activities in land, at sea level, at deep-sea ocean, in the coral reef, in the coastline, and in the diverse types of natural protected areas. All the above characteristics are within the context of four (4) different countries, all of which were once part of one of the most important ancient civilizations: The Mayans.

The criteria should assist respondents to address the questionnaire used to determine political acceptance of the various approaches in the Mexican context.

Table 3 outlines the criteria of the applicability of various techniques for the MBRS.

Approach	Criteria
Large Marine Ecosystem	<ul style="list-style-type: none"> <input type="checkbox"/> Need a minimum size of 200,000square kilometres. <input type="checkbox"/> Need to be integrated in the same areas of physical environment, biological communities, pollution, and socio-economic considerations. <input type="checkbox"/> Need a total ecosystem approach to take meaningful management actions. <input type="checkbox"/> Need to be in the same political unit. <p>Potential problems to the MBRS:</p> <ul style="list-style-type: none"> • Marine area is often too big to manage it as a single unit (e.g. the relevant protected are may extend beyond administrative boundaries, the coastal areas of 4 different countries. • There is very little knowledge among practitioners of what a LME is.
Co-management	<ul style="list-style-type: none"> <input type="checkbox"/> Need sharing of responsibility and authority between the government and the community to manage fishery or other resources; <input type="checkbox"/> Need partnership and institutional arrangements; <input type="checkbox"/> Requires degrees of power sharing between community and government institutions; <input type="checkbox"/> Need the integration of local and centralized management systems; <input type="checkbox"/> Should not be one single model of management and participation; <input type="checkbox"/> Need improvement of participatory and compliance structures; <input type="checkbox"/> Need to involve stakeholders in management and planning process; <input type="checkbox"/> Requires to circulate benefits derived from back into the local communities; <input type="checkbox"/> Need to define the geographic region for the ownership and control of the fishery resources and the management functions; <input type="checkbox"/> Need to give subsidiary funds to fisheries managements; <input type="checkbox"/> Governments should establish condition for co-management; <input type="checkbox"/> Supportive legislation, rights and authority structures; <input type="checkbox"/> Decentralization of the decisions in management of the resources.

	<ul style="list-style-type: none"> □ Participation and efficiency □ Democratisation, government reforms and community development; <p>Potential problems to the MBRS:</p> <ul style="list-style-type: none"> • Administration of fisheries across countries, the variety in staffing and the level of expertise available; • Inter-departmental linkages in the 4 countries which are essential for co-management; • Establish a way of decentralizing resource management decisions; • Improve participation; • Sharing of the marine and coastal resources; • Avoid overlapping agency responsibilities; • Lack of a strong political support; • Conflict between multiple stakeholders in the coastal zone and marine area; • Funding
Adaptive Management	<ul style="list-style-type: none"> □ Requires an understanding of the natural world; □ Needs an understanding of the environmental complexity and the psychosocial conflict between stakeholders; □ Need to adopt environmental protection and preservation measures; □ Need to manipulate certain species within a defined area; □ Need to monitor the results of management, and to establish sanctions; □ Need to modify decisions and management practices; □ Need a strong link between management planning and policy making; □ Need transparency in knowledge; □ Need to deal with uncertainty; □ Need to integrate social and political concerns; □ Needs a stage of evaluation and comparison <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • Without monitoring and validation the quality of management can not be assessed; • Social or political pressure making the necessary links between institutions to brake; • Little attention is paid to the cost and delay of gathering information; • Equity in the use of the resources by different communities; • There is no sufficient information about the species in the MBRS; • Environmental protection measures and policies are not distributed on an even manner through the MBRS.
Regional management.	<ul style="list-style-type: none"> □ Need international leadership, international institutions, transnational scientific networks, non-governmental organisations, and public concern; □ Need to measure success; □ Need to define problems clearly □ Need to accommodate multiple uses of the area; □ Need high quality information to be able to identify trends and responses; □ Need to view social, political and environmental issues in a

	<p>system context;</p> <ul style="list-style-type: none"> □ Need plans for a long-term period. <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • The absence of legal framework; • There are only agreement between countries; • Sharing power in the establishing of the international leader; • Accomplish common goals for the region in the context of national interest.
Cross-sectoral management.	<ul style="list-style-type: none"> □ Need to define the extent of the boundaries and cross boundaries of the planning area; □ Need to integrate spatial scales in the political (local community, national, and regional level), institutional (agriculture, industry, urban development, forestry, transport, and energy) and ocean related fields (land, shoreline, coastal, shelf edge, and open ocean); □ Need strong confidence on separately organised management system; □ Need to integrate sectors overtime in a management context. <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • Building a strong confidence on organised management systems across the MBRS; • Common difficulty in countries such as Mexico, Guatemala, Belize and Honduras.
Community based management.	<ul style="list-style-type: none"> □ Usually applied only at local or regional levels; □ Need community self-identified by interested groups; □ Need to identify the area subject to management by consulting with the community; □ Using community criteria and thresholds, define the values associated with places; □ Need consultation with the community that may include professional views; □ Need appropriate methods and actions prepared by the community for conservation activities; □ Need consultation via professionals that can be part of the community. <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • Governments from Mexico, Belize, Guatemala and Honduras do not have decentralised policies; • There is not a strong community self-identification; • The communities are disperse and with different values; • Differences among communities across the four countries. (For example different culture, different language, different interest, and different natural environments).
Integrated Coastal Management or Integrated Coastal Zone Management	<ul style="list-style-type: none"> □ Need a scientific based understanding of marine ecology, ocean process and their interactions with the terrestrial and atmospheric system; □ Need cooperation of user groups at a national, regional, and local level; □ Need analysis implications of development, conflicting uses, and interrelations between physical processes and human

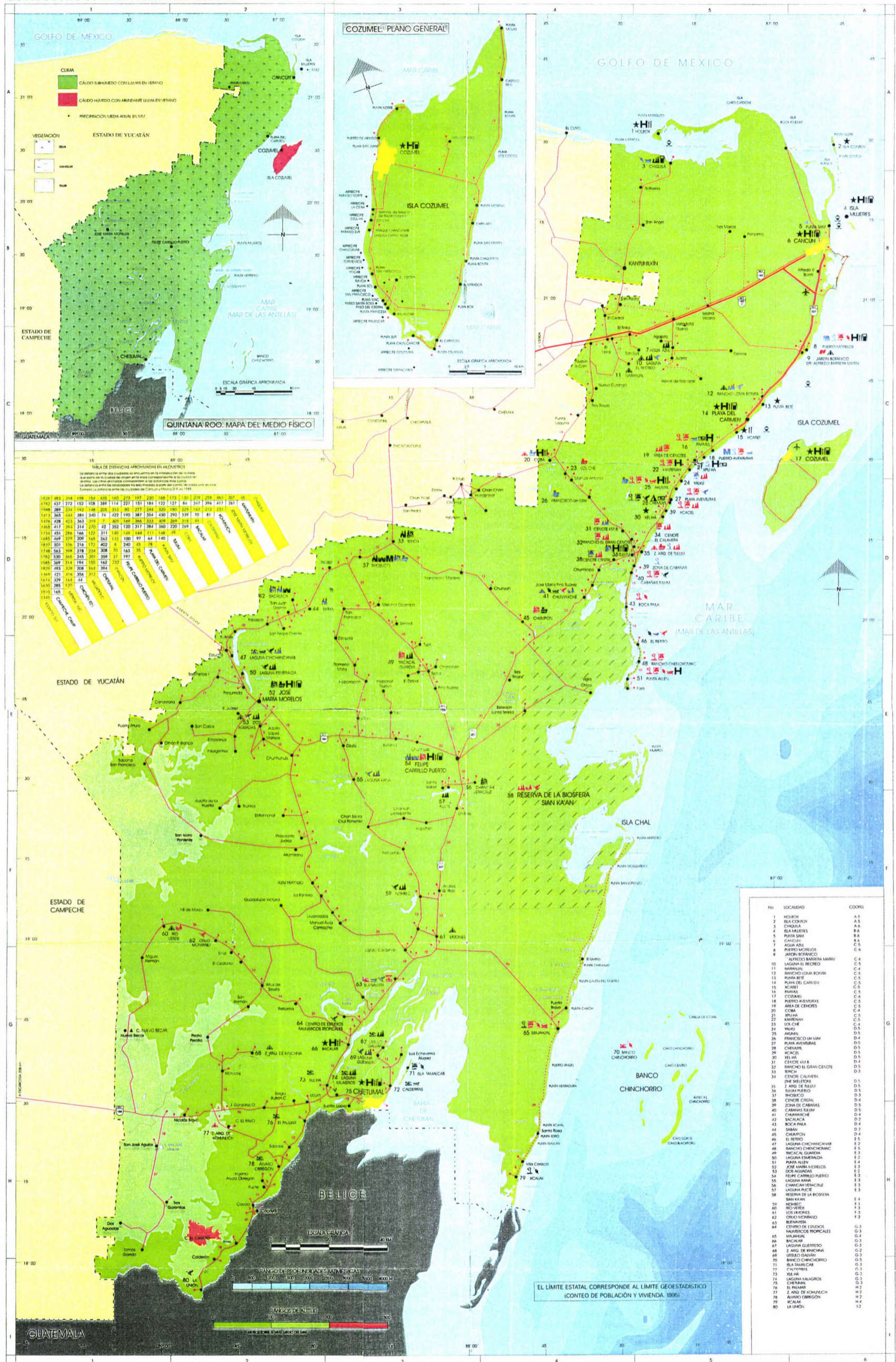
	<p>activities;</p> <ul style="list-style-type: none"> □ Need strategies to take account of the socio-economic constraints, and the link between socio-economic and cultural process and the natural environment; □ Need to promote linkages and harmonization among sectoral and ocean activities; □ The need of a coordinating/monitoring body; <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • A full commitment from all the institutions involved in a common agreement concerning the sustainable management of the MBR. • A lack of analysis in the implications concerning the conflicting uses between physical process and human activities.
Individual Sector Operating Independently without common ends	<ul style="list-style-type: none"> □ Need strong individual sectors; □ Need to share with government the right and responsibility to establish a management plan. <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • The institutionalisation divisions among different sectors involved in management within the same community; • The delimitation of the geographical space in which the activities of management take place.
Sector Operating Independently with Agreed Common Ends	<ul style="list-style-type: none"> □ Need to set a common outcome between sectors involved. □ Need strong individual sectors. □ Need to maximise the returns from the agreement to the particular sector. □ Need to establish formal or informal processes of communications and coordination between sectors; <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • Establish the forms of communication and coordination between sectors; • Identify mechanisms to be established for the maximisation of the returns.
Virtual Organisations (e.g. partnership, co-management, etc.)	<ul style="list-style-type: none"> □ Need coupled networks of sectors and agencies sharing common visions and values; □ Need to agree in goals, values and codes of conduct; □ Need to share expertise and experience; □ The need of initiatives of collaboration and commercial endeavours to avoid expensive bureaucratic structures. <p>Potential problems to the MBRS:</p> <ul style="list-style-type: none"> • How to avoid bureaucratic structures in countries where this structures are a common practice; • How the fisheries organisation is going to collaborate with other stakeholders.
An Overall Co-ordinating Body	<ul style="list-style-type: none"> □ Need the establishment of a separate body or agency with an overall coordinating and facilitating role; □ The agency/body may need to be located outside of any specific sector; □ Need a role of policy setting, facilitation, research and funding assistance; □ The body/agency will provide independent auditing and enforceability, and may have some reserve powers.

	<p>Potential problems to the MBRS:</p> <ul style="list-style-type: none"> • The extra cost of establishing a new agency; • To take partial decisions.
An Overall Management Agency.	<ul style="list-style-type: none"> □ Need to build a new structure; □ Need to define sharing of responsibilities; □ Need control of planning ends; □ Need to enhance coordination. <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • The rise of a new bureaucratic structure; • Confusion over sharing responsibilities.
Biogeographic or regional ecosystem classification.	<ul style="list-style-type: none"> □ Need to manage a range of spatial and temporal scales; □ Need to determine the ecological boundaries of the area; □ Need to establish the structure and the key elements; □ Need to incorporate predator prey interactions; □ Need well define marine protected area in order to delimitate human activity; □ Require defining sustainable goals and objectives; □ Need to identify appropriate temporal and spatial scales for management. <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • The biogeographic approach remains largely untested (Burgman and Lindenmayer, 1998 p. 307-308); • It does not consider the changes in human values and social priorities; • The management strategies must move beyond sectoral resources borders in order to address sustainability.
Strategic Planning Approach	<ul style="list-style-type: none"> □ Need coordinated activities across sectors and decision maker's bodies, global enterprises and national interest; □ Need to involve specific organization in specific places. □ Need a formal information system; □ Need to consider the secondary impacts of diverse multiple activities; □ Need to anticipate adverse environmental impacts; □ Need to assess environmental impact; □ Need to provide a public decision-making framework. <p>Potential Problems to the MBRS:</p> <ul style="list-style-type: none"> • Which is the best mechanism to achieve the coordination among sectors and decision-making bodies; • The viability of the information systems; • Setting the mechanism for assessing environmental impact.

Large marine ecosystem, adaptive management, regional management, integrated coastal zone management, and sector operating independently with agreed common ends are the most applicable theoretical approaches because of their previous applications in natural resources management. These methods have

generally received more evaluation through previous applications. Chapter four (4) enables Mexican agencies to determine the criteria which is best in the management of the MBRs.

QUINTANA ROO. MAPA TURISTICO ESTATAL



Map 3. The state of Quintana Roo (The Mexican MBRS).

LEGAL STATUS AND SPATIAL ANALYSIS

CHAPTER 4

4 Questionnaire

The questionnaire used in this research is based on thirteen (13) questions. For more details of the objective of the questions see chapter two (2). The process for its application consists on a series of interviews with different agencies from the Mexican government. Also included were surveys to a local academy institution (ECOSUR), and to a private institution that gives financial support to conservation and sustainable use projects in Mexico (Mexican Nature Conservation Fund FMCN). This research would not be completed without interviewing local governmental agencies such as the one responsible for the management of fisheries, local urban planning office, and other local agencies.

The MBRS as stated in chapter 2 crosses four (4) countries. However in Mexico it only includes one of the 31 states of the Federation: the state of Quintana Roo. This makes the case of Mexico unique when compared to Belize, and Honduras where the Caribbean coast is the only access to the sea in the first case. For Honduras, access is approximately half of its total coastline.

The questionnaire first was initially designed to be applicable in the context of the four countries. However it was only possible to apply it to the Mexican context. The criteria for the application of this questionnaire is as follows:

Table 4. Criteria for the application of the questionnaire

Coastal and Ocean Activities	Mexican Ministries/governmental office involved
Living marine resources	PESCA, CONABIO and Fisheries community and industry
Minerals and Energy	SE
Tourism and recreation	SECTUR, FONATUR,
Coastal infrastructure development	SCT, CNA, FONATUR, Municipal government., State government, the Community, SCT, and SECTUR.
Waste disposal and pollution prevention	SEMARNAT, INE, Municipal and state government and PROFEPA.
Ocean and coastal environmental quality protection.	SEMARNAT, PROFEPA, SEMAR
Navigation and communication	SCT, SEMAR,
Beach and shoreline management.	State government, SEMARNAT, and municipal government..
Research	CONABIO, INE, UNAM, IPN, ONG. Local Universities and International Agencies.
Mesoamerican Biological Corridor	Plan Puebla-Panamá
International Agreements	SRE
Agriculture and forestry	SAGAR
Industrial waste	SEMARNAT AND PROFEPA
Alteration of wetlands	SEMARNAT, and academic institutions
Construction of Human settlements and roads	SCT, INE, SEMARNAT, SEDESOL, and state government
Local community	INI, other no governmental organisations (NGOs), academic institutions, and local government agencies

During this research, thirteen (13) interviews were possible with the following agencies:

- National Commission for the Knowledge and Use of Biodiversity(CONABIO)
- Southern Border College (Academic Institution)(ECOSUR)
- Bank Trust of the Caribbean (FIDECARIBE)
- Mexican Nature Conservation Fund (FMCN)
- National Institute for Indigenous People (INI)
- The Office of the Federal Attorney For Environmental Protection (PROFEPA)
- State Ministry of Fishery - National Commission of Fishery (PESCA)
- Ministry of Communications and Transport (SCT)
- Ministry of Economy, the Office of Mining (SE)
- Ministry of Tourism (SECTUR)

- State Ministry of the Environment and Urban Development (SEDUMA)
- Ministry of the Environment and Natural Resources (SEMARNAT)
- The Navy (SEMAR)

Agencies that did not answer the questionnaire but was included by this author under the criteria were:

- The Ministry of Foreign Affairs (SRE),
- The National Fund for the tourism development (FONATUR),
- Fisheries National Commission (PESCA).
- The Deputy Ministry of International Affairs of the Ministry of the Environment, (SEMARNAT)
- The Presidential Commission for the Social and Human Development,
- The Puebla-Panama Plan Presidential Commission, and
- The Ministry of Tourism at the state of Quintana Roo (SECTUR).

4.1 Respondents Who Choose Not To Answer The Questionnaire

The respondents from PESCA at the national level were not willing to be in an interview. The reason given by some employees was because the status of the Commission was not well defined. In the administration prior to President Fox's time (2000-2006) PESCA was part of the Ministry of the Environment (or SEMARNAP, as it was named until 2001). The 'P' at the end stands for 'Fisheries' in Spanish), and with this new government 'Fisheries' is going to be a Commission from the Ministry of Agriculture. However by May 2001, the agency was still not legally nor physically established.

On the other hand the respondent from the Ministry of Foreign Affairs (SRE) stated that this agency did not have information concerning the MBRS. They acknowledged that the department of Natural Resources and the Environment was responsible to monitor the international agreements concerning the MBRS. The respondents from FONATUR agreed to have an interview concerning the research, however when

they saw the questionnaire the respondents was reluctant to answer it arguing that 'the office did not have the decision making capacity to answer questions concerning the management of the MBRS. '

At the local level the respondent from SECTUR was also keen to have an interview with the author. Even if the questionnaire was not answered, however comments were however made in favour of tourism development because it would generate employment for the local people. The respondent said that the authorised agency to answer the questionnaire was the State Ministry of the Environment (SEMARNAT) and not SECTUR.

With the Puebla-Panama Presidential Commission it was not possible to have a meeting because they were travelling. Yet this author was able to contact them by phone. They said that there were only three (3) people working in that office. The Office Director was in a trip to Central America and that the rest of the team that stayed, did not have information concerning the MBRS project. On the other hand the Presidential Commission for the Social and Human Development stated that they 'need advise from a marine expert in order to answer the questionnaire'.

The Office of International Affairs from the Ministry of the Environment (SEMARNAT), refused to answer the questionnaire arguing that the National Council for Natural Protected Areas (CONANP) was the technical body capable of defining policies and priorities for the MBRS (see appendix 3 for details).

The Water National Council (CNA) is under the criteria for the application of the questionnaire, however when this author asked them which office was responsible for the reefs in Mexico there was no

answer. Yet in the process of gathering information for this research the CNA was listed under the participants of the reunion discussing coastal problems (CEPNEWS, 1996).

4.2 Respondents Who Answered The Questionnaire

The reasons for deciding which respondents to select from the Mexican government were based in the legal framework. The Constitution of Mexico states in section number 27 that the country's land and water resources are property of the nation, and it is the nations right to transfer it to private owners. From the Constitution a number of laws and regulations emerge in relation with the management of the natural resources from the coastal areas and the marine environment. Such regulations are:

- | | |
|--|--------|
| 1. Water Law | LGA |
| 2. National regulation on public goods, | LGBN |
| 3. Fisheries law, | LP |
| 4. Forestry regulations, | LF |
| 5. Tourism regulations, | LT |
| 6. Planning regulations, | LGP |
| 7. National Port law, | LP |
| 8. Navigation law, | LN |
| 9. General Law for the Environment Protection, | LGEEPA |
| 10. Public Health regulations | LGS |
| 11. Rural sustainable development law, | LDRS |
| 12. National law of the sea, | LFM |
| 13. National law of wild flora and fauna, | LGVS |
| 14. National Protected Areas Regulations, and | LANP |
| 15. Law for the Indigenous people
(is now being discussed in Congress). | LI |

This statute gave this research the framework to select the respondents, which will be the government agencies responsible for the application

of these regulations in the management of the coastal, land, and marine environments. The next table shows the respondents' details. The author considered this relevant to establish a relationship between the experience working within the agency with the quality of the knowledge which each respondent had.

Respondents' Profile

Table 4.1 Shows the respondents' profile and personal details.

Agency	Position	Age	Degree of Education	Years working in the agency
CONABIO	Executive Director	48	PhD in Ecology	9
ECOSUR	Researcher	43	Masters in Marine Ecology	12
FIDECARIBE	General Director	60	Bachelor in Engineering	0
FMCN	General Director	48	Masters in Science	7
INI	Office Director of Regional Funds	36	Bachelor in Geography	12
PESCA	State Office Director	45	Bachelor in Business Administration	15
PROFEPA	Deputy Director of Natural Resources	40	Masters in International Law	0
SCT	Planning Officer	30	Bachelor in Engineering	8
SE	General Director of Statistics	44	Diploma in Marine Resources	18
SECTUR		43	Masters in Business Administration	22
SEDUMA	Office Director of the Environment	33	Bachelor in Biology	4
SEMAR	***			
SEMARNAT (CONANP)	Office Director and Director's Consultant	28 & 34	Bachelors in Biology (both)	2

*** For details of SEMAR respondents see section 4.2.12

Next there are the legal characteristics of each office that responded to the questionnaire. To make it easy to the reader the author has sorted the agencies in alphabetical order.

4.2.1 CONABIO

The National Commission for the Knowledge and Use of Biodiversity (CONABIO) was created on a permanent basis for the knowledge and use of biodiversity. The purpose of the Commission is to coordinate the actions and studies related to the knowledge and preservation of biological species, as well as to promote and develop scientific research activities for the exploration, study, protection, and use of biological resources. These activities include conservation of the nation's resources and the generation of criteria for its defensible handling.

The aims under this agency are embodied in the "1988 General Law of Ecological Balance and Environmental Protection" (LGEEPA), the "Federal Law of Coast and Sea Management", the "Fisheries Law", the "Presidential Mandate that established the CONANP", and the "National Strategy of Biodiversity". At the international level the Convention on Biological Diversity (CBD). The respondent from Conabio, (the Executive Secretary of the Commission), commented in the question of issue that public awareness should be one of the key policies to manage the MBRS in a sustainable manner.

4.2.2 ECOSUR

ECOSUR is an academic institution at the postgraduate level; its focal point is the development and connection with the southern border of Mexico. Their programs are focused on the creation of scientific knowledge and the establishment of new technologies towards a sustainable development (ECOSUR, 2001).

It is important to notice that as an academic institution the respondent from ECOSUR is considered under the category of an 'expert' in the MBRS meetings. During the interview the respondent commented that the state government is implementing marine parcels. Information related to this matter was not given by the other respondents from the other agencies.

4.2.3 FIDECARIBE

Fidecaribe is an agency responsible for developing the open land of Quintana Roo. The agency was created in 1974 when the Federal Government signed enormous tracts of hitherto public land for future development. Fidecaribe has drawn the maps, done surveys and installed basic infrastructure in the "Costa Maya" and the "Riviera Maya" (both names are used to refer to the coastal area of the state of Quintana Roo, Mexico). It is also empowered to commercialise the land and can give valuable technical advice on financing available or permits required for development. (Fidecaribe, 2000).

The intention of the documents that emerged from this office is purely to develop the privatisation of the coast land in order to build infrastructure for the tourism industry. It is important to mention that FIDECARIBE does not have any involvement in the activities of management of the MBRS, however they have acted towards the involvement of local communities.

The objective of this agency is to sell public land to private owners with the only condition relating to the need to develop tourism infrastructure. They recommend to the investor not to harm the natural resources. However FIDECARIBE does not have the legal status to

ensure that conservation measures are implemented. The respondent actually stated that FIDECARIBE does not have any relationship with other agencies at the local or federal government levels.

4.2.4 FMCN

The FMCN is a private institution. It is the first environmental fund created in Mexico which was a proposal to the Mexican government by the WWF in 1992. Its mission is to conserve the biodiversity of the country and assure the sustainable use of natural resources by promoting strategic actions and promoting medium and long-term financial assistance (FMCN, 1999).

At the end of 1996, the Mexican government through the National Council for Natural Protected Areas (CONANP) designated the FMCN to received 16.5 million dollars from the Global Environment Facility (GEF), earmarked for use in ten (10) natural protected areas. Included in these areas are: Calakmul Biosphere Reserve in the state of Campeche, El Triunfo Biosphere Reserve in the state of Chiapas, and Isla Contoy Biosphere Reserve in the state of Quintana Roo. The FMCN is a possible candidate in the assignation and administration of the GEF funds for the MBRS project.

It is relevant to say that the respondent from this institution (the General Director) knew more about the management plans of 'Sian Khan' biosphere reserve, situated also in the state of Quintana Roo than any other management plans concerning the MBRS.

4.2.5 INI

The National Institute for Indigenous People (INI) was created with the objective to deal with all the matters of the different ethnic groups that are in Mexico, which consist around 53 different groups.

One mechanism of Virtual Organisation already exists in the MBRS and the Ministry of the Environment (SEMARNAT) manages it. It is important to note that full strategic planning full mechanism was considered "poor for the administration of the MBRS". This is different to what all the rest of the Ministers considered as the strategic planning approach.

4.2.6 PESCA

The regulations of the state of Quintana Roo state that the "Ministry of Rural, Agricultural and Indigenous Development" must ensure to do economic and social fishery research and that fisheries activities would not interfere with the ecological equilibrium of the area. Also this Ministry would be responsible for the economic development of fisheries in the state.

The interview was with the Fishery office. The respondent from PESCA stated that documents concerning the management of the Mesoamerican Barrier Reef that this Ministry knew were:

- "A Management Programs for Different Areas of the MBRS" which was a document completed after a meeting in Belize City, in March, 2000. This document focused in fisheries management.

- "A proposal for the management of different species, mostly lobster and other related species."

Special emphasis was made regarding the differences between 'sectors' especially the ones from fisheries sector and the environmental sectors. With years of experience in the fisheries field, the respondent commented that the fisherman's community of Quintana Roo is willing to carry out actions toward conservation. He also said that few natural reserves in the state had that status because it was a project developed by the community and not by the government.

4.2.7 PROFEPA

The Federal Attorney for Environmental Protection (PROFEPA) is one of the SEMARNAT bodies with technical and operative autonomy. The office of the Federal Attorney for Environmental Protection is responsible for the enforcement of regulations on natural resources and wildlife management. It is also responsible for the monitoring of the environmental judicial layouts of any environmental felony such as pollution of land, aquatic environs, and ecosystems (OECD,1998).

The interview was with a Deputy Attorney, one of the highest level government employee of this office. From the beginning it was clearly established that the questions answered would be just in the competence of the PROFEPA; assessment and observation only. The answers were concerning all reefs in Mexico and not only the MBRS.

4.2.8 SCT

As stated by the Mexican law, The Ministry of Communications and Transport (SCT) has the responsibility of the control of the communications and transport in water, as well as setting the marine signs and the management of marine transportation.

The interview was with the Planning Manager. As a general statement, it was noted that the focus of this Ministry's strategies is to help in the development of the ecotourism in the area of Quintana Roo. One of the comments during the interview was that this Ministry acts as a 'facilitator' through which the other government agencies could arrange more specific activities.

4.2.9 SE

For the purpose of this research it was important to take notice of the minerals that could be potentially important in the area of the MBRS. The Ministry of Economy (SE) is the agency responsible for the Mining activity in the country. Firstly it is relevant to say that during the period of the research the author found different knowledge of the interviewees about the mining activities not only in the MBRS but also in the state of QR. Some said that there were none of these activities and some said that there were certain that there were, without specifying what sort of activities.

However the Office of Mining assured that there are a few areas in the State lands or sea where minerals are abundant. The Mexican state of

Quintana Roo is not of a high importance compared with other areas of the country, in terms of mining activities. The only relevant activity is salt extraction (from the sea) done in the upper part of the state, near the island of Cozumel. This is a characteristic that most of the modern reefs have; and since the MBRS is a modern reef there is no mineral with potential for extraction.

4.2.10 SECTUR

The "Federal Public Administration Law of Mexico" establishes that among the duties of the Ministry of Tourism, is to resolve in coordination with SEMARNAT the areas suitable for tourism. The Mexican state of Quintana Roo is considered a place of a high potential resource for tourism thanks to the beauty of its natural resources and because it is the only state of the country within the Caribbean coast.

At the beginning of the interview the respondent was very clear in saying that the management of the MBRS was not the responsibility of his office. However, he had responded because of his experience in the establishment of the sustainable tourism zone of the Caribbean, an initiative of the Association of Caribbean States (ACS) (See Appendix 5), which main objective is to develop 'sustainable tourism' in the state of Quintana Roo together with another 35 states and territories from the Wider Caribbean region. Other sectors of the Ministry refused to respond to the questionnaire.

The Ministry of Tourism considers the national plans with a strong conservative bias. It is suggested that the management of the MBRS should have a more utilitarian vision or approach, which encourages tourism development.

4.2.11 SEDUMA

The Ministry of Urban development and the Environment (SEDUMA) during the interview clearly stated that this Ministry does not have direct interference in the management activities of the MBRS. However the Ministry has its own list of Protected Areas which are listed in the Appendix 3. It is important to mention that the protected areas do not receive federal funding for management purposes. Conservation activities receive local funding under the provision of a 'local management plan'.

4.2.12 SEMAR

According to the "Federal Public Administration Law ", The Navy (SEMAR) should focus on surveillance of Mexican seas, the reefs, the continental platform, the islands, and cays as well as fresh water surroundings. The Navy also collaborates with other institutions in the duties of prevention and pollution control. It is as well responsible for carrying out scientific research and surveillance of the traffic vessels.

When responding to the questionnaire The Navy was clear in explaining that the Navy does not have any communication or relation with the community in the area, however they are well documented about them. They considered that threats to the MBRS can be addressed by education and public awareness and that artificial reefs can be included in the MBRS to diminish the damage that human activities especially aquatic sports are doing to the barrier reef. They mostly agreed with the policies in conservations taken under the SEMARNAT.

They also acknowledged that the tourism industry is not always an ally when policies are taken to protect and conserve.

It is important to mention that in this particular interview there were five (5) participants: two (2) sea captains and three (3) civilians with a Masters degree in Science. All of them had at least 18 years of experience working with coral reefs, though not necessarily in the MBRS area.

The respondents were not clear about both the location of the MBRS of the coast of Mexico, and the nature of conservation and protection. However they all have in general a good knowledge of other reefs in the states of Veracruz, Chetumal, and Yucatan, where there are significant differences among marine resources.

4.2.13 SEMARNAT

The Ministry of the Environment (SEMARNAT) is responsible for leading and putting together the national policies, programmes and assets for the natural resources management, with the exception of the petroleum and the radioactive minerals. It is also responsible for the ecosystems conservation and restoration, as well as the environmental policy planning to assure a sustainable development of the national natural resources. (DOF, 2001).

According to the Mexican legal statutory the agency responsible for the issues concerning the MBRS is the National Council for Natural Protected Areas (CONANP) that was created on June, 2000 as an "independent office" under the Ministry of the Environment (DOF, 2000)

(See diagram in page 77). The respondents to the questionnaire were from the CONANP.

Through the CONANP Mexico has promoted the creation of the National Scientific and Technical Consultative Council of Mexico's Coral Reefs (COCCYTAC) and the National Committee for the Conservation and Sustainable use of the Mexican Coral Reefs (CONARCO) which is a mandate from the World Bank in the establishment of the MPA system (refer to chapter 6 for more details). This last proposal has been a draft since 1997 (INE, 1997).

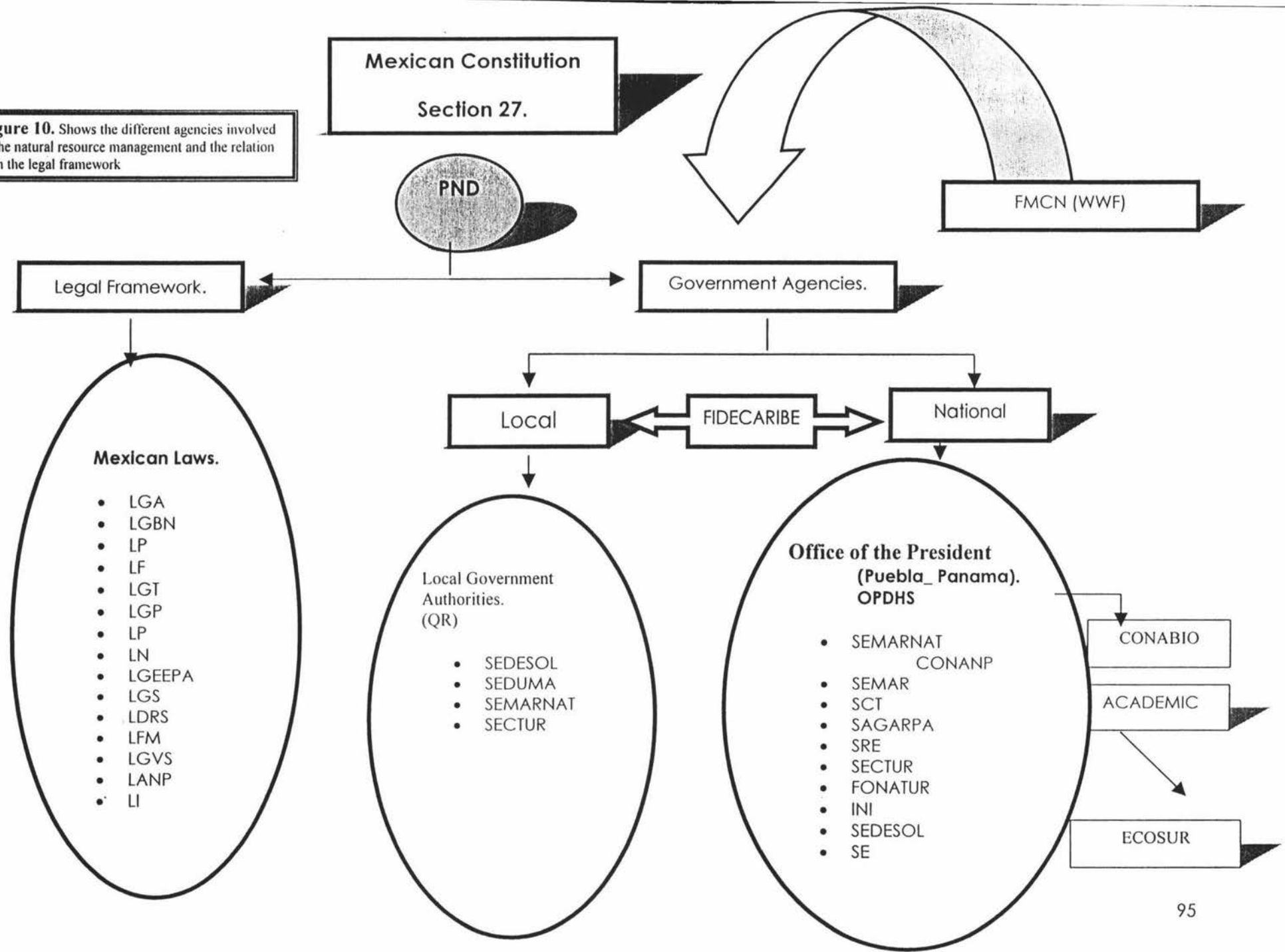
4.3 CONCLUSIONS

As stated by the Mexican legislation, each Ministry of the Federal Government has a unique responsibility in the management of the country's natural resources. The main problems is that new legislation has been included without any previous assessment process. One example is the LGEEPA which was incorporated in 1988 in the Mexican legislation. As a consequence now there are at least twelve (12) other legal regulations that are also concerned with issues related with the management of natural resources.

These issues make activities such as the management, the coordination, the research, the education, and the information for the public awareness difficult to accomplish. The government agencies, the international and national organizations, and the local communities now need to understand the complicated process of having to coordinate activities with at least five (5) different mandates.

The next diagram shows the legal framework of the Mexican government that has relation with the management of the natural resources.

Figure 10. Shows the different agencies involved in the natural resource management and the relation with the legal framework



Section 27 of the Constitution states that the natural resources are part of the territory and is a national responsibility to manage it with an efficient approach. The National Development Plan (PND) is the president's government program. The 2001-2006 PND stated that this period will be of a high importance in the sustainable management of the natural resources.

The next chapter will analyse the information gathered in each question of the questionnaire during the field work. The answers that were obtained will be detailed and evaluated according with the methodology.

ANALYSIS AND DISCUSSION

OF THE RESULTS

CHAPTER 5

5 Introduction

This chapter presents the analysis of the information gathered during the field research using the methodology outlined in previous chapter (Chapter 1). This chapter contains the analysis and discussion of the current institutional and legal framework for sustainable development of the MBRS. The questionnaire used in the fieldwork is detailed in Appendix 1. However to make it easy for the reader the various questions are included in the discussion.

In the analysis and discussion of question number seven (7) there are a number of respondents who do not comment on the approaches. Therefore, not all the management mechanisms analysis have a detailed comments. It is important to mention that question seven was posed with the intention of knowing if the respondents had knowledge of the different marine and coastal management mechanisms.

It is also important to note that respondents are often afraid of saying 'I do not know'. Sometimes they feel it is their obligation to know, and discuss management issues. For example, the respondent from FIDECARIBE did answer the question about LME and did not make any

comments. However, respondents such as FMCN and CONABIO were eager to accept that there were management mechanisms that they did not recognize, such as sector operating Independently with agreed common ends.

5.1 Analysis of the Questionnaire

The questionnaire was first designed in English. During the fieldwork it was translated to Spanish. The translation was a literal translation.

Question No. 1

1.- What international, national or state plans are being implemented by ministries of the Federal Government of Mexico about management of the Mesoamerican Barrier Reef System (MBRS)?

Question No. 2

Do any of the plans focus on protection of the Barrier Reef System or on the sustainable utilization of the system? If there is more than one objective explain.

Questions one (1) and two (2) asked respondents to identify national or international plans for the management of the MBRS. The majority of respondents did not recognize any plan. The eight (8) agencies, SEMAR, SECTUR, PROFEPA, SCT, FIDECARIBE, SE and SEDUMA stated that they had no information concerning national or international plans. For example, PROFEPA understood that "some plans have been implemented" without specifying the content of the plan. Other agencies such as SEMAR, stated that they had limited responsibilities concerning management of the MBRS.

Four (4) agencies, SEMARNAT, CONABIO, ECOSUR, and PESCA, stated that they knew at least one (1) or two (2) plans for the management of MBRS. However, each agency identified different plans.

It is important to mention that only SEMARNAT had the correct and complete information of all national and international plans concerning the MBRS.

Question No. 3

What have been the difficulties in achieving the objectives and the implementation of strategies associated with marine protection?

Answers to this question can be classified in four (4) categories of difficulty:

1. Confusion about provisions regarding property rights,
2. Social and cultural differences,
3. Management differences, and
4. Funding.

As shown in table 5 the respondents listed twenty (20) different types of difficulties in the implementation of protection policies to the marine environment. The conflict of interest among different stakeholders appears to be the most important difficulty followed by the different types of government in each country and the funding issues. However even though problems such as the opposition of the X'Cacl community (see page 98) arise because of the lack of definition of the land tenure and the allocation of land on the coast line to the tourism industry, only FIDECARIBE considered this as a difficulty.

There is no common perception of the difficulties in the area. Every agency seems to have their own vision of management problems and possible solutions in the narrow context of their ministries or departments.

Table 5 shows the difficulties that respondents perceived in the MBRS.

Table 5 Summarize the answers given by the respondents to question 3.

DIFFICULTIES	ECOSUR	CONABIO	SECTUR	SEMARNAT	SCT	INI	SEDUMA	FIDECARIB E	PESCA	FMCN	SEMAR	PROFEPA
<i>Government and property rights</i>												
Different types of government	▲	▲			▲							
National sovereignty	▲									▲		
Continuous government changes		▲		▲								
Lack of legal framework							▲					
Interest conflict		▲		▲		▲					▲	
Lack of government participation/all levels							▲					
Land tenure/allocation of property rights								▲				
<i>Management</i>												
Lack of sufficient MPA					▲							
No management plan/strategy					▲				▲			
Lack of monitoring					▲							
Lack of research									▲			
Lack of vision coast/reef										▲		
Lack of institutional coordination												▲
Communication				▲								
<i>Social and Cultural</i>												
Lack of community cooperation											▲	▲
Different languages	▲											
Artisanal fisheries practice											▲	
Funding		▲	▲									▲

Note: The respondent from the Ministry of Economy did not answer question 3

Legend: ▲ Difficulties identified by respondents.

Question No.4

If a cooperative model was established to manage the MBRS. Comment on the following actions in terms of assessing constraints in implementing federal objectives at a state level. Give a rank of the constraints, where 5 represents a maximum constraints and 1 represents a minimum.

In this question all of the constraints were considered not specifically in relation to established of a cooperative model but as general limitations to the sustainable management of the MBRS. The respondents considered as a high constraint the lack of funding especially at the local level. As shown in figure eleven (11), the strongest qualification went to: funding problems at the municipal and state level, and also sharing natural resources between two countries.

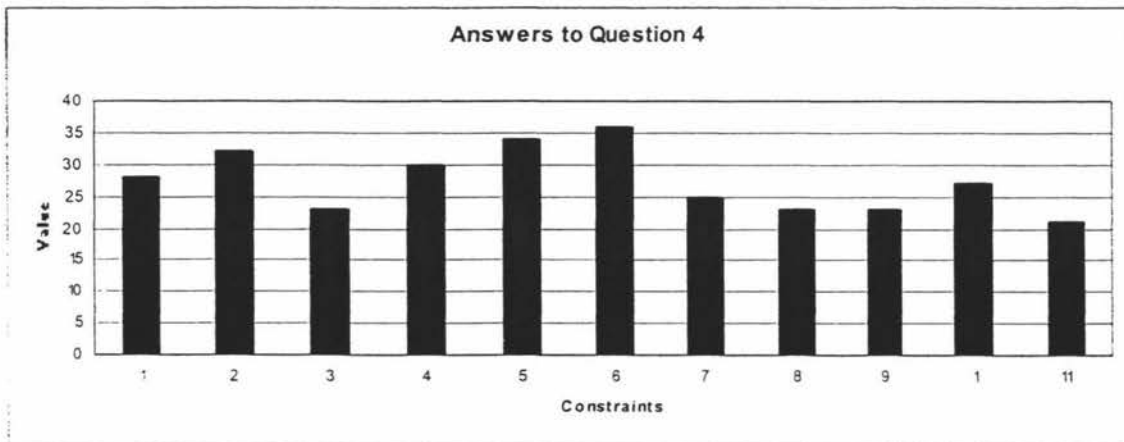
The respondents who considered funding a strong constraint are: SECTUR, INI, PROFEPA, CONABIO, SEDUMA, and PESCA. The majority of respondents agreed that there was no funding for management municipal level, which is a major constraint. The respondents from CONABIO, SECTUR, INI, and PROFEPA considered that the lack of funding at the state level is also a major problem. However, SEDUMA, and PESCA, which are local government agencies ranked state funding as a low constraint.

A relevant aspect of the interviews was that the majority of the respondents, commented on not having adequate information to support participation of the community in reef management and that was a reason to rank this constraint as weak. However the respondent from PROFEPA believes that participation exists but only in certain sectors of the community. The INI respondent considered that the participation was low because communities in Quintana Roo are "starving communities" and did not have the resources to do such.

It is important to mention that the respondent from FIDECARIBE said that they experienced "no constraints at all", yet in the newspapers focus is on case studies such as the X'Caclal dispute where the community forced authorities to stop the building of the *Sol Melia* tourist development. In December 2001 the Federal Congress of Mexico asked SEMARNAT to make the area a federal reserve (email from M. L. Whitlow, pers. comm. 4.4.02).

It is interesting that the respondent from ECOSUR mentioned that boundaries between Mexico and Belize were not considered constraints because of the long history of mutual cooperation between the two countries. The next figure summarise the answers given by respondents to question four (4). As shown the highest constraints considered from the respondents is funding at municipal level.

Figure 11 summarizes the answers from the respondents to question 4 regarding constraints in the MBRS.



Note: The respondents from the SE, and FIDECARIBE did not answer Question No.4

Constraints.

1. Communication
2. Shared state with an international border
3. Research
4. Funding (federal level)
5. Funding (state level)
6. Funding (municipal level)
7. Expertise (federal level)

8. Expertise (state level)
9. Expertise (municipal level)
10. Local Community support/participation
11. Support of voluntary programs.

Question No. 5

What are the difficulties in government areas of policy making at an international level for Mexico in the application of a multinational agreement as set in the Large Marine Ecosystem management model for the protection of the MBRS?

The difficulties expressed by the respondents can be summarized in table 5.1 The first row of the table shows that respondents from INI and PESCA did not have information about the LME approach. However SE, FIDECARIBE, and PROFEPA did not give a specific reason for not answering this question. Respondents from ECOSUR, SEMARNAT, FMCN, and SEMAR agreed that common objectives in international agreements were one of the main difficulties. CONABIO and SEDUMA had the same opinion about funding, however the respondent from CONABIO specified that the funding was for the international meetings that needed to take place to get the consensus of the international agreements. The respondent from SEDUMA did not specify which funding it was referring to.

Table 5.1 shows the answers from respondents to question 5

Difficulties	ECOSUR	CONABIO	SECTUR	SEMAR/NAT	SCT	INI	SEDUMA	PESCA	FMCN	SEMAR
Not know the LME approach						▲		▲		
National sovereignty	▲									
Constant government changes.		▲								
Lack of coherence & monitoring.		▲			▲					
Funding		▲					▲			
Agree common objectives	▲			▲					▲	▲
Communication mechanisms				▲						
Geopolitical position of Mexico					▲					
Marine species migration.									▲	
Differences in population density of the coasts.					▲					
Different types of economic reliance that each country have of their natural resources.									▲	
Lack of adequate technology										▲

Note: The respondent from the Ministry of Economy, FIDECARIBE, and PROFEPA did not answers question No.5

Legend: ▲ Difficulties identified by respondents.

Question No. 6

Did your Ministry complete any reports about the Barrier Reef in the state of Quintana Roo?

a) If yes.

b) Please give further details (nature of report ,titles ,objectives, dates, and others...)

The respondent from CONABIO stated that by section 3.1 of the "National Biodiversity Strategy of Mexico" it is a duty of the strategy members (see appendix 7 for a list of members) to support and endorse further research in the following areas:

- a) Biodiversity management strategies;
- b) Aquatic and terrestrial management systems leading to sustainable management of the MBRs;
- c) Indigenous knowledge;
- d) Environmental accountability;
- e) Environmental monitoring and assessment mechanisms; and
- f) Global warming and the implications for NPA.

However no further details were given concerning any particular research area pertaining to this aspect.

The respondent from the INI commented that the agency does not had any research concerning the MBRS, yet they produce research about the mechanism that the communities use in the protection of the MBRS natural resources. The respondent stated that: "in general, there is no possible work with other governmental agencies supporting this research". No further comments were made.

Even though the FIDECARIBE respondent agrees that this agency does not has any research concerning the MBRS. It is important to mention that this agency has a well-illustrated map of the coastal area of Quintana Roo. This map is divided in two (2). The north part of the state of Quintana Roo is called "*Cozumel Riviera Maya, a thriving destination*" and the second correspond to the south part of the coastline named "*Costa Maya, a new destination*". Both documents are design in English brochures, in full colour mostly for potential investor.

PROFEPA has funded researches concerning the threats and risk evaluation to the reef. No further details were given concerning the objectives or methodology of the research.

Table 5.2 illustrates the answers given by respondents to section a and b of question 6.

Table 5.2 Shows the answers to question 6 in sections a) and b)

<i>Agencies</i>	<i>Answers</i>
ECOSUR	a) Yes b) See list of documents in appendix 3
CONABIO	a) Yes b) See list of documents in appendix
SECTUR	a) No b)
SEMARNAT	a) Yes b)
SE	a) No b)
SCT	a) No b)
INI	a) No b)
SEDUMA	a) No b)
FIDECARIBE	a) No b)
PESCA	a) No b)
FMCN	a) No b)
SEMAR	a) Yes b) Documents concerning marine streams, and coastal pollution.
PROFEPA	a) No b)

Question No. 7

- (a) Which of the following mechanism would be most useful to deal with issues facing your Ministry such as fisheries, recreation/tourism, mining, oil, conservation, shipping, and coastal development. Please rank 1-5 for each method by circling relevant numbers.
1=useful 5=not useful
- (b) If funding is provided for implementation of any cooperative models at this level of government.
Yes
No

In section a) of question seven (7), respondents are asked to rank various resource management approaches or methodologies to determine the usefulness of each approach in managing aspects of importance to them in MBRS. This discussion is divided in two sections, the first section reports 14 different types of management approaches in four areas: fisheries, recreation, mining, conservation and coastal management. The other section (b) provides information about funding the application of any of these theoretical approaches at all levels of government or non-government organisations and is consider after section a) of the question. The management approaches are discussed and described in the literature review of Chapter 3.

The final percentage value given to each management approach shows that there is not a dominant of preferred management approach. For example, table 5.3 shows that the management approaches have between four (4)% to nine (9)% value. The table explains that among the Mexican agencies there is not a dominant mechanism for the MBRS.

5.2. Management Concepts

5.2.1 Large Marine Ecosystem (LME) Concept

Criteria

- Need a minimum size of 200,000km²;
- Need to be integrated in the same areas of physical environment, biological communities, pollution, and socio-economic considerations;
- Need a total ecosystem approach to take meaningful management actions;
- Need to be in the same political unit;
- Potential problems to the MBRS:
 - a) Marine area is often too big to manage as a single unit (e.g. the relevant protected area may extend beyond administrative boundaries, and the coastal areas of 4 different countries.
 - b) There is very little knowledge among practitioners of what a LME is.

Analysis

The Large Marine Ecosystem (LME) concept is useful to nearly six (6)% of respondents. Other management approaches are considered more useful (e.g. Regional Management (RM) has nine (9)% , Co-management (CoM) seven (7)% and the strategic planning approach (SP) eight (8)%. The nine (9) agencies who consider it possible uses include: PROFEPA, SCT, SECTUR, SEMARNAT, FMCN, ECOSUR, SE, SAGARPA, and SEDUMA.

The reasons given by respondents for supporting LME are: (a) that the MBRS is a natural protected area, and (b) that the concept fits the legal framework for management of the MBRS.

Five (5) agencies namely INI, CONABIO, FIDECARIBE, ECOSUR, and SEMAR did not rank the LME as a useful management approach for their purposes. These agencies believe the LME concept is complex (no implications discussed). The MBRS is an excessively large area to manage using one approach. The respondents from these agencies are not familiar with the application of the LME concept, for example

the respondent SECTUR stated that a LME approach within the management of coastal development would conflict with conservation activities (this respondent meant objectives, however this is a literal translation from Spanish). The agencies that rank LME highly also place more emphasis on fishing than on other aspects of coastal management such as recreation, mining and conservation.

Some respondents would not rank the approaches preferring simply to explain or discuss matters generally, rather than considering in detail the various management approaches. For example in discussing the Large Marine Ecosystem concept, most of the respondents believe it is more of a biogeographic approach with little emphasis in coastal development and management issues. They are not comfortable criticizing approaches in detail.

5.2.2 Adaptive Management (AM) Concept

Criteria

- Requires an understanding of the natural world;
- Needs an understanding of the environmental complexity and the psychosocial conflict between stakeholders;
- Need to adopt: environmental protection and preservation measures
- Need to manipulate certain species within a defined area;
- Need to monitor the results of management, and to establish sanctions to stakeholders in the areas where initial objectives are not reached;
- Need to modify decisions and management practices;
- Need a strong link between management planning and policy making;
- Need transparency in knowledge, i.e., that knowledge can be shared among different stakeholders, sectors and government agencies;
- Need to deal with uncertainty;
- Need to integrate social and political concerns;
- Needs a stage of evaluation and comparison
- Potential problems to the MBRS:
 - a) Without monitoring and validation the quality of management cannot be assessed;
 - b) The social or political pressure that make the necessary links between institutions;
 - c) Little attention is paid to the cost and delay of gathering information;

- d) Equity in the use of the resources by different communities;
- e) There is no sufficient information about the species in the MBRS;
- f) Environmental protection measures and policies are not distributed on an even manner through the MBRS.

Analysis

Adaptive Management is considered only by six (6)% of respondents to be a useful approach. The AM approach is ranked as the 10th most suitable mechanism for application in Mexican context.

From the answers given by the respondents, it appears that little is known about the application of AM. Only the INI and SEMARNAT knew the meaning of AM. On the other hand Ministries such as SEMARNAT, INI and PROFEPA give AM an overall high score.

Three (3) agencies, SEMAR, SUMA, and ECOSUR do not give any ranking to this approach; and they do not give a specific reason.

The agencies that classify AM highly also place more emphasis on conservation than on other aspects such as fishing, mining, coastal management and recreation (see table 5.4)

5.2.3 Co-management (CoM) Concept

Criteria

- Need sharing of responsibility and authority between the government and the community to manage fishery or other resources;
- Need partnership and institutional arrangements;
- Requires degrees of power sharing between community and government institutions;
- Need the integration of local and centralized management systems;
- Should not be one single model of management and participation;
- Need improvement of participatory and compliance structures;
- Need to involve stakeholders in management and planning process;
- Requires circulation of benefits derived back into the local communities;
- Need to define the geographic region for the ownership and control of the fishery resources and the management functions;

- Need to give subsidiary funds to fisheries management;
- Governments should establish condition for co-management;
- Supportive legislation, rights and authority structures;
- Decentralization of the decisions in management of the resources.
- Participation and efficiency
- Democratisation, government reforms and community development;
- Potential problems to the MBRS:
 - a) Administration of fisheries across countries, variety in staffing and level of expertise available.
 - b) Inter-departmental linkages in the 4 countries, which are essential for co-management;
 - c) Establishment of rules to decentralize resource management decisions;
 - d) Improve participation;
 - e) Sharing of marine and coastal resources;
 - f) Overlapping agency responsibilities;
 - g) Lack of strong political support;
 - h) Conflict between multiple stakeholders in the coastal zone and marine area;
 - i) Funding

Analysis

The co-management approach is considered useful to only seven (7)% of the respondents. The agencies who consider it useful are: INI, PROFEPA, SCT, and SEMARNAT. Other management approaches that are considered more useful are: strategic planning and integrated coastal management. The approaches considered in the same category include: cross-sectoral management, sector operating independently with agreed common ends, overall management agency, and biogeographic classification.

Respondents do not support co-management because COM is viewed as being applicable to fisheries management and has been ignored when dealing with other management issues such as coastal development, mining, recreation and conservation (see Table 4.5). Another reason is that some respondents consider the co-management approach to be complex in terms of the application of MBRS geographical and physical characteristics.

Only two (2) agencies did not rank the co-management concept: SEMAR and ECOSUR. SEMAR state that the application of co-management was difficult in the MBRS because communication mechanisms are not properly established. ECOSUR voices its concerns about acknowledging the cooperation among different fishery communities. "There is a lack of cooperation across transboundary communities in different countries, such as Guatemala and Honduras where administrators do not have any experience with the co-management concept."

The respondent from ECOSUR suggests that different experiences in different countries in co-management could be a problem in the integration of a common view of this approach. It is important to mention that only Mexico and Belize had experience in co-management (personal communication from the respondent).

5.2.4 Cross-sectoral Management (C-SM) Concept

Criteria

- Need to define the extent of the boundaries and cross boundaries of the planning area.
- Need to integrate spatial scales in the political (local community, national, and regional level), institutional (agriculture, industry, urban development, forestry, transport, and energy) and ocean related fields (land, shoreline, coastal, shelf edge, and open ocean).
- Need strong confidence on separately organised management system.
- Need to integrate overtime in a management context.
- Potential problems to the MBRS:
 - a) Building strong confidence on organised management systems across the MBRS.
 - b) This is a common difficulty in countries such as Mexico, Guatemala, Belize and Honduras.

Analysis

The cross-sectoral management approach is also considered useful to only seven (7)% of the respondents. Other management approaches

considered more useful are: strategic planning (8%) and integrated coastal management (9%).

The five (5) agencies who consider it possibly useful include: INI, PROFEPA, SECTUR, SEMARNAT, and SEDUMA. SECTUR ranked cross-sectoral management of high use in aspects such as conservation, recreation, and coastal development.

Three (3) agencies, CONABIO, FIDECARIBE, and ECOSUR, did not rank this approach, the reasons given are: (1) that the cross-sectoral management approach was difficult to understand, and (2) that the respondents do not have sufficient information to respond.

The agencies that rank C-SM highly consider the approach to be more suitable for fisheries management than for other aspects of coastal development, mining, recreation and conservation.

It is important to mention that the Navy give C-SM a qualification of minus one (-1), because the respondents (8 people) state that cross-sectoral management is not useful to them.

Most of the respondents considered this approach not significant in coordination with other areas. They have such a perspective because the word 'sector' is not well understood.

5.2.5 Community Based Management (CBM) Concept

Criteria

- Usually applied only at local or regional levels;
- Need community self-identified by interested groups;
- Need to identify the area subject to management by consulting with the community;
- Using community criteria and thresholds, define the values associated with places; for example, for the Garifunas communities in Guatemalan fisheries is valued as a social gathering more than an economic activity;

- Need consultation with the community;
- Need appropriate methods and actions for the community in conservation activities;
- Need consultation via professionals, that can be part of the community;
- Potential problems to the MBRS:
 - a) Governments from Mexico, Belize, Guatemala and Honduras do not have decentralised policies.
 - b) There is not a strong community self-identification;
 - c) The communities are disperse and have different values;
 - d) Differences among environments across the four countries (for example; different culture, language, interests and different surroundings).

Analysis

The community based management approach (CBM) is functional to nine (9)% of the respondents. Further management approaches that are considered in the same category as CBM are: regional management, and integrated coastal management. Agencies which considered this approach useful are: INI, PROFEPA, SCT, and SEMARNAT.

Respondents support CBM because this approach considers ideas and knowledge of local communities, which could be incorporated among the communities of the four different countries. For instance fishery communities from Belize may have different cultural values from the fishery communities of Quintana Roo and Guatemala, etc. The differences in cultural values can be translated into different proposed management approaches for the MBRS.

One agency, FIDECARIBE, did not rank the CBM approach, stating lack of knowledge concerning the concept. No reasons were given by CONABIO, FMCN, and SE, all of which gave CBM poor ranking.

The agencies who ranked CBM highly also place more emphasis on fishing than on any other aspects of coastal management such as

recreation, mining and conservation. It is important to mention that LME approach is ranked higher in fishing than in any other aspect.

One of the respondents commented on the issue of the different types of communities in each country. If collaboration and communication was to exist between these communities, it is not likely to be completely adequate.

5.2.6 Integrated Coastal Management (ICM) Concept

Criteria

- Need a scientific based understanding of marine ecology, ocean processes and their interactions with the terrestrial and atmospheric system;
- Need cooperation of user groups at a national, regional, and local level;
- Need analysis implications of development, conflicting uses, and interrelations between physical processes and human activities;
- Need strategies to take account of the socio-economic constraints, and the link between socio-economic and cultural processes and the natural environment;
- Need to promote linkages and harmonization among sectoral and ocean activities;
- The need of a coordinating monitoring body
- Potential problems to the MBRS:
 - a) Full commitment from all the institutions involved in a common agreement concerning the sustainable management of the MBRS.
 - b) Lack of analysis in the implications concerning the conflicting uses between physical process and human activities.

Analysis

The Integrated Coastal Management (ICM) concept is useful to nine (9)% of respondents. Other management approaches considered at the same levels of usefulness are regional management and community based management. The seven agencies who considered it useful are: INI, FIDECARIBE, SCT, SEMAR, SEMARNAT, PESCA and SEDUMA. No specific reason is given to support this approach. However, the reason for a high ranking could be that the ICM approach has been popular in the international community, specially for those who are concerned with natural resource management, yet

little is known about its real implications for the management of a resource such as the coast lines and marine environment.

No specific reasons were given by the only two (2) agencies CONABIO and ECOSUR who did not rank the ICM approach. These agencies could be honest and considered that they did not have enough knowledge of this concept.

The agencies who ranked ICM highly also placed a higher emphasis on recreation than on the other aspects of coastal management, conservation, fishing, and mining (see table 5.4).

5.2.7 Individual Sector Operating Independently Without Common Ends (ISOINCE) Concept

Criteria

- Need strong individual sectors;
- Need to share between government and sectors the right and responsibility to establish a management plan for the area concerned;
- Potential Problems to the MBRS:
 - a) The institutionalisation divisions among different sectors involved in management within the same community or regions;
 - b) The delimitation of the geographical space in which the management activities take place is often difficult especially in the marine environment where political boundaries meet.

Analysis

The Individual Sector Operating independently without common ends (ISOINCE) concept is useful to only four (4)% of respondents, which means that this is the approach that less respondents considered useful. Other management approaches, for example virtual

organisation and the overall coordinating body are considered useful by six (6)% of the respondents.

Even though the ISOINCE approach is considered useful by only four (4)% of the respondents, two agencies still consider it useful, for example: PROFEPA gave ISOINCE the highest qualification (5), SEMARNAT ranked it almost as useful as the LME approach (with 3 and 4). The reason for this could be that the MBRS is managed with the ISOINCE criteria. The agencies that rank ISOINCE highly also place more emphasis on fisheries and conservation than on other aspects of coastal management, recreation and mining, therefore these agencies are most likely to consider this approach as the most suitable for the management of the MBRS.

Five (5) agencies (SEDUMA, PESCA, ECOSUR, FMCN, and FIDECARIBE) did not rank the ISOINCE management approach. The primary reason given was: that the agencies do not had information regarding this approach. The second reason is that the respondents considered the concept of ISOINCE as an 'obstacle' for the sustainable management of the MBRS. However all agree that cooperation among sectors is needed.

5.2.8 Sector Operating Independently With Agreed Common Ends (SOIACE) Concept

Criteria

- Need to set a common outcome between sectors involved;
- Need strong individual sectors;
- Need to maximise the returns from the agreement to the particular sector;
- Need to establish formal or informal processes of communications and coordination between sectors;
- Potential problems to the MBRS:
 - a. Establishing communication and coordination rules between sectors;

- b. Establishing the best mechanisms to obtain maximum returns.

Analysis

The sector operating independently with agreed common ends (SOIACE) concept is useful to nearly seven (7)% of the respondents. Other management approaches considered at the same level as SOAICE are co-management, cross-sectoral management, sector independently with agreed common ends, overall management agency, and the biogeographic classification. The seven agencies that considered its possible uses include: PROFEPA, INI, SCT, SECTUR, SEMAR, SEMARNAT, and SEDUMA. There are not specific reasons given from the respondents to support the SOIACE approach, however the respondents from SEMARNAT ranked the SOAICE approach at the same level as the cross-sectoral management. On the other hand, the PESCA office ranked this mechanism with both a three (3) and five (5) because the Quintana Roo respondent is not certain that it would be useful.

A number of respondents state that little is known in Mexico relating to this management approach. For example the respondent from FMCN clearly stated that they had no data related to the SOIACE approach.

Five agencies, namely CONABIO, FIDECARIBE, FMCN, SE, and ECOSUR did not rank the SOIACE as a useful approach for their purposes. These agencies judge that they do not have sufficient information to rank the SOAICE concept. The respondents from FIDECARIBE and ECOSUR did not rank the approach at all. CONABIO gave a low qualification to SOIACE(2). The respondent from CONABIO commented that the ISOINCE approach was not useful, because even though the aim of the approach was to have common ends, this aim did not have enough strategies to bring the communities together with common ends. The agencies who rank the SOIACE highly also place more

emphasis on conservation than on other aspects of fisheries, recreation, mining and coastal management.

5.2.9 Virtual Organisation (VO) Concept

Criteria

- Need coupled networks of sectors and agencies sharing common visions and values;
- Need to agree in goals, values and codes of conduct;
- Need to share expertise and experience;
- Need of initiatives of collaboration and commercialisation to avoid expensive bureaucratic structures;
- Potential problems to the MBRS:
 - a) How to avoid bureaucratic structures in countries where large bureaucratic structures are a common practice;
 - b) How the fisheries organisation going to collaborate with other stakeholders.

Analysis

The Virtual Organisation (VO) concept is useful to nearly six (6)% of the respondents. Only one management approach is considered less useful (individual sector operating independently without common ends). The five (5) agencies who consider its possible usefulness include: PROFEPA, SCT, SECTUR, SEMANAT, and SEDUMA.

The reasons given by respondents for supporting VO are as follow: (1) that the VO is an essential approach to manage the MBRS because it is consider that in sharing a natural resource such as the reef, common vision and common values will flow naturally. (2) The Australian example of the Marine Park Authority.

The following agencies namely INI, CONABIO, FIDECARIBE, ECOSUR, SE, PESCA, and SEMAR did not rank the VO as a useful management approach for their purposes. These agencies believed that VO already exists with the presence of a number of non-governmental organisations (NGOs). For example SEMAR stated that within the conservation management, some NGOs are working in the MBRS. The

respondent from the INI said that nowadays the SEMARNAT functions as a Virtual Organisation.

The agencies who rank VO highly also place more emphasis on conservation than on other aspects of fishing, recreation, coastal management and mining.

The FMCN stated that a virtual organisation is essential to manage the MBRS.

5.2.10 An Overall Coordinating Body (OCB) Concept

Criteria

- Need of establishing a separate body or agency with an overall coordinating and facilitating role;
- The agency/body may need to be located outside of any specific sector;
- Need a role of policy setting, facilitation, research and funding assistance;
- The body/agency will provide independent auditing and enforceability, and may have some reserve powers;
- Potential Problems to the MBRS:
 - a) The extra cost of establishing a new agency;
 - b) To take partial decisions

Analysis

The Overall Coordinating Body (OCB) concept is useful to nearly six (6)% of the respondents. Other management approaches are considered more useful (e.g. co-management, regional management, cross-sectoral management, community based management, and integrated coastal zone management). The five agencies who considered it possible uses include: INI, PROFEPA, SCT, SEMARNAT, and SEDUMA.

The primary reasons given by respondents for supporting OCB is: that the OCB approach is "important" for the management of the MBR. For cultural reasons, Mexico is a country where everything that is done is

always in the name of a political party (Silva, 2000). The agencies who rank OCB highly also place more emphasis on fishing than on the other aspects of recreation, mining, coastal development, and conservation.

CONABIO, FIDECARIBE, ECOSUR, SE, SECTUR, and SEMAR, did not rank the OCB as a useful management approach for their purposes. These agencies believe that the OCB concept does not fulfil the requirements to manage an area with complex system of values (for example the MBRS deals with economic, social, cultural and scientific values, among others).

5.2.11 An Overall Management Agency (OMA) Concept

Criteria

- Need to build a new structure;
- Need to define sharing of responsibilities;
- Need control of planning ends;
- Need to enhance coordination.
- Potential problems to the MBRS:
 - a) The rise of a new bureaucratic structure;
 - b) Confusion over sharing responsibilities.

Analysis

The OMA approach is useful to nearly seven (7)% of the respondents. Other management approaches considered more useful include: regional management, community based management, integrated coastal management, and strategic planning approach. The seven (7) agencies who consider it possibly useful are: FIDECARIBE, PROFEPA, SCT, SECTUR, SEMAR, SEMARNAT, and SEDUMA. The agencies that rank OMA highly also place more emphasis on conservation than on the other aspects of fishing, recreation, mining, and coastal development, which probably means they were considering the same natural resource management as the Ministry of the environment.

The reason given by respondents for supporting the OMA is: that this type of management approach already exists and is achieving positive results. However, the reason for this could be that the respondents confuse the OMA with a virtual organization.

Six (6) agencies, (INI, CONABIO, FMCN, ECOSUR, SE, and PESCA) did not rank the OMA as a useful management approach for their purposes. The reason for this was not clear to them what was the role of an overall management agency.

In the Spanish translation the overall management agency (OMA) concept was understood as a 'governmental agency'.

The respondents from PROFEPA and FIDECARIBE stated that they completely agreed with this concept and that it will "function very well for the MBRS."

5.2.12 Biogeographic Classification (BC) Concept

Criteria

- Need to manage at a range of spatial and temporal scales;
- Need to determine the ecological boundaries of the area
- Need to establish the structure and the key elements;
- Need to incorporate predator prey interactions;
- Need a well define marine protected area in order to delimit human activity;
- Require defining sustainable goals and objectives;
- Need to identify appropriate temporal and spatial scales for management;
- Potential problems to the MBRS:
 - a) The biogeographic approach remains largely untested (Burgman and Lindenmayer, 1998);
 - b) It does not consider the changes in human values and social priorities;
 - c) The management strategies must move beyond sectoral resources borders in order to address sustainability.

Analysis

The biogeographic classification (BC) concept is useful to the nearly seven (7)% of the respondents. Other management approaches are considered more useful (e.g. regional management, community based management, integrated coastal management, and strategic planning). The seven (7) agencies who consider it possibly useful include: INI, FIDECARIBE, SCT, SECTUR, SEMARNAT, SEMAR, and SEDUMA.

The reason given by respondents for supporting BC is that it is easy for surveillance. The BC approach is common among those who have specialized staff in biology, ecology or marine science. People with these characteristics are often found in sectors concerned with natural resource management in both government agencies and academic fields. That is probably why an approach such as BC has seven (7)% of the respondents support. The agencies that rank BC highly also place more emphasis on conservation than on other aspects such as fishing, recreation, mining, and coastal development.

Five (5) agencies (CONABIO, FMCN, PROFEPA, SE, and PESCA) did not rank the BC as a useful management approach for their purposes. The reason given is the lack of information. For example, the Ministry of Economy state that this concept could be more acceptable if applied to an area of mining or geological studies.

5.2.13 Strategic Planning (SP) Concept

Criteria

- Need coordinated activities across sectors and decision maker's bodies, global enterprises and national interest;
- Need to involve specific organization in specific places;
- Need a formal information system;
- Need to consider the secondary impacts of diverse multiple activities;
- Need to anticipate adverse environmental impacts;
- Need to assess environmental impact;
- Need to provide a public decision-making framework.
- Potential problems to the MBRS:
 - a) Which is the best mechanism to achieve the coordination among sectors and decision-making bodies;
 - b) The viability of the information systems;
 - c) Setting the mechanism for assessing environmental impact.

Analysis

The strategic planning concept is useful to eight (8)% of respondents. Just one management approach is considered more useful, the regional management. The six (6) agencies who consider its possible use include: FIDECARIBE, PROFEPA, SCT, SECTUR, SEMARNAT, and SEDUMA. The agencies who ranked SP highly also place more emphasis on fishing than on the other aspects of coastal management, conservation, mining, and recreation.

The reason given by respondents for supporting SP is that this approach is in line with the policies of the federal government of Mexico. It is important to consider that the strategic planning concept is likely to be the slogan of the new government in Mexico. That is probably why the strategic planning approach received a high ranking.

Seven (7) agencies namely INI, CONABIO, FMCN, ECOSUR, SE, ECOSUR, and PESCA did not rank the strategic planning concept as a useful management approach for their purposes. These agencies believe the SP concept is just a trend and works with little efficiency. For example,

the respondent from INI stated that the SP approach was inadequate for the sustainable management of the MBRS because it did not take into consideration the communities' opinion in the planning process.

5.2.14 Regional Management (RM) Concept

Criteria

- Need international leadership, international institutions, transnational scientific networks, non-governmental organisations, and public concern;
- Need to measure success;
- Need to define problems clearly;
- Need to accommodate multiple uses of the area;
- Need high quality information to be able to identify trends and responds;
- Need to view social, political and environmental issues in a system context;
- Need the plans for a long-term period.
- Potential problems to the MBRS:
 - a) The absence of legal framework
 - b) There are only agreement between countries
 - c) Sharing power in the establishing of the international leader;
 - d) Accomplish common goals for the region in the context of national interest.

Analysis

The regional management (RM) concept is useful to nine (9)% of the respondents. Other management approaches which are considered as useful as RM are: community-based management, and integrated coastal management. The eight (8) agencies who consider its possible use include: INI, FIDECARIBE, PROFEPA, SCT, SECTUR, SEMAR, SEMARNAT, and SEDUMA.

Five agencies (CONABIO, FMCN, ECOSUR, SE, and PESCA) did not rank the RM as a useful management approach for their purposes. These agencies believe that the RM can be useful for the management of the complete American continent from Alaska to Argentina.

The agencies who ranked RM highly also place more emphasis on recreation and coastal development than on the other aspects of fisheries, mining and conservation.

The next two tables show the values given to each management approach from the respondents.

Table 5.3 shows the percentage given to each approach in the first column. The second column shows the overall ranking, and the third column shows the qualification of each approach given by the respondents.

Management approach	%	Ranking	Respondents mark
Large Marine Ecosystem	6%	13	32
Co-management	7%	6	40
Adaptive Management	6%	10	34
Regional management.	9%	2	51
Cross-sectoral management.	7%	9	39
Community based management.	9%	3	48
Integrated Coastal Management or Integrated Coastal Zone Management	9%	1	52
Individual Sector Operating Independently without common ends	4%	14	24
Sector Operating Independently with Agreed Common Ends	7%	7	40
Virtual Organisations	6%	12	33
An Overall Co-ordinating Body	6%	11	34
An Overall Management Agency.	7%	8	39
Biogeographic or regional ecosystem classification.	7%	5	40
Strategic Planning Approach (Smith, 1999)	8%	4	47
TOTALS (approx. value)	98%		40

Table 5.4 Shows the total value given from the management approach to each category of management.

Management approaches	Fisheries	Recreation	Mining	Conservation	Coastal Development	TOTAL
Large Marine Ecosystem	22	20	12	21	11	86
Co-management	36	19	18	19	17	109
Adaptive Management	18	20	9	24	17	88
Regional management.	29	35	14	33	35	146
Cross-sectoral management.	28	23	12	22	23	108
Community based management.	38	27	12	30	27	134
Integrated Coastal Management or Integrated Coastal Zone Management	31	34	19	33	34	151
Individual Sector Operating Independently without common ends	15	12	8	14	13	62
Sector Operating Independently with Agreed Common Ends	22	24	14	26	24	110
Virtual Organisations	19	17	8	21	21	86
An Overall Co-ordinating Body	21	16	13	20	16	86
An Overall Management Agency.	22	23	6	28	27	106
Biogeographic or regional ecosystem classification.	25	16	10	33	25	109
Strategic Planning Approach (Smith, 1999)	35	25	11	33	25	129
TOTAL						1510

Section b)

Question No. 7	
b)	
<i>Is funding provided for implementation of any cooperative models at this level of government.</i>	
Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

Six respondents representing the agencies from CONABIO, SEMARNAT, SCT, INI, PESCA, and SEMAR, agreed that there is funding for the implementation of a cooperative model in their agencies. Respondents from SECTUR, ECOSUR, SE, SEDUMA, FMCN, and PROFEPA, state that there was no funding in the agencies that they represent for this type of projects. The respondent from SEMAR said that this Ministry knew that the funding for this type of projects usually comes from international agencies.

Table 5.5 Shows the answers from the respondents to question 7) section b).

Agencies	YES	NO
ECOSUR		▲
CONABIO	▲	
SECTUR		▲
SEMARNAT	▲	
SE		▲
SCT	▲	
INI	▲	
SEDUMA		▲
PESCA	▲	
FMCN		▲
SEMAR	▲	
PROFEPA		▲

Note: The respondent FIDECARIBE did not answer Question No.7b

Legend: ▲

Difficulties identified by respondents

Question No. 8

How does this Ministry (or governmental office) perceive the MBRS ?

- a) *As a composite region (an area with a unique combination of submarine topography and hydrographic and biological characteristics).*
- b) *As an area potential for tourism.*
- c) *As a potential resource for commercial fishery.*
- d) *As a part of larger unitary entity of marine resources.*
- e) *Other _____*

The respondents from ECOSUR, CONABIO, SECTUR SEMARNAT, SCT, INI FIDECARIBE, PESCA, FMCN, and PROFEPA agreed that the MBRS is a composite region with a unique combination of submarine topography and hydrographical characteristics. There is little agreement between respondents in consider the MBRS as part of a large marine unitary resource.

The respondent from the Ministry of Economy representing the mining sector believes that the MBRS is an area of low mining activity. On the other hand the respondent from PROFEPA included in the category of 'other' an "area that needs protection".

Table 5.6 Shows the answers from the respondents to question 8

Agencies	Answers				
	Option (a)	Option (b)	Option (c)	Option (d)	Option (e)
ECOSUR	▲				
CONABIO	▲	▲		▲	
SECTUR	▲	▲			
SEMARNAT	▲	▲		▲	
SE					▲
SCT	▲				
INI	▲			▲	
SEDUMA		▲		▲	
FIDECARIBE	▲	▲		▲	
PESCA	▲				
FMCN	▲	▲	▲	▲	
SEMAR				▲	
PROFEPA	▲	▲	▲	▲	▲

Legend: ▲ Answers from respondents

Question No. 9

Is there a strategy for developing partnerships with the other stakeholders of the MBRS?

The respondent from ECOSUR said that there are two partnership structures in Belize and Mexico: "Alianza Mexico-Belize" (BEMAMCCOR), manages natural resources especially in the Bay of Chetumal. A "Tourist Guide Association" is the other partnership structure. As stated in the Mexican legislation (Camara de Senadores, 2002) there is only one agreement with Belize: "Convenio Básico de Cooperación Técnica y Científica" which is an agreement for technical and scientific cooperation signed in 1995. Nothing is said about an agreement for the management of common natural resources.

The respondent from SECTUR did not know about any partnership program about the MBRS.

Table 5.7 shows the answers from the respondents to question 9

	a1	a2	b	c1	c2	d	e	f	g	h	i
ECOSUR	✓						✓	✓	✓		
SEMARNAT	✓	✓		✓			✓	✓	✓		
INI	✓		✓					✓		✓	
SEDUMA							✓	✓	✓	✓	
FIDECARIBE			✓	✓	✓						
PESCA	✓	✓	✓	✓			✓	✓	✓	✓	✓
FMCN	✓	✓			✓		✓	✓	✓		
SEMAR								✓			

In this table column 'a' refers to the category of fisheries, column (a1) is community fisheries and (a2) is the private fishery industry. Column (c1) and (c2) relate to local and multinational tourism industry.

Note: The respondent from CONABIO, SECTUR, SE, SCT, and PROFEPA did not answer question 9

Legend: ✓ Categories identified by respondents.

Question No. 10

How does your ministry structure communications links between your office and the stakeholders of the MBRS?

The respondent with the greatest understanding of communications and community understanding in the MBRS was CONABIO. This agency sees adaptive management concept as the most suitable means for achieving MBRS objectives. Even though SEMAR stated clearly that this Ministry had no contact with the communities, it was clear that they also had some knowledge about utilizing local academic institutions.

Table 5.8 shows the answers given by respondents to question 10.

Agencies	Answers
CONABIO	Through adaptive management mechanism, which is being used in the Mesoamerican Biological Corridor (CBM)
SECTUR	Through the local government authorities.
SEMARNAT	Trough technical working groups and local government agencies.
SCT	Not in this office, yet the respondent believes that must be one in the 'Commercial Navy and Ports Office' from the Ministry of Economy.
INI	Through community committees and local radio programs in indigenous languages.
SEDUMA	Through the consultative committees* of each community and through the 'Local Ecology Commission'
FIDECARIBE	Through discussion groups and through 'legal causes'
PESCA	Through meetings.
FMCN	Through a regional financial mechanism.
SEMAR	Through research groups with the participation of the National University of Mexico, the National Polytechnic and a local academic program located in the City of Merida.
PROFEPA	Through 'collaboration agreements' among local government agencies, local communities and NGOs.

Note: The respondent from ECOSUR and SE did not answers question 3

* The consultative committees are responsible for the communication links and are part of the "State Committee for the Natural Protected Areas", established in agreement with the LGEEPA (1997) section 47. However the respondent from SEDUMA believes that it has been two (2) years since they last met.

Question No. 11

How does Mexico deal with the threats that affect the MBRS? Please rank 1-5 to each threat.

1 = minimum threat.

5 = maximum threat.

In this question respondents were asked to rank 29 threats to determine the risk of unwanted natural and human activities affecting the sustainable management of the MBRS.

It is important to mention that the questionnaire in Spanish only considered 28 threats because farming is considered under agricultural

activities. There are also other issues to take into consideration concerning the translation of the questionnaire from English into Spanish, such as:

- Freshwater diversion was understood as 'estuaries pollution'.
- Global change phenomena was translated as 'climate change'.
- Inequitable access was understood as giving privilege to some groups from the communities.
- Swimming and diving was understood as "aquatic sports".

Some respondents included corruption as another threat. For example, the respondent from ECOSUR said that 'benefit sharing' could be interpreted as giving benefits to some using techniques such as bribes.

What respondents reflected in this question was that the highly potential threat to the MBRS is the 'lack of knowledge' about the MBRS. However, even though this category received the highest ranking not all respondents agreed. For example, the respondent from ECOSUR considers the tourism infrastructure the major threat to the MBRS. Almost all respondents agreed that the research activities were less dreadful for the MBRS, except from the INI respondent who ranked it with a relatively high level of risk.

Respondents ranked 'estuary pollution' as the second most potential threat to the MBRS (See table 5.9). It is important to mention that the respondent from SEDUMA stated that there were no estuaries in that area. The overexploitation of marine resources is considered by respondent from SECTUR, SEMARNAT, INI, FMCN, SEMAR and PROFEPA to be a major potential threat for the MBRS.

The respondent from PESCA commented that overexploitation of the marine resources is illegal, and that "this practice is common among illegal poachers. Introduction of exotic species is also of concern but is provided in Mexico's regulations". This respondent also commented that aquaculture activities did not currently exist in the Mexican Caribbean region. PESCA and ECOSUR agreed that military activities are not carried out in the MBRS.

Table 5.9 shows the answers given from respondents to question 11

Threats	ECOSUR	CONABIO	SECTUR	SEMARNAT	SCT	INI	SEDUMA	FIDECARIBE	PESCA	FMCN	SEMAR	PROFEPA	TOTAL
Overexploitation.	4	4	5	5	3	5	4	1	1	5	5	5	47
Commercial fishing technology	2		1	3	3	4	3		1	5	2	5	29
Aquaculture	2	3	1		2	5	2		1		1	5	22
Mining	2		5	5	4	5	1	1	1	3	1	1	29
Hazardous waste	3		5	5	5	5	2	2	3	2	5	2	39
Harvest techniques	2	4	5	3	4	5	4		1	1	5	5	39
Pollution from land	3		5	4	5	5	4		2		5	5	38
Introduction of exotic species.	2		5	2	3	5	1		1	3	5	5	32
Freshwater diversion in water	3	5	5	5	4	5		5	3	3	5	5	48
Global change phenomena	3		5	2	5	5	3	4	4	3	3	3	40
Societal attitudes	1		2	3	4	5	5	1	3	1	4	5	34
Insufficient knowledge	4	5	5	4	4	5	5	1	5	5	5	5	53
Fragmental management.	3	5	5	3	3	5	3		1	4	5	3	40
Human population growth	4		4	3	4	4	4	3	3	5	5	5	44
Poverty	4		3	3	4	5	3	5	5	4	5	5	46
Trade Policies			3	4	4	5	4	1	1	3	2	5	32
Inequitable access.		5	5	3	3	5	3	5	1	4	1	5	40
Benefit sharing	4	3	2	3	4	5	4	5	1		5	3	39
Tourism infrastructure	5			5	3	4	4	1	3		3	5	33
Swimming and diving	4	3	5	5	3	4	3		3		3	5	38
In land activities:	~	~	~	~	~	~	~	~	~	~	~	~	~
Agriculture	3		5	4	2	5	4	1	1	5	3	5	38
-Cattle raising			5	3	2	5		1	1	5	3	5	30
-Farming	3		5	3	2	5	3	1	1		3	5	31
Shipping	3		4	3	2	5	4	3	3	2	3	5	37
Hurricanes	2		5	4	3	4	5	5	5	2	5	3	43
Port & harbour development	3		5	5	4	4	4	1	1	1	3	5	36
Military Activities.			1	2	3	5	2	1			5	1	20
Research Activities.			1	4	1	3	1	1	1	1	1	1	15
Corruption	4		5				4			5			18

Note: The respondent from the Ministry of Economy did not answers question 11

Question No. 12

- a) *When MBRS strategies are prepared, who assesses implementation? and*
- b) *How?*

In question twelve (12) ECOSUR, CONABIO, SE, SEDUMA, and PROFEPA stated that there is no accurate information concerning any assessing mechanism for the MBRS. However, they commented on some ideas they thought were possible. For example the respondent from ECOSUR mentioned the technical groups between countries and CONABIO refer to a Council for the four countries with specific goals.

Respondents from PROFEPA, and SE agree that the Ministry of the Environment should be the agency to do any assessment of the MBRS. The respondent from SEMAR said that since it was an international agreement the agency that should be assessing is the Ministry of Foreign Affairs (SRE).

Ministries such as PESCA and INI commented on the high importance to have local communities and public participating in the evaluation of regulations and policies. SECTUR suggested including "all sectors" referring to all the stakeholders from the MBRS.

It is important to mention that few respondents have information about assessment of natural resources management in Marine and Ocean environments. From the answers given, this author concludes that Ministries and agencies find it difficult to take responsibilities to carry out assessment of management techniques and concepts.

Table 5.10 explains with more detail the answers from the respondents to question twelve (12).

Table 5.10 shows the answers from respondents to question 12

Agency	Answers
ECOSUR	"Something about a technical group between the four countries"
CONABIO	A Council with representatives of the four countries that have goal settings indicators.
SECTUR	A council with representatives of all sectors and government agencies that have goal setting indicators
SEMARNAT	Through an Assessing Committee that already exists in the MBRs.
SE	The Ministries responsible for the Natural Resource Management (SEMARNAT) and Fisheries.
SCT	An independent body Mechanisms: visual inspections, satellite monitoring, and goal setting indicators from a strategic plan.
INI	a) The local communities. b) Visual inspections every 6 months, and periodical reports and through questionnaires to the government authorities.
SEDUMA	SEMARNAT
PESCA	a) the government and the society b) periodical regional meetings.
FMCN	Throughout an international scientific committee with the aid of an International organism of conservation, that will have programmatic information of the area
SEMAR	a) The Ministry of Foreign Affairs. b) With evaluation committees.
PROFEPA	The National Council for Natural Protected Areas (CONANP).

Note: The respondent from FIDECARIBE did not answer question 12

Question 13.

How could Mexico ensure the continuity of success of any strategy for sustainable management of the MBRS?

Respondents from CONABIO, FMCN, SEMAR, and SECTUR agree that funding is needed to assure the continuity of any strategy for the sustainable management of the MBRS. SECTUR mentioned that funding through gate charges can be a fee that can be applied for the visitors.

CONABIO, PROFEPA, PESCA, and INI commented on the high importance that public participation would be for the continuity of the Project. The respondent from CONABIO insisted the most about the importance of the participation of the society through "public awareness campaigns".

Table 5.11 shows the answers from the respondents to question 13

Agency	Answers
ECOSUR	Through the structures that already exist.
CONABIO	Trough a private trust such as the FMCN. Mexico has being successful in achieving this.
SECTUR	With a high money quota for those who want to see or enjoy the reef.
SEMARNAT	Trough the National Barrier Reef Committee. .
SCT	Throughout a federal law that will considered 'the country strategic areas'.
INI	Trough mechanisms that will make decision making available for all the stakeholders of the area.
SEDUMA	Extremely difficult
FIDECARIBE	Through education especially 'school education'.
PESCA	With a specialized coordinating body with all the stakeholders.
FMCN	As a designated environmental protected area that will receive its own funding.
SEMAR	With economic resources, monitoring and surveillance activities, and with the assurance of the management programs.
PROFEPA	Through institutional mechanisms, such as reports that can be scrutinised and assessed by the public

Note: The respondent from the Ministry of Economy did not answers question 13

Chapter six (6) will examine the document from the World Bank "Regional Project for the Conservation and Sustainable use of the Mesoamerican Barrier Reef System (MBRS)" with the criteria from previous chapters.

REGIONAL PROJECT FOR THE CONSERVATION AND SUSTAINABLE USE OF THE MESOAMERICAN BARRIER REEF SYSTEM (MBRS)

CHAPTER 6

6 Description of the Project

The first part of this chapter contains a brief summary of the document "The Regional Project for the Conservation and Sustainable Use of the MBRS". The summary includes the objectives, the techniques suggested to achieve the aims of the project and the responsibilities set for each country. The second part of the chapter analyses these techniques with a perspective from the Mexican context.

The initiative from the presidents of Mexico, Belize, Guatemala, and Honduras, expressed at the Tulum Declaration, and from the Presidents of Central America countries both in 1997 is the begging of an environmental concern regarding the marine environment of the Mesoamerican region. In 1999 the World Bank prepared a first proposal for the sustainable management of the MBRS called: "Central American Region-Conservation and Sustainable Use of the Mesoamerican Barrier Reef System (Belize, Guatemala, Honduras, and Mexico)". (World Bank, 2001).

Two (2) years later the World Bank subscribed to the Central American Commission on the Environment and Development (CCAD) the "The Regional Project for the Conservation and Sustainable Use of the MBRS". The project's principal objective is 'to enhance protection of the marine ecosystem and to assist the countries of Mexico, Belize, Guatemala and Honduras in the strengthening and coordination (at a national level) of the policies, regulations, and institutional arrangements for the conservation and sustainable use of the MBRS.' (World Bank, 2001). This initiative is part of a five (5) to fifteen (15) years long to safeguard the integrity and continue the productivity of the area. The details of the initiative will be discuss later in this chapter.

The Project establishes the following techniques:

- 1) "To facilitate the harmonization of policies and regulations related to sustainable management of shared/transboundary resources, best practice and regional environmental certification programs for sustainable tourism development, and harmonizing regulations governing harvesting and conservation of shared fish stocks;" (all these is the first mechanism of the strategy according to the document);

- 2) "Strengthening the system of MPA in the MBRS to maintain vital ecological processes and increase representativeness in the existing system; "and

- 3) "To Build capacity through training, environmental education and improved information systems to enhance public and private participation in the conservation of the MBRS and the benefits from its sustainable use."

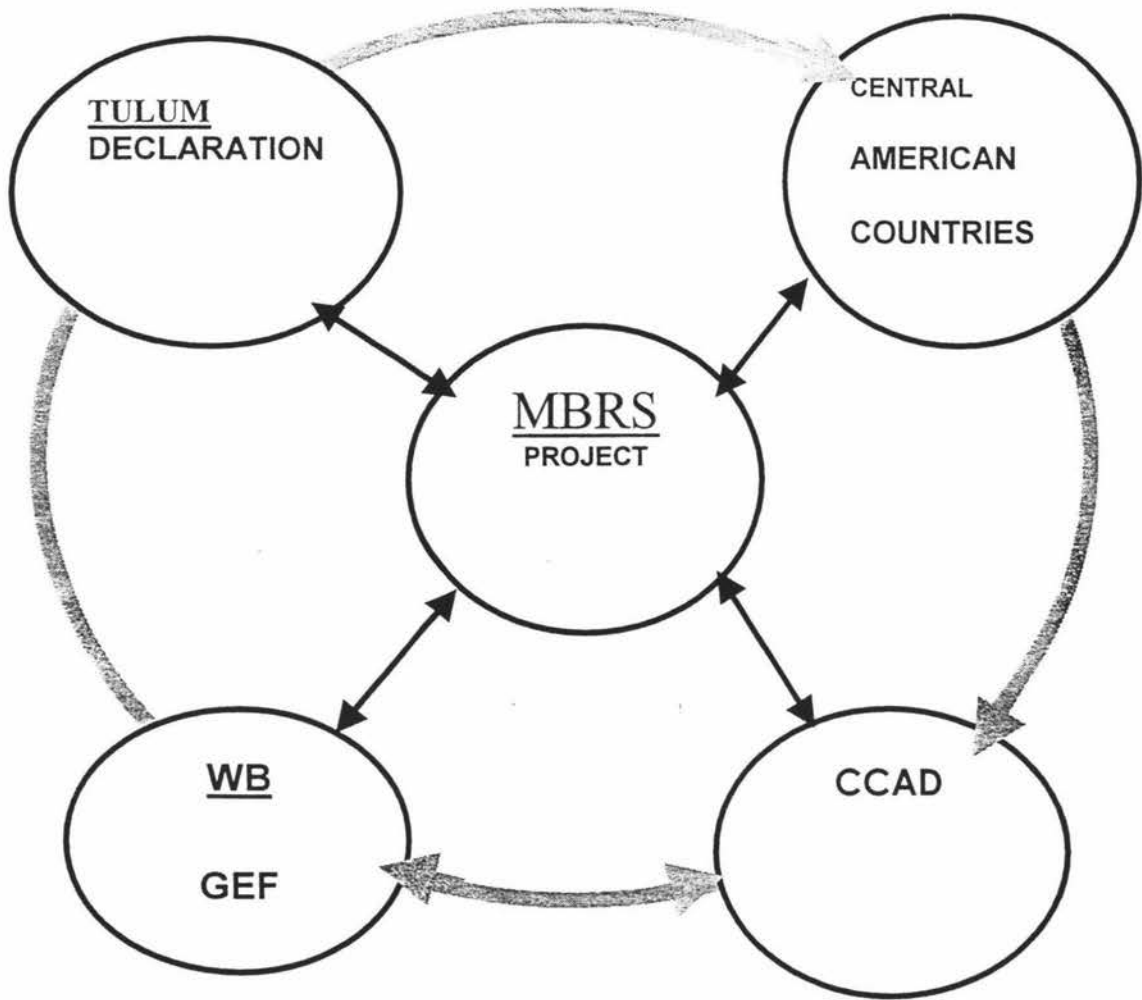
The project will 'support':

- 1) The establishment of a data baseline and monitoring program to:
- 2) Develop of management plans for the MPAs;
- 3) Give basic equipment and infrastructure for the MPA plan implementation
- 4) Transboundary cooperation in policy, protection and management of the MPA.

The project contemplates the establishment of an initial grant to the Central American Commission on Environment and Development (CCAD).. The CCAD will coordinate with governmental and other agencies the distribution of the resources. For this purpose the CCAD has already contracted the United Nations Development Program (UNDP) to be the administrative body of the grant.

The next figure illustrates the agencies and countries involved in this initiative of the Regional Project for the Conservation and Sustainable Use of the MBRS. The arrows show the mechanisms of coordination between agencies and countries for the implementation of the Regional Project.

Figure 12 Shows the participants of the initiative of the MBRS.



The responsibility of the countries will be:

- 1) The implementation of the existing laws and regulations related to the use of the MBRS resources, including frameworks for their conservation such as MPAs, bans on harvesting of threatened and endangered species, zoning of coastal landscapes, closed seasons and permitting systems.
- 2) The establishment of a National Barrier Reef Committee and a National Coordinator for the national committees that will serve

as the principal liaison with the Project preparation team in the design and implementation of the system of transboundary MPAs; in the Bay of Chetumal and Gulf of Honduras (refer to map I for more details); and

3) The installation of a Regional Technical Group.

The project will fund the establishment of fifteen (15) MPA along the MBRS. The attention will be placed in those MPAs that are located in the Bay of Chetumal and in the Gulf of Honduras. The World Bank through the Global Environment Facility trust fund (GEF) is financing US\$2.7 million. The total cost is estimated as US\$5.0 million and is expected that the government of each country will contribute to this cost.

The Project is also contemplating the design of a regional clearinghouse, to be called "Regional Environmental Information System (EIS)". The EIS will provide data on biophysical and socio-economic matters that will be available to the public in two languages, Spanish and English. The EIS will also provide information to help in the organization and management of the MBRS.

The document comments about a project to transform fisheries communities into tourism operators. These four operations have been successfully piloted in fishing communities in Southern Belize with the support of local NGOs.

The Project also calls for supporting conservation activities in the four countries through the "Country Assistance Strategies (CAS)". The objectives of the general CAS are:

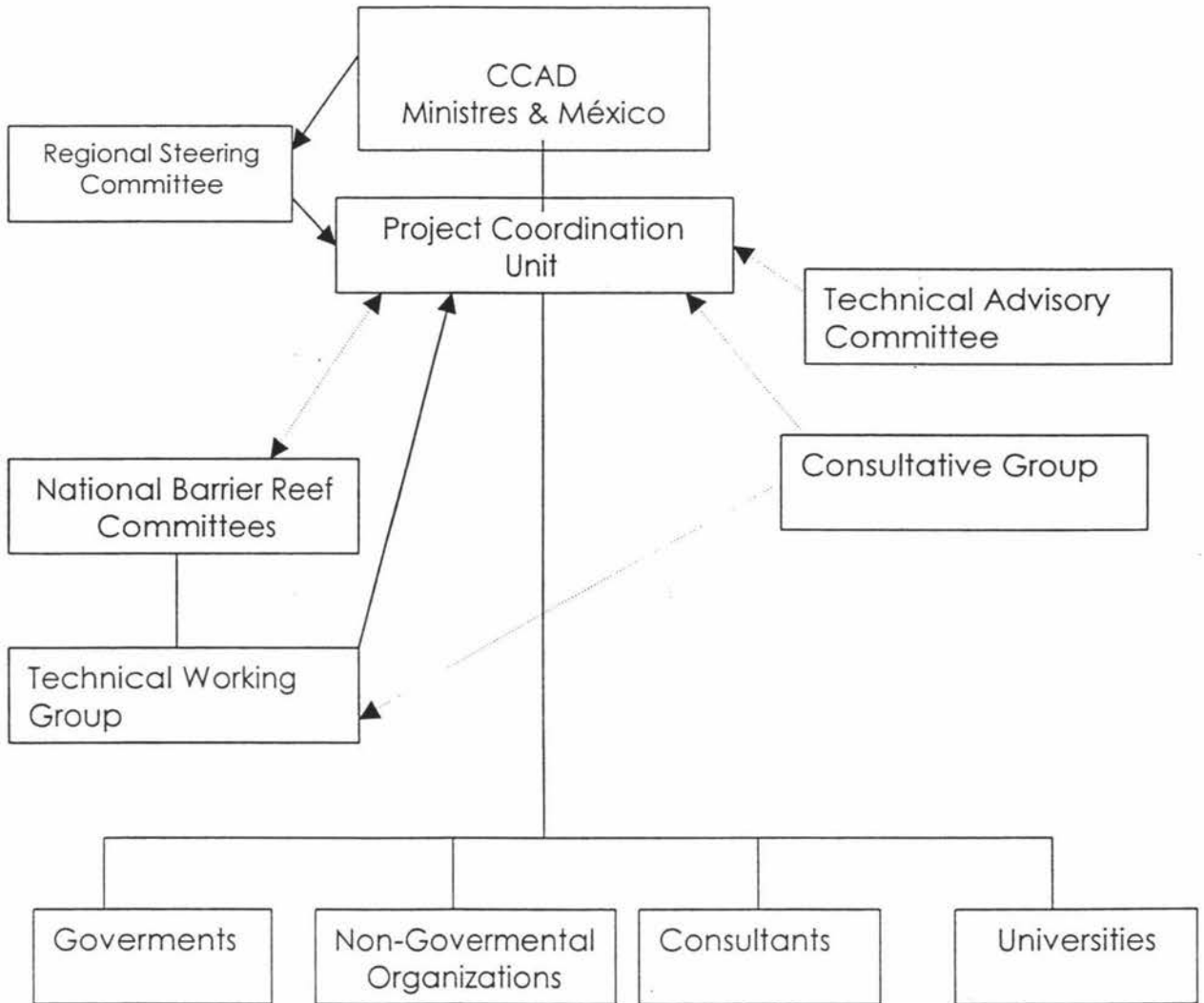
- To reduce poverty,
- To increase environmental security;
- To accelerate economic growth in rural areas; and
- To increase effectiveness of the public sector and its policies.

The World Bank has developed a strategy of CAS for each country. In Mexico the strategy will focus on:

- Social sustainability;
- Removing obstacles to sustainable growth;
- Effective public governance;
- Institutional development and decentralization of environmental management;
- Better management of natural resources (e.g. forests, water and biodiversity); and
- Assistance in the design of sector policies.

In the case of Belize, Guatemala and Honduras the emphasis of the CAS will be in reducing rural poverty through improved environmental security and better management of natural resources.

Figure 13 illustrates the organizational structure of the MBRS Project



Source: Taken from World Bank, 2001

The arrows show the type of coordination between groups. A dash arrow means low level of communication and coordination.

6.1

Analysing the Regional Project for the Conservation and Sustainable use of the MBRS.

The document calls for the strengthening existing mechanisms and creating new ones as required. From the Mexican perspective and according to the answers to the research questionnaire there is a deficiency in the coordination mechanism between agencies involved. Respondents commented in question number five (5) that to reach a common objective between countries was the main difficulty for the sustainable management of the MBRS.

To create mechanisms for the sustainable tourism development it is going to be difficult in terms of achieving consensus between countries. From previous chapter is known that tourism is the second most important economic activity for Belize. However for Mexico in the year 2001 the tourism industry represented the third economic activity after the petroleum and manufacturing (SECTUR,2001). Regarding the state of Quintana Roo the tourism activity represents economic value only to the cities of Cancun, and Cozumel located in the upper north of the state. This two (2) cities are considered by the Association of Caribbean States (ACS) as the 'Mexican Caribbean' (for more detail refer to document "Establishment of the Sustainable Tourism Zone of the Caribbean" in appendix 7).

In Mexico the World Bank Project includes four (4) MPAs, namely Banco Chinchorro, Santuario del Manati, Xcalak, and Bacalar Chico. As stated in the previous chapter these MPAs have a different legal status according to the Mexican legislation. The issue that MPAs have been managed under different categories makes the cooperation, communications and research activities even more difficult.

The improvement of information systems is definitely a prior necessity. However it is first necessary to define the characteristics of the information system. It is also necessary to allocate responsibilities, for example who is going to be responsible for the administration of the information and what will be the policies of access to that information. Details need to be defined before an improvement can be facilitated. The document: "Establishment of the Sustainable Tourism Zone of the Caribbean" by ACS, is an example. However this document is not listed in the references of the World Bank document.

Finally, the document is not taking into consideration the agricultural, tradition that the countries had for many decades. Issues such as social, cultural, and land tenure traditions are not being incorporated in the strategies of the document.

Next table demonstrates a list of the projects suggested by the World Bank to be applicable in the four countries

Table 6

This table shows the projects that will need to be implemented in the four countries along the MBRS. The 'X' represents what is need to be done and the '*' what has been achieved up to now.

Project Suggestions	Countries			
	Belize	Guatemala	Honduras	Mexico
Reduce poverty.	X	X	X	X
Increase environmental security.	X	X	X	X
Accelerate economic growth in rural areas.	X	X	X	X
Increase effectiveness of the public sector and its policies.	X	X	X	X
Higher income for the communities	X	X	X	X
Institutional development and decentralization of environmental management	*	X	X	X
Better management of natural resources	X	X	X	X
Policy design for sustainability	X	X	X	X
Education	X	X	X	X
Public information	X	X	X	X
Increase public participation	X	X	X	X
Develop small and medium enterprises	X	X	X	X
Ecotourism development	X	X	X	X
Strengthen local communities	*	X	X	X
Create a system of MPA	X	X	*	X
Creation of National Reefs Committees	*	*	*	*
Creation of a PCU	*	X	*	X
Creation of TWG	*	*	X	*
Social communication campaign	X	X	X	X
Alternative income generating program	X	X	X	X
Institution development	X	X	X	X
Institutional arrangement for increased participation of indigenous and ethnic groups	X	X	X	X
Land tenure related issues	X	X	X	X
Socio-economic conflict management	X	X	X	X
Monitoring and evaluation	X	X	X	X

6.1.1 Levels of Implementation in Mexico

An overall assessment of the 'Project' demonstrates that there is no specifications as to which level of government the strategies and activities are going to be implemented in the Mexican context. Also there is no mention in the document to distinguish any levels of government, sectors or society. The Project includes the NGOs, the consultants and the Universities as part of the participants in the activities of management, monitoring, and assessment (see figure 13). However no further information is mentioned.

The difficulty in the definition of the levels of implementation will bring problems with the sharing of the economic resources. Agencies will want to be granted with the economic aid. As shown in figure 11 funding is the major constraints for the implementation of a cooperative model in the management of the MBRS for the majority of respondents. In the case of Mexico, local authorities of the MBRS as stated by respondents have not funding from the national government (see chapter 5).

Local agencies as well as indigenous communities must be part of the process of planning and decision making in the management of the resources. In the case of Mexico the Constitution states that Seas are part of the Federation, however the experience and the literature in natural resource management strongly recommend to undertake local communities and local agencies in the process if success.

Aspects such as the introduction of new agencies will left behind responsibilities that correspond to the governmental agencies. This will also make the coordination, building capacity and communication more

difficult that it is now. The introduction of new agencies will increase the operational cost and will make decisions take longer.

6.2 Protection of the MBRS within Mexican waters.

Mexico has 11,590 km of coastline and has access to the seas of the Pacific, the Gulf of California, the Gulf of Mexico, and the Caribbean sea. Being number twenty (20) in the world's fisheries production. Mexico is the leader in the production of large oyster, and lobster. According to the document "Priority marine regions of Mexico" the main threats to the marine environment have been identified as: overexploitation, pollution, and tourism (CONABIO, 1998) which agrees with the information in table 5.9

With the proposition of the World Bank to incorporate the four (4) MPAs of "Santuario del Manati," "Banco Chinchorro Biosphere Reserve," "Arrecife de X'Calak Reserve", and "Bacalar Chicho Marine Reserve and National Park" into the Project, Mexico is the country that has an increased number of MPAs. The emphasis of the management plans is in the inventory of the species, the biological and geological characteristics of the natural environment, and the features of zoning. This authors does not have information concerning the number of community programs undertaken by the management plans of the MPA.

The Mexican legislation states that the oceans, its natural resources, lagoons, estuaries, and rivers are the nations' property and that the LGEEPA establishes the legal framework for its management. The LGEEPA however is not clear in the implementation of the coordination mechanisms with the other levels of government. Another constraint in the legal framework is

concerning the fisheries regulations. These regulations agree that it is necessary to have permission from the government to harvest the marine species. The exceptions are to domestic fishery and recreation fishery, which is the type of fishery in tourist areas such as the MBRS.

It is also a necessity to strengthen pollution control regulations in the marine environment. As stated by the Mexican Marine Priority Regions Program (CONABIO, 1998) the majority of human settlements located in the coasts utilise the ocean and the marine estuaries as a depository of their solid waste. This has generated pollution in the coasts and mangrove areas located in the MBRS.

In summary there are approximately one hundred (100) regulations that at some stage have relations with the marine environment (CONABIO, 1998). Making research, monitoring and assessment procedures difficult to implement and follow.

The achievements of the Mexican government have been in the creation of a Technical Committee for the regularization of the Fisheries Industry (Comite Tecnico sobre Normatividad de la Pesca Responsable). The Committee was under the responsibility of the Ministry of the Environment until 1999.

Under the national programs related with the protection of the marine species are the following activities:

- National Fisheries Program,
- National Program for the Research and Conservation of the Marine Mammals,
- National Program for the Advantage of the Tuna Fish and the Protection of the Dolphin,
- The National Program for the Protection of the Marine Turtle, and
- The National Committee for the Preservation of two indigenous marine specie: the marine vaquita (*phocoena sinus*), and Totoaba (*totoaba macdonaldi*).

However this author does not has any information if this Committee is still functioning and if it has kept its activities.

If Mexico is going to perform a leading activity in the sustainable management of the MBRS will have to refine its legal framework specially the one concerning with the marine environment. It will be necessary to include the coast as integral element of both environments the marine and the land. Of high importance will be to give the legal framework continuity with periodical revisions from a governmental agency that could be the CONABIO.

CONCLUSIONS AND RECOMMENDATIONS

CHAPTER 7

This research has focused on the examination of possible management concepts that can be used to ensure the sustainable management of the MBRS. Until recent time the Mexican Caribbean was a remote marine environment because of the difficulty of the access and the characteristics of hard vegetation and low density of population in Quintana Roo. All these characteristics have helped the MBRS to maintain a high degree of conservation and have also contributed to the conservation of the Barrier Reef System. However the MBRS values are now threatened if a comprehensive management system is not established.

The MBRS, considered in this research as a LME is really a natural ecosystem divided in to four or more land decision making regimes. The MBRS is now been managed in different sections. Some sections are divided again by sub-natural boundaries within each country. Making the sustainable management of the resource difficult to achieve.

The reef represents for each country a different value. For Belize and Honduras it is an economic asset because of the tourism industry. For Guatemala it is an isolated area far from their territory and difficult to access. For Mexico represents a potential tourist region, already worldwide known as the area of "Cancun" with future economical potential development.

Mexico, Belize, Guatemala and Honduras share this Large Marine Ecosystem with an inadequate social and economical development of the region. Other regions of Mexico with a higher density of population have been aided with regional programs. The reason for this help is also related to having connections with the political parties (see chapter 5). For Belize, Guatemala and Honduras the programs have come mostly from the international community.

Within the region of the MBRS, Mexico is considered to be a country with an increase social, economical and political development if compared with the other three countries. Despite that the distribution of the progress in Mexico has been in an inequitable manner in both the society and the different regions of the country. For example the southern state of Chiapas has been a priority for the government development policies leaving behind other states. Some researches however assure that people from Chiapas are migrating to other states of the south such as Chetumal, Quintana Roo, and Yucatan because of the civil war which still has this southern state. All levels of government in Mexico should be designing an strategy if new jobs are going to be offer in the region.

Another important fact that the Mexican authorities need to consider is that from the document and from the research questionnaire this author is deducing that not all of the stakeholders have been included in the complete process through the sustainable management of the MBRS. Local communities and FIDECARIBE need to be included as key elements to avoid conflicts such as X'Cacl.

Information about the MBRS remains mostly unknown. Since then the MBRS although a relatively new name that has recently been used to refer to the Barrier Reef in the Caribbean Sea. Researches available are mostly of scientific knowledge and a few concerning management of protected areas. Public awareness is needed in terms of making the studies of the MBRS multidisciplinary.

From the literature used in this research fisheries is the most valued resource of the marine environment. Management approaches are focused on the sustainable management of fisheries. However in the case of Quintana Roo and Mexico, fisheries is not the most valuable resource. Mexico, Belize, Guatemala and Honduras are agricultural economies. Until recently the marine economic activities were not considered to be a priority for the national economy. In some isolated cases however they were important for the local communities. It is important to considered this when designing management programs for the MBRS.

Education programs will need to be also linked to the planning and policy development work. Emphasis will need to be placed on having people from the community as well as technicians to review the content of educational material and to incorporate education techniques in their own field of activity.

Further research is needed in coastal management and MPAs management techniques of the MBRS. Mexico needs to learn from other's experiences, for example the case of Argentina and Uruguay in the management of a shared resource "Rio de la Plata," or the Antarctic which has forty (40) years of experience in the international agreement of a shared natural resource.

From the field work for this research, general aspects of management need further analysis such as:

- Define common objectives;
- Introduce more participation from all the government agencies involved;
- Ensure participation from industrial sectors concerned with marine management. For example tourism, mining, business, and scientific research agencies.
- Develop mechanisms of participation.
- Improve mechanism of communication among agencies,
- Maintain continuity in policies regarding the management of the MBRS and in land resources
- Develop scientific data, management data, geographical data,
- Improve training and education at all levels
- Generate identity from the inhabitants to the region,
- Develop public participation and public awareness,

- Build voluntary programs involving young people, schools and associations such as scouts, and other similar groups,
- Improve funding for MPAs management including ecological surveys and monitoring activities,
- Share benefits between local communities especially indigenous communities,
- Examine the legal framework and incorporate coastal areas
- Integrate coherence and continuity policies in the decision making, and
- Develop a set of criteria for the monitoring and assessing of activities.

Silva and Desilvestre (1986) note that countries in Latin America have not lagged behind in recognizing the values of 'marine reserves'. The criteria applied for this statement is a research in sixteen (16) Latin American countries in which Mexico, Belize, Guatemala, and Honduras are included. They identify around ninety (90) marine reserves. However it is true that established marine reserves lack management programs to protect their values. Mexico has 43 marine protected areas under different regimes. Yet from these, only 12 are bigger than 100 hectares. From this information it appears that Mexico has a considerable number of MPAs. However a more detailed analysis is necessary to know how many coastal landscape types are protected. A detailed analysis is needed to determine the classifications criteria for the MPA.s

According with the information gathering in the field and from the literature in this research, Mexico should implement a training program including professionals working in the management agencies, governmental agencies, mass media, local communities, and schools at all levels. It is important to educate all that could be involved with at least one feature of the MPA management, coastal management, and marine ecosystem in the MBRS. The training program should increased in management capacity and improves communication between protected areas managers and local communities.

It will also be of a high priority to design a set of criteria based in local values and international literature for the monitoring, and assessment activities of the MBRS. Mexico would have to agree with the other three countries in this task. In doing this it will be necessary the participation of the three (3) levels of government, the communities and the NGOs. Once established it will be essential to make a public awareness campaign. Within this feature it will be

helpful to create policies for local patrolling. The assessment Committee could be the same as the one listed in appendix 7.

Another suggestion for the Mexican authorities is the initiation of a pricing policy for the different uses of the reef. The revenues should be retained in the local economies. Pricing must be even or equal, standard pricing for the use of the reef not only in the MPA. Common agreement between stakeholders and managers of protected areas along the MBRS will be essential.

As stated before the MBRS is been management as within different inland regimes, it will be indispensable to incorporate terrestrial protected areas and stakeholders from the coastal and inland areas into the process of planning and management the MBRS.

Along with all the management, monitoring, assessment, and patrolling activities will be necessary to consolidate achievements gained in each goal of the project.

Finally it is important to remember that “resource management is more to do with managing the people” (Caddy, and Cochrane, 2001). In the process of resource management is fundamental not to leave behind the consideration of historical issues such as the activities that are considered as traditional within the mayan communities of the MBRS.

The next table compares the two approaches and questionnaire results to determine the extent to which each recognizes Agardy’s MPA objectives discussed in chapter 1. It is disappointing that conservation of habitat of biota and monitoring are not considered in all three situations.

Table 7 Is a comparative table showing a management program of a MPA in the MBRS, the strategies proposed by the WB and Agardy’ objectives of MPAs

Agardy’s MPA Objectives	From the Questionnaire	MBRS according to World Bank	Management Plan from Banco Chinchorro
Maintain genetic diversity	●	●	●
Promote research	●	●	π
Allow creation of education and training areas	●	●	π

Conserve habitat and biota	π	π	π
Allow monitoring	π	π	π
Protect species	π	π	●
Promote tourism and recreation	π	π	●
Promote sustainable development	π	π	●
Recolonize exploited areas	●	●	●
Protect coastlines	●	●	●
Allow for alternative economic development	●	π	●
Preserve aesthetic value	●	●	●
Protect historic/cultural site	π		●
Exert political influence	●	π	●
Protect intrinsic values	●	π	●

Source: World Bank, (2001). Regional Project for the Conservation and Sustainable use of the Mesoamerican Barrier Reef System (MBRS), Instituto Nacional de Ecología, SEMARNAP (2000). Programa de Manejo Reserva de la Biosfera Banco Chinchorro.

Legend:

π Considered

● Not considered

The future of the MBRS is at stake. Rapid industrial mega-tourism development is built in the coastline of the MBRS. The "Costa Maya" and the Belizean coast constitute the perfect place for the international investors of the tourism industry. With none or very few environmental regulations and under the strategy to create employments huge tourism developments are now in the process and are expected to operate in the next few years. Such is the case of the port in Majahual which aim is the designing of a "tourist attraction" for the cruises by stopping in the harbour "Puerto Costa Maya" to shop . This harbour was built placing explosives in the rock near the reef. During the last century numerous ships sank because of the low levels of sea waters in the area.

APPENDIX 1
QUESTIONNAIRE

Massey University
COLLEGE OF HUMANITIES & SOCIAL SCIENCES
SCHOOL OF RESOURCE & ENVIRONMENTAL PLANNING

**Mesoamerican Barrier Reef Questionnaire for the federal
and state authorities of Mexico.**

Name: _____

Position: _____

Federal Office: _____

Highest Education Attainment: _____

Age: _____

Length of Service in this area: _____

1.- What international, national or state plans are being implemented by ministries of the Federal Government of Mexico about management of the Mesoamerican Barrier Reef System (MBRS)?

2.- Does any of the plans focus on protection of the Barrier Reef System or on the sustainable utilization of the system? If there is more than one objective explain.

3.- What have been the difficulties in the achievement of objectives and the implementation of strategies associated with marine protection?

4. If a cooperative model was established to manage the MBRS. Comment on the following actions in terms of assessing constraints in implementing federal objectives at a state level. Give a rank of the constraints, where 5 represents a maximum constraints and 1 represents a minimum

Constraints.					
Communication					
Shared state with an international bordered					
Research					
Funding (federal level)					
Funding (state level)					
Funding (municipal level)					
Expertise (federal level)					
Expertise (state level)					
Expertise (municipal level)					
Local Community support/participation					
Support of voluntary programs.					

Co-management (cooperative model) approach, meaning that communities should have access and control over decisions affecting their resources, in cooperation with government, economic and administrative functions with the establishment of a general management body as a facilitator. Examples; The Belize Fishermen Cooperative Association (BCFA), The Discovery Bay Fishermen's Association (DBFA) in Jamaica, and the establishment by law of the Local Fisheries Management Area (LFMA) considered to be a model of co-management in the Caribbean, and the proposed co-management model in Galicia, Spain, after the failure of the management of the artisanal fisheries.

5- What are the difficulties in government areas of policy making at an international level for Mexico in the application of an multinational agreement as set in the Long Marine Ecosystem management model for the protection of the MBR?

6.- How your Ministry completed any reports about the Barrier Reef in the state of Quintana Roo?

- a) If yes.
- b) Please give further details (nature of the report, titles, objectives, dates)

7.(a) Which of the following mechanisms would be most useful to deal with issues facing your Ministry such as fisheries, recreation/tourism, mining, oil, conservation, shipping, and coastal development. Please rank 1-5 for each method by circling relevant number. 1 = useful
5 = not useful

Management approaches	Fisheries	Recreation	Mining, oil, and others.	Conservation	Coastal Development
Long Marine Ecosystem					
Co-management					
Adaptive Management					
Regional management.					
Cross-sectoral management.					
Community based management.					
Integrated Coastal Management or Integrated Coastal Zone Management					
Individual Sector Operating Independently without common ends					
Sector Operating Independently with Agreed Common Ends					
Virtual Organisations (eg. partnership, co-management, etc.)					
An Overall Co-ordinating Body					
An Overall Management Agency.					
Biogeographic or regional ecosystem classification.					
Strategic Planning Approach (Smith, 1999)					

7. (b).Is funding provided for implementation of any cooperative models at this level of government.

Yes

No

8. How does this Ministry (or governmental office) perceive the MBRS ?

- a) as a composite region (an area with a unique combination of submarine topography and hydrographic and biological characteristics).
- b) As an area potential for tourism.
- c) As a potential resource for commercial fishery.
- d) As a part of larger unitary entity of marine resources.
- e) Other _____

9.(a) Is there a strategy for developing partnerships with the other stakeholders of the MBRS?

(b) Tick relevant stakeholders.

Fisheries

a) Communities

b) Private industries

Transportation agencies (sea and coastal areas)

Tourism developments.

a) Local

b) Multinational.

Oil, gas or mining Industries.

Scientific and academic institutions

Local NGO's

Internationals NGO's.

With other governmental agencies

Other. Specify. _____

10. How does ministries structure communications links between your office and the stakeholders of the MBRs?

11. How does Mexico deal with the threats that affect the MBR? Please rank 1-5 to each threat.

5 = maximum threat.

1 = less threat.

Threats	Ranking				
Overexploitation of the marine resources.					
The use of modern commercial fishing technology					
Aquaculture					
Mining					
Disposal of hazardous waste					
Harvest techniques					
Pollution from land-based resources					
Introduction to alien or exotic species.					
Freshwater diversion in water					
Global change phenomena					
Societal attitudes					
Insufficient knowledge					
Fragmental management.					
Human population growth					
Poverty					
Trade Policies					
Inequitable access.					
Benefit sharing					
Tourism infrastructure					
Swimming and diving					
In land activities:					
-Agriculture					
-Farming					
-Cattle					
-Forestry					
Shipping					
Hurricanes					
Port and harbour development					
Military Activities.					
Research Activities.					

12. a) When MBRS strategies are prepared, who assesses implementation?

b). How?

13. How could Mexico ensure the continuity success of any strategy for sustainable management of the MBRS?

APPENDIX 2

LIST OF RESEARCHES GIVEN BY ECOUSR IN THE FIELD OF THE MEXICO-BELIZE ALLIANCE.

AQUATIC VEGETATION alga, see grass and mangrove

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PLANKTON: Zooplankton and (ictioplancton)

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Nota: 1) ver también Plancton, donde hay citas sobre ictioplancton (huevos y larvas de peces).

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APPENDIX 3

NATIONAL PROTECTED AREAS FROM THE STATE OF QUINTANA ROO

MANAGED BY LOCAL AUTHORITIES

1. Park Kabah, city of Chetumal
2. Laguna Colombia, in the Island of Cozumel
3. Santuario de la Tortuga Marine X'cacel-X'cacelito, in
X'cacel-X'cacelito.
4. Santuario del Manati, in the Bay of Chetumal.
5. Laguna Manati, in the community of Benito Juarez.

APPENDIX 4

PLANNING COMMITTEE FOR THE DEVELOPMENT OF THE STATE.

QUINTANA ROO, MEXICO

Sector Sub-Committee	Regional Committees	Special Committees
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- Funding for the development
- Urban development
- Agricultural development
- Factories
- Supply and commercial development
- Transportation and communications
- Fisheries
- Management and training

- Health
- Education
- Security
- Tourism

- Northern Caribbean
- Maya region
- South Fringe

- Social assistance

- Traditions
- Forestry
- Recreation
- Woman

- Population

- Fresh water supply
- Strength of municipal institutions
- Jobs

APPENDIX 5

Matrix of the Questionnaires answered in Mexico

Matrix Sample

		Known other plans <i>Q. 1 & 2</i>	Difficulties <i>Q. 3*</i>	Co-management assessing Constraints <i>Q. 4</i>	Difficulties in the application of I.M.E. management <i>Q. 5</i>	Studies of the Reef of Q.Roo, Mexico <i>Q. 6</i>	How the MBRS is perceived <i>Q. 8*</i>	Partnership with stakeholders <i>Q. 9</i>	Threats <i>Q. 11</i>	Assessment of the MBRS <i>Q. 12</i>	Strategy continuity <i>Q. 13</i>
Equivalent Institution(s)	Institution(s)' Name	y e s	n o	Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		

Note. * For further detail refer to the questionnaire

SEMARNAT

Ministry of the Environment, and Natural Resources. National Commission of Natural Protected Areas CONANP	SEMARNAT CONANP	X		Government changes, & communication among Ministries.	International border, local community support & research	Common objectives agreement. Language. Lack of human & technical resources.	Yes	a) d)	a) c) e) f) g) h)	Overexploitation -Mining -hazardous waste -freshwater diversion -Tourism -Aquatic sports -Port develop. & -exotic species introduction -global warming -military activity	Evaluation Comity It already exist a Chief Committee that evaluates the projects. 4 people: 1 resource management expert, 1 monitoring, 1 sociologist & 1 computer person.	Trough the National Barrier Reef Committee
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Comments:

The Ministry of the Environment is responsible for leading and put together the national policies, programmes and resources for the natural resources management, with the exception of the petroleum and the radioactive minerals. It is also responsible for the ecosystems conservation and restoration, as well as the environmental policy planning to assure a sustainable development of the national natural resources. (DOF, 2001).

The National Commission of Natural Protected Areas (CONANP) was created on June, 2000 (DOF, 2000) as an "independent office" under the Ministry of the Environment (SEMARNAT). (DOF, 2000). It is the responsible body of the federal government for the MBRS. See diagram below.

Trough this agency Mexico has promote the creation of the National Scientific and Technical Consultative Council of Mexico's Coral Reefs (COCCYTAC) and the National Committee for the Conservation and Sustainable use of the Mexican Coral Reefs (CONARCO) , this last proposal has been a draft since 1997 (INE, 1997).

In terms of management approaches (Q.7) CONANP considers the AM, the CBM, the OCB, (see appendix I for abbreviations) and the SP approaches to be methods useful for the management of fisheries, recreation, mining, conservation and coastal development. In a minimum level of importance were the LME and the ISOINCE. The COM, the OMGA , and the BC were located on a third place of importance.

It is relevant to mention that those who answered the questionnaire were, a technician with a background in biology and the other person was the Deputy Director's counsellor.

The Ministry of Environment, and Natural Resources was considered as one of the main key issues for this research since the activities that according to the law are of its competence.

Diagram:



The Chief Executive of Conservation is the person most directly responsible for manage the MBRS aspects. However when the President of Mexico or the Ministry of the Environment need information it is requested through the Deputy Minister of the Environment.

The Chief Executive of International Affairs (Hugo Guzman) refused to answer the questionnaire, stating that the technicians were the ones to carried out the job (such as collecting data from the MBRS, attending meetings, having reunions with the stakeholders, and keeping the files from the aspects concerning the management of the MBRS) . Meaning the officers from CONANP.

SEMAR

The Navy	SEMAR		X	Fisheries community, tourism	Communication and International border with a medium level.(3) & research and federal funding.	Lack of: legislation, technology and infrastructure.	Research in marine currents and pollution.	d)	f)	13 were considered as high level risk: overexploitation of resources, hazardous waste, harvest techniques, land pollution, exotic species, insufficient knowledge, fragmental management, population growth, poverty, and military activities. & Aquaculture, mining, inequitable access, and research.	The Ministry of Foreign Affairs. With evaluation committees.	With economic resource, monitoring and surveillance activities, and with the assurance of the management programs.
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Comments:

According to the "Federal Public Administration Law " (Ley Organica de la Administracion Publica Federal) The Navy focus on the surveillance tasks, which includes the sea, the reefs, the continental platform, the islands, and cays as well as fresh water surroundings. The Navy also collaborates with other institutions in the duties of prevention and pollution control. It is as well responsible for carrying out scientific research and surveillance of the traffic vessels. An statement was clear in explaining that the Navy does not have any communication or relation with the community in the area.

In terms of the management approaches they considered the LME, and the COM approaches very difficult to be efficient. However the approaches such as ICM, RM, and CBM were evaluate to be the most useful. On the other hand approaches such as OMGA, BC, and SP were considered not applicable in tourism and recreation, mining, and coastal development:

It is important to mention that in this particular interview there were 5 participants: 2 sea captains and 3 with a master in science. All of them had at least 18 years of experience working in the field, though not necessarily in the MBRS area.

The respondents were not clear about both the locations of the MBRS of the cost of Mexico, and the nature of conservation and protection. However they all have in general good knowledge of other reefs in Veracruz, Chetumal, and Yucatan, where there are significant differences among marine resources.

SECTUR

Equivalent Institution(s)	Institution(s) Name	Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of I.M.E. management Q. 5	Studies of the Reef of Q. Roo, Mexico Q. 6	How the MBRS is perceived Q. 8*	Partnership with stakeholders Q. 9	Threats Q. 11	Assessment of the MBRS Q. 12	Strategy continuity Q. 13
		yes	no		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (International) h) governmental agencies	Maximum & minimum		
Ministry of Tourism	SECTUR		X	Economic resources	Communication, federal funding & Community participation, and support for voluntary programs.	No problems at all.	None	a) b)	Does not know	17 were identify as a high risk level. However fragmental management was said to be with the highest level of risk. & use of modern commercial fishing technology, aquaculture, military activities and research.	Within a group that could have private interest represented, as well as public participation and the government officers at a different levels.	With an expensive charge for those who want to see or enjoy the reef.

Comments:

The "Federal Public Administration Law of Mexico" establishes that among the duties of the Ministry of Tourism, is to resolve in coordination with SEMARNAT the areas suitable for tourism. The Mexican state of Quintana Roo is considered a place of a high potential resource for tourism thanks to the beauty of its natural resources being the only state of this country with Caribbean coast. That is the case of Cancun (situated in the north part of Quintana Roo) that is now in the top league of international beach resort. (Fidecaribe, 2000).

The Ministry of Tourism is based (considers) the national plans with a strong conservative bias. It has suggested that the management of the MBRS should have a more utilitarian vision or approach, which encourage development to attract tourism.

At the beginning of the interview the respondent was very clear in saying that the management of the MBRS was not the responsibility of his office. However, he had responded because of his experience in the establishment of the sustainable tourism zone of the Caribbean (an initiative of the ACS [Association of Caribbean States]) (SECTUR, 1999). Other sectors of the Ministry refused to respond to the questionnaire.

In terms of the most useful management approaches the highest reward was given to the SPA, COM, RM, CSM, CBM, ICM, SOICE, and OMGA same utility level. In the other hand and OCB was considered to be less useful. Regarding the approach of LME this was said that this kind of management approach was in conflict with the idea of natural resource conservation.

PROFEPA

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q.8*	Partnership with stakeholders Q.9	Threats Q.11	Assessment of the MBRS Q.12	Strategy continuity Q.13
Equivalent Institution(s)	Institution(s)' Name	ye s	n o		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (International) h) governmental agencies	Maximum & minimum		
The office of the Federal Attorney for Environmental Protection	PROFEPA		X	Coordination between institutions. Lack of economic resources. Lack of knowledge.	Federal and local funding. Federal expectation & International border	N/A	No specific to the MBRS	a) b) c) d) and as an area that requires protection.	N/A	Shipping & Mining. Military activities and research activities.	CONANP	Institutional mechanism. Make public the goals that are achieved and community participation.

Comments:

The PROFEPA is one of the SEMARNAT bodies with technical and operative autonomy. The office of the Federal Attorney for Environmental Protection is responsible for the enforcement of regulations on natural resources and wildlife management. (OECD, 1998, pg 103) And it is also responsible for the monitoring of the environmental judicial layouts of any environmental felony such as pollution of land, aquatic environs, and ecosystems. (OECD, 1998, p 103)

The interview was with a Deputy Attorney, one of the high level government employee of this office. From the beginning it was clearly established that the questions answered would be just in the competence of the PROFEPA; assessment and observation only. And that the references would be from all the reefs in Mexico and not only of the MBRS.

In an overall, this agency considers almost all of the mechanisms very useful for the fisheries, tourism and recreation, conservation, and coastal development. However there was no ranking in the mining activity. It is important to mention that the PROFEPA was one of the few agencies that have certainty concerning the mining activities. The lower qualification was giving to the BC and the OCB.

During the interview it was acknowledge that the Mexican authorities already had implemented an OMGA with the SEMARNAT.

SCT

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q.8*	Partnership with stakeholders Q.9	Threats Q.11	Assessment of the MBRS Q.12	Strategy continuity Q.13
Equivalent Institution(s)	Institution(s)' Name	yes	no		Maximum & minimum			a)composite region b)tourism c)fishery d)large unitary entity of marine resources e)other	a)fisheries b)transportation c)tourism d)mining e)Academic Inst. f)NGOs (local) g)NGOs (international) h)governmental agencies	Maximum & minimum		
Ministry of Communications and Transport	SCT		X	Lack of strategies, non vigilance in the area. No consideration that reefs should be incorporated as protected areas under the environmental law. Lack of international agreement defining which are the priorities. Also at a national level.	None of the constraints got a 5 (maximum level). International border, local funding, and municipal funding got the maximum constraint level (4). The lowest ranking constraint was the support of voluntary programs.	Differences in approaching and techniques on how to preserve natural resources among the countries. Differences between population density (among countries of the MBRS)	No	a)	N/A	-Disposal of hazardous waste -Pollution from land -global warming & Research activity.	Trough an independent organism. With the following mechanism: Physical inspections of the NPA (also with satellites). Monitoring activities. And evaluation of the gauges given for an previous Strategic Plan.	Throughout a federal law that will considered 'the country strategic areas'.

Comments:

As stated by the Mexican law, The Ministry of Communications and Transport has the responsibility of the control of the communications and transport in water, as well as setting the marine signs and the management of marine transportation.

The interview was with the Planning area. As a general statement it was said that the focus of this Ministry strategies were basically in develop the ecotourism.

SP and OCB were considered the most efficient mechanisms to deal with the management of the MBRS, following by ICM and LME.

One of the comments during the interview was that this Ministry acts as a facilitator through which the other government agencies could arrange more specific activities.

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q. 8*	Partnership with stakeholders Q. 9	Threats Q. 11	Assessment of the MBRS Q. 12	Strategy continuity Q. 13
Equivalent Institution(s)	Institution(s) Name	yes	no		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		
Mjnistry of Economy, the Office of Mining.	Secretaria de Economía. (SE) Direccion General de Minas		X	N/A	N/A	N/A	N/A	As a low mining potential area	N/A	N/A	Through the ministries of tourism and fishery (SEMARNAT)	N/A

Comments:

For the purpose of this research it was important to take notice of the minerals that could be potentially important in the area of the MBRS.

Firstly is relevant to say that during the period of the research it was notice the different knowledge of the interviewers about the mining activities not only in the MBRS but also in the state of QR. Some said that there were any of this activities and some said that there were certain that there were, without specifying what sort of activities.

However the Office of Mining assure that there are some areas in the state in land and sea where the minerals are abundant.

The Mexican state of Quintana Roo is not of a high importance compare with other areas of the country, in terms mining activities. The only relevant activity is the salt extraction (from the sea) done in the upper part of the state, near the island of Cozumel. This is a characteristic that most of the modern reef have; and since the MBRS is a modern reef there is roughly any existence of potential minerals.

Mechanisms for mining. On doing this the best mechanism for mining was LME and co-management because it was a "marine protected area".

(www.secofidgm.gob.mx)

INI

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q.8*	Partnership with stakeholders Q.9	Threats Q.11	Assessment of the MBRS Q.12	Strategy continuity Q.13
Equivalent Institution(s)	Institution(s)' Name	yes	no		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		
National Institute for Indigenous People	INI	X		Different interest in different governmental levels.	International border, federal funding, state funding, local funding. & support of voluntary programs	"Some comparison with the coral reefs in Asia."	No	a) d)	a) c) f) h)	21 were considered as maximum risks. Minimums are research activities, use of modern commercial fishing technology, human population growth, tourism infrastructure, hurricanes water sports, and port development.	Local population. Trough reports done by the community to the authorities.	Institute decision making available for all the stakeholders of the area.

Comments:

The National Institute for Indigenous People was created with the objective to deal with all the matters of the different ethnics groups that are in Mexico. Concerning the ranking of the mechanisms the highest ranked were RM, ICM, CBM, AM, and BC; in that order. LME and SP were considered with the lowest useful use.

It was said that the a mechanism of VO already exist in the MBRS and it was managed by the Ministry of the Environment (SEMARNAT). Something to take in consideration was that the SP mechanism was considered "poor for the administration of the MBRS". This is different of what all the rest Ministers considered the Strategic Planning approach.

CONABIO

Equivalent Institution(s)	Institution(s) Name	Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q.8*	Partnership with stakeholders Q.9	Threats Q.11	Assessment of the MBRS Q.12	Strategy continuity Q.13
		yes	no									
National Commission for the Knowledge and Use of Biodiversity	CONABIO	X		Lack of consensus, changes in local and federal government. Heterogeneity expensive to achieve among countries because it is necessary to have a lobbying policy.	Municipal funding & Expertise at federal level, and communication	Changes in the public administration, difficulties on the follow up of the continuity, changes in CBD, International Agreements are highly expensive for the countries involved	Yes **	a) b) d)	N/A	Global warming, fragmental management, human population growth, tourism infrastructure & Mining, aquatic sports, and agriculture	Consensus among the 4 countries. Need to have parameters with setting goals.	In the conservation area trough a private trust such as the FMCN. Mexico has being successful in achieving these.

Comments:

The Intersecretarial Commission was created on a permanent basis for the knowledge and use of biodiversity whose purpose shall be to coordinate the actions and studies related to the knowledge and preservation of biological species, as well as to promote and develop scientific research activities for the exploration, study, protection, and use of biological resources tending toward the conservation of the nation's resources and generate criteria for its defensible handling.

Conabio's mission is to co-ordinate conservation and research efforts designed to preserve biological resources. Conabio promotes and develops scientifically-based activities whose aim is to explore, study, protect or find a sustainable use for biological resources. The intention of these activities is to conserve the nation's resources and to generate criteria for sustainable development.

*Some of the plans that Conabio takes notice of are: 1988 General Law of Ecological Balance and Environmental Protection (LGEEPA), the Federal Law of Coast and Sea management, the Fisheries Law, the Presidential Mandate that established the CONANP, and the National Strategic of Biodiversity. At the international level the Convention on Biological Diversity (CBD)

A propos of the mechanisms that could be utilized to manage the MBRS facing different issues such as fisheries, recreation, mining, conservation, and coastal development, the Conabio decided to answer concerning only conservation; in here the grading was as follow: AM was considered of greater use above others, followed by other four (COM, CBM, VO, OCB). There were some spaces left it in blank those were the LME mechanism, the RM, and ICM.

FMCN

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q. 8*	Partnership with stakeholders Q. 9	Threats Q. 11	Assessment of the MBRS Q. 12	Strategy continuity Q. 13
Equivalent Institution(s)	Institution(s)' Name	yes	no		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		
Mexican Nature Conservation Fund.-MNCF	FMCN	X		National sovereignty. Deficient view of the area as a terrestrial basin.	Local community participation & Communication	Differences among countries in the level of economic reliance over its natural resources	No	a) b) c) d)	a) c) e) f) g)	Overexploitation of the marine resources, use of modern commercial fishing technology, insufficient knowledge, human population growth, in land activities, corruption & port and harbour development, military activities, and research activities.	Throughout an international scientific committee with the aid of an International organism of conservation, that will have programmatic information of the area.	As an environmental protected area designed. Each country should have to invest economic resources in the area.

Comments:

The MNCF is a private institution it is the first environmental fund created in Mexico and was a proposal to the government by the WWF in 1992. (FMCN, 1999). Its mission is to conserve the biodiversity of the country and assure the sustainable use of natural resources by promoting strategic actions and promoting medium and long-term financial assistance. (FMCN, 1999).

*The plans known by this institution at a national level are: Coastal Management of Quintana Roo, ecotourism management, management of national protected areas such as 'Sian Khan'. At the international level: Conservation management receiving economic assistance through different institutions such as GEF, and EU. Also through the Environmental Net Funds for Latin America and the Caribbean and the WWF.

Concerning question 7 of the questionnaire, there was no ranking of the management mechanisms. The answers were just focus on which of them were useful to manage the complete aspects of the MBRS. It was said that a Virtual Organization approach was of the highest priority.

Offices not willing to answered the questionnaire

National Fund for the tourism development	FONATUR	Not answers to the questionnaire, saying that the questions were of high relevance. The interview was with the responsible of the planning office.
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Comments:

The Minister of Foreign Affairs (SRE) only answered by a telephone call saying they did not know anything about the MBRS, they had not attend to any of their meetings even though they were the office uncharged of the international environmental agreements.

Public and academic Offices of Quintana Roo.

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q.8*	Partnership with stakeholders Q.9	Threats Q.11	Assessment of the MBRS Q.12	Strategy continuity Q.13
Equivalent Institution(s)	Institution(s)' Name	yes	no		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		
Southern Border College (Academic Institution)	ECOSUR	X		Differences in government. Different concept of sovereignty and different language	See general comments below.	Different agreements among countries. Lost of sovereignty.	Yes See Appendix II	a)	a) e) f) g) See general comments below. **	Tourism infrastructure & research activities Societal attitudes,	Technical Committee that may do the evaluation . (Not certain information)	By the structures that already exist.

Comments:

ECOSUR is an academic institution at the postgraduate level; its focal point is the development and connection with the southern border of Mexico. Their programs are focus on the creation of scientific knowledge and the establishment of new technologies towards a the sustainable development. (ECOSUR, 2001, <http://www.ecosur.mx/>).

Various things to take into consideration bearing in mind the answers of the questionnaire are:

According with ECOSUR, if a cooperative model was established to manage the MBRS it would not be relevant constrains in assessing the implementation of federal objectives at a state level. Shared state with an International level would not be a difficulty since between Mexico and Belize because there is a family tradition in trade between the two countries, however Belize does not has much experience in trade with Guatemala and Honduras.

They comment that the federal and local level of government would have more resistance to the establishment of a co-management approach. The state government is implementing marine parcels.

It is important to say that the W.W.F. (World Wild Foundation) is more likely to accomplish a co-management approach in the area of the MBRS. In contrast with other answers ECOSUR considers that community participation is very likely.

** The existence of a partnership between Mexico and Belize has been trough the BEMAMCCOR. BEMAMCCOR is an alliance program between the two countries in the resource management, natural protected areas management, and it also identifies fringe problems. Other stakeholders are the National protected Area officers and the tourist guides association.

In the opinion with ECOSUR, the mining activity is done near the reefs shores. And there are no military activities. (compare these with others).

With the mechanisms of management, it was said that a co-management approach was of no existence for Honduras and Guatemala. The AM approach was best known than the other approaches. However the CBM could be the more useful approach.

PESCA

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q. 8*	Partnership with stakeholders Q. 9	Threats Q. 11	Assessment of the MBRS Q. 12	Strategy continuity Q. 13
Equivalent Institution(s)	Institution(s)' Name	y e s	n o		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		
State Ministry of Fishery National Commission of Fishery	Subdelegacion de Pesca	X		Lack of research, plans of action, and management	Funding at municipal level & communication	Ignore what LME means.	Semam at has done studies but not the Ministry of Fishery.	a)	a) b) c) e) f) g) h) Community groups, private companies, journalist.	Insufficient knowledge, poverty, hurricanes. & overexploitation of the marine resources, the use of modern commercial fishing technology, aquaculture, mining, harvest techniques, research activities	Both the government and the society	With a specialized coordinating body with all the stakeholders.

Comments

* Management Programs of Different Areas of the MBRS, Belize City, March, 2000. A discussion group regarding fisheries management in the MBRS, and a Propose fishery management.

Wide differences among sectors specially fisheries and environment.

The fisherman's community is willing to carry out actions toward conservation, in some situations, more likely than the authority.

LME, COM, CBM, ICM, and SP were the most useful mechanism for the management of the MBRS regarding the fisheries activity. And AM, OCB, and OMGA were classified as of lesser use for the fisheries.

FIDECARIBE

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q. 8*	Partnership with stakeholders Q. 9	Threats Q. 11	Assessment of the MBRS Q. 12	Strategy continuity Q. 13
Equivalent Institution(s)	Institution(s)' Name	yes	no		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		
Bank trust of the Caribbean	FIDECARIBE		X	Legal land tenure, illegal land occupations, irregular human settlements,	There are no difficulties in the implementation of models with any governmental office.	There is no difficulty	No	a) b) d)	b) c)	Fresh water pollution, poverty, inequitable access, benefit sharing, hurricanes, & overexploitation of marine resources, mining (although it does not exist), societal attitudes, insufficient knowledge, trade policies, tourism infrastructure, in land activities	N/A	Trough education.

Comments:

FIDECARIBE is an agency charged with developing the open land of Quintana Roo. The agency was created in 1974 when the Federal Government signed huge tracts of hitherto public land for future development. Fideracibe has drawn the maps, done surveys and installed basic infrastructure in the "Costa Maya" (Costa Maya is the name for the coastal area of the state of Quintana Roo, Mexico). It is also empowered to commercialise the land and can give valuable technical advice on financing available, permits required for development. (FIDECARIBE, 2000).

The intention of the documents emerged from this office is purely to develop the privatisation of the coast land in order to build infrastructure for the tourism industry.

The best mechanism to deal with issues such as tourism and recreation, conservation, and coastal development would be: first of all OMGA, it was said that is the ideal mode for management these issues in the MBRS. A second mode would be the AM, RM, BC, and SP mechanism stated by FIDECARIBE. On the other hand the less useful were COM.

It is important to mention that FIDECARIBE does not has any involvement in the activities of managemen t the MBRS.

SEDUMA

Equivalent Institution(s)	Institution(s) Name	Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of LME management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q. 8*	Partnership with stakeholders Q. 9	Threats Q. 11	Assessment of the MBRS Q. 12	Strategy continuity Q. 13
		yes	no		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (International) h) governmental agencies	Maximum & minimum		
State Ministry of the Environment and Urban Development	SEDUMA Secretaria de Medio Ambiente y Desarrollo Urbano		X	Control over the application of the design management instruments	Municipal funding, and support of voluntary programs. & local community participation	Lack of economic resources	No	b) d)	e) f) g) h)	Societal attitudes, insufficient knowledge, and hurricanes. & Mining, introduction of exotic species, and research activities.	For assessing implementation : SEMARNAT, through a specialized organism that could have the representation of all the stakeholders	Extremely difficult

Comments:

It is relevant to mention that this State Ministry does not has direct interference in the MBRS as it was state in the interview.

*No concerning the MBRS but there are other management instruments in other NPA in the State of Quintana Roo, listed in appendix III

The mechanism suitable for manage the MBRS in the opinion of SEDUMA were: RM, CSM, SP. In the other hand the less suitable were: VO, OCB, and Co-management.

		Known other plans Q. 1 & 2		Difficulties Q. 3*	Co-management assessing Constraints Q. 4	Difficulties in the application of I.M.E management Q. 5	Studies of the Reef of Q.Roo, Mexico Q. 6	How the MBRS is perceived Q. 8*	Partnership with stakeholders Q. 9	Threats Q. 11	Assessment of the MBRS Q. 12	Strategy continuity Q. 13
Equivalent Institution(s)	Institution(s)' Name	y	n		Maximum & minimum			a) composite region b) tourism c) fishery d) large unitary entity of marine resources e) other	a) fisheries b) transportation c) tourism d) mining e) Academic Inst. f) NGOs (local) g) NGOs (international) h) governmental agencies	Maximum & minimum		

State Ministry of Planning and Regional Development	Secretaria de Planeacion y Desarrollo Regional.	They did not answer the questionnaire, but they were willing to cooperate giving information concerning the state of Quintana Roo urban developing planning strategies. See diagram in appendix IV										
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State Ministry of Tourism	Secretaria de Turismo del Estado de Quintana Roo	The Ministry of Tourism say that they were not authorized to answer the questionnaire. However there was the opportunity to talk with the (subsecretario) of tourism, Carlos Aranda.										
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APPENDIX 6

ESTABLISHMENT OF THE SUSTAINABLE TOURISM ZONE OF THE CARIBBEAN



**ESTABLECIMIENTO DE
LA ZONA DE TURISMO
SUSTENTABLE DEL CARIBE**

**ESTABLISHMENT OF THE
SUSTAINABLE TOURISM ZONE
OF THE CARIBBEAN**

**CREATION DE LA ZONE
DE TOURISME DURABLE
DE LA CARAIBE**



SECRETARIA DE TURISMO

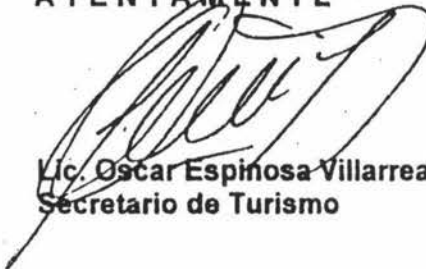
**Estimado Sr. Simón Molina Duarte
Secretario General de la Asociación
de Estados del Caribe**

El Caribe, en opinión de sus visitantes, es una región que posee una enorme riqueza en atractivos turísticos, pero éstos sólo se exaltan a través del placer que de ellos ejercitan quienes los visitan.

El viajero actual busca en los sitios descanso, conocer sus culturas e historia, anhela confort, la realización de actividades y todo ello lo ofrece la mágica región caribeña, la cual debe asegurar para las generaciones presentes y futuras su disfrute en un medio ambiente sano, que convierta a sus destinos turísticos en sitios competitivos en la gran oferta mundial.

Todo ello es posible, si unimos esfuerzos que nos lleven a emprender acciones conjuntas para el desarrollo turístico sustentable, como lo demuestra la presente edición fruto del esfuerzo de los países miembros de la AEC. Por lo anterior, el Gobierno Mexicano a través de la Secretaría de Turismo, gustosamente realiza esta aportación al imprimir el presente documento para los integrantes de la Asociación de Estados del Caribe, en la que se plantea una estrategia que da respuesta a una serie de variables que permitirán la realización de un plan de acción inmediata para enfrentar los retos de un desarrollo turístico sustentable.

ATENTAMENTE



Lic. Oscar Espinosa Villarreal
Secretario de Turismo

1. LA ASOCIACION DE ESTADOS DEL CARIBE

La Asociación de Estados del Caribe (AEC) es una respuesta a uno de los importantes retos integracionistas de nuestra región multilateral de nuestro continente, tanto por el gran número de Estados, Países y Territorios diversos que logra asociar como por los desafíos que debe enfrentar.

El 24 de julio de 1994, los Jefes de Estado y / o representantes de veinticinco países del denominado Gran Caribe reunidos en Cartagena de Indias, Colombia, firmaron el Convenio Constitutivo de la AEC, el cual fue ratificado en la Primera Reunión de Jefes de Estado y de Gobierno, realizada en Puerto España, Trinidad y Tobago.

La AEC quedó constituida por veinticinco estados en calidad de miembros plenos, los Departamentos Franceses del Caribe, dos países que forman parte del Reino de los Países Bajos en calidad de Miembros Asociados. Además pueden participar los territorios Británicos y Norteamericanos de la región como miembros asociados, lo que daría un total de treinta y seis Países, Estados y Territorios con una amplia diversidad de intereses y grandes asimetrías.

La Asociación ha unido a diferentes proyectos integracionistas como son los trece¹¹⁾ países de la Comunidad del Caribe (CARICOM), los cinco países que integran el Mercado Común Centroamericano (MCCA), el Grupo de los tres (G-3) que lo forman México, Colombia y Venezuela y otros países no integrados a bloques como son la República Dominicana, Cuba y Panamá.

¹¹⁾ Haití será el país número 14 de la CARICOM, el cual está en proceso de completar los requisitos para adherirse al Tratado de Chaguaramas

1. THE ASSOCIATION OF CARIBBEAN STATES

The Association of Caribbean States (ACS) is a response to one of the major challenges of integration and multilateral co-operation of our continent, both because of the large number of different States, Countries and Territories it has been able to bring together, and also because of the challenges it must face.

On July 24, 1994, the Heads of State and/or representatives of twenty-five countries of the so-called Wider Caribbean met in Cartagena de Indias, Colombia and signed the convention establishing the ACS, which was ratified at the First Meeting of Heads of State and Government in Port of Spain, Trinidad and Tobago.

The ACS was constituted by twenty-five full members, in addition to the French Départements in the Caribbean and two countries of the Kingdom of the Netherlands as associate members; Additionally, the British and US territories in the region may also participate as associate members, bringing the total to thirty-six states and territories with a wide diversity of interests and great asymmetries.

The Association has united different integration projects such as the thirteen¹¹⁾ countries of the Caribbean Community (CARICOM), the five countries of the Central American Common Market (MCCA), the Group of Three (G3), comprising Mexico, Colombia and Venezuela, and other non-grouped countries such as the Dominican Republic, Cuba and Panama, which do not belong to any such blocs.

¹¹⁾ Haiti will become the 14th member of CARICOM, and is in the process of completing the requirements for adopting the Treaty of Chaguaramas.

1. L'ASSOCIATION DES ETATS DE LA CARAÏBE

L'Association des Etats de la Caraïbe (AEC) est une réponse à l'un des plus importants défis d'intégration et de coopération multilatérale de notre continent, autant pour le grand nombre des Etats, Pays et Territoires diverses qui souhaitent avoir l'association que pour les défis auxquels celle-ci est obligée de faire face.

Le 24 juillet 1994, les Chefs d'Etat et/ou Représentants de vingt-cinq pays de ladite Grande Caraïbe, réunis à Carthagène des Indes, Colombie ont signé la Convention créant l'AEC, et celui-ci a été ratifié lors de la Première Réunion de Chefs d'Etat et de Gouvernement qui s'est tenue à Port d'Espagne, Trinité-et-Tobago.

L'AEC a été constitué de vingt-cinq Etats jouissant de la qualité de membres de plein droit, ainsi que les Départements Français de la Caraïbe et deux pays qui forment partie du Royaume des Pays Bas en tant que membres associés. Eventuellement les territoires britanniques et américains de la région pourrait participer en tant que membres associés, ce qui ferait en total trente-six pays, Etats et territoires dotés d'une vaste diversité d'intérêts et d'asymétrie.

L'Association a pu réunir différents projets qui visent à l'intégration, par exemple, les treize¹¹⁾ pays de la Communauté de la Caraïbe (CARICOM), les cinq pays de l'Amérique Centrale qui se sont adhésés au Marché Commun de l'Amérique Centrale (MCCA), le Groupe des Trois (G-3) composé du Mexique, la Colombie et le Venezuela ainsi que d'autres pays non alignés aux blocs tels que la République Dominicaine, le Cuba et Panama.

¹¹⁾ Haiti sera le 14ème pays de CARICOM, et celui-là est en train de satisfaire les conditions nécessaires à l'adhésion au Traité de Chaguaramas.

PIB / GDP / PIB

520,000 millones de dólares / million dollars / millions de dollars

Exportaciones / Exports / Exportations

146,000 millones de dólares / million dollars / millions de dollars

Mercado Interno / Domestic market / Marché interne

215 millones de consumidores / million consumers / millions de

consommateurs

Según diversos estimados, la formación de la AEC, posibilitó la creación de un área económica que genera anualmente más de 520 mil millones de dólares de producto interno bruto, sosteniendo un nivel de exportaciones superior a los 146 mil millones de dólares y con un mercado interno cercano a los 215 millones de consumidores. Desde 1995, en que se constituye formalmente la AEC, se inicia una intensa actividad a partir de una cargada agenda, que lleva a lograr consensos para aprobar en la I Cumbre de la Asociación de Estados del Caribe, celebrada en Trinidad y Tobago de ese año, la Declaración de Principios y el Plan de Acción sobre Turismo, Comercio y Transporte. En el mes de diciembre del mismo año, en la ciudad de Guatemala se realizó la primera Reunión Ordinaria del Consejo de Ministros, adoptándose el Programa de Trabajo, y las disposiciones para darle normatividad e institucionalizar a la AEC. Al año siguiente, en La Habana, Cuba, en el marco de la segunda Reunión Ordinaria del Consejo de Ministros, se decide entre otros acuerdos, emprender los trabajos para la creación de la Zona de Turismo Sustentable del Caribe, (ZTSC) primer esfuerzo de esta magnitud a nivel mundial, creando para ello el Comité Especial de Turismo.

Es así, como después de cuatro años de intensa labor, la AEC logra concretar a partir de este Comité una respuesta al problema más importante de la región, el desarrollo del turismo como eje unificador de la economía del Gran Caribe, generando una serie de acuerdos y acciones que hoy hacen posible presentar las estrategias del desarrollo de la Zona de Turismo Sustentable del Caribe.

According to many estimates, the formation of the ACS made it possible to create an economic area which generates over 520 thousand million dollars gross domestic product per annum, maintaining a level of exports of over 140 thousand million dollars in trade, and with a domestic market of close to 215 million consumers. From 1995, when the ACS was formally constituted, intense activity began on a heavy agenda, which led to the agreement to approve at the First Summit of the Association of Caribbean States in Trinidad and Tobago that year, the Declaration of Principles and Plan of Action on Tourism, Trade and Transport. In December of that year, the First Ordinary Meeting of the Ministerial Council was held in Guatemala City, where the Work Programme and provisions for the establishment of rules and an institutional framework for the ACS were agreed upon. The following year, at the Second Ordinary Meeting of the Ministerial Council in Havana, Cuba, it was decided that, among other agreements, work would be begun on the creation of the Sustainable Tourism Zone of the Caribbean (STZC), the first effort of this magnitude in the world, and the Special Committee on Tourism was created for this purpose.

Thus, together with four years of intense work, the ACS was able to respond through this committee to the region's most pressing problem - developing tourism as the essential unifying element of the economy of the Wider Caribbean. This generated a series of agreements and actions which have made it possible to present strategies for developing the Sustainable Tourism Zone of the Caribbean.

Certains estiment que la création de l'AEC a rendu possible la création d'un espace économique qui génère plus de 520 milliards de dollars par an, représentant le produit intérieur brut qui soutient un niveau d'exportations supérieur à 140 milliards de dollars, tout en comptant sur un marché interne composé d'environ 215 millions de consommateurs. Depuis 1995, lors de la création formelle de l'AEC, l'on a initié une série d'activités intensives basées sur un agenda chargé qui vise au consensus afin d'approuver la Déclaration de Principes et le Plan d'Action sur le Tourisme, le Commerce et le Transport lors du Premier Sommet de l'Association des États de la Caraïbe qui s'est tenue à la Trinité-et-Tobago cette année-là. En décembre du même an, dans la ville de Guatemala, la Première Réunion Ordinaire du Conseil de Ministres a été réalisée, et celui-ci a adopté le programme de Travail ainsi que les dispositions nécessaires à normaliser et institutionnaliser l'AEC. La prochaine année, à la Havane, Cuba, dans le cadre de la Deuxième Réunion Ordinaire du Conseil de Ministres, l'on s'est mis d'accord pour entreprendre, entre autres accords, les actions nécessaires à la création de la Zone de Tourisme Durable de la Caraïbe, (ZTDC) - tout premier effort de cette magnitude au niveau mondial, tout en créant à cette fin le Comité Spécial sur le Tourisme.

C'est ainsi qu'au bout de quatre ans de travail intensif, l'AEC a pu concrétiser moyennant ce Comité une réponse au problème le plus grave de la région - le développement du tourisme en tant qu'axe unificateur de l'économie de la Grande Caraïbe, tout en générant une série d'accords et actions qui à l'heure actuelle rendent possible la présentation de stratégies de développement portant sur la Zone de Tourisme Durable de la Caraïbe.





2. ¿POR QUE UNA ZONA DE TURISMO SUSTENTABLE EN EL CARIBE?

El turismo es hoy la principal actividad económica de la mayoría de los países de esta región que denominamos el Gran Caribe y en los que no lo es, se transforma en un importante factor de equilibrio en la cuenta corriente de la balanza de pagos.

Desde la segunda mitad de este siglo, esta nueva actividad ha ido remplazando al sector primario y a la incipiente industria, integrándose así al complejo mundo de la economía internacional del turismo, una de las primeras expresiones de la globalización planetaria.

La compleja realidad que hoy vivimos, no puede limitar entender al turismo como una actividad reducida a funciones muy focalizadas dentro de los servicios, ya que el hecho de analizarse con esta visión impediría dimensionar la magnitud y la dinámica de esta nueva "industria" de la era post-industrial. Los grandes cambios en la ocupación espacial y los procesos migratorios que ello implica, la urbanización acelerada y mayoritariamente no planeada, la transformación de la infraestructura y equipamiento, los cambios culturales y los grandes requerimientos de recursos humanos altamente especializados, son algunos de los efectos inmediatos de este nuevo y complejo modelo económico. Las "Cuentas Satélite" del sector turismo empiezan a mostrar los amplios nexos e interdependencia del sector con otras ramas de la producción.

2. WHY A SUSTAINABLE TOURISM ZONE OF THE CARIBBEAN?

Today, tourism is the mainstay of most of the countries of this region we refer to as the Wider Caribbean, and in those where it is not, it has become an important factor in balancing the current account on the balance of payments.

Since the second half of this century, this new activity has been replacing the primary sector and incipient industry, thus joining the complex world of the international tourism economy, one of the first expressions of planetary globalisation.

Today's complex reality cannot limit the understanding of tourism to that of an activity focussed only on the provision of services, since such an analysis would prevent an appreciation of the magnitude and dynamics of this new "industry" of the post-war era. Major changes in the occupation of space and the migratory processes involved, rapid (generally unplanned) urbanisation, the reconversion of plant and equipment, cultural changes, and the substantial need for highly specialised human resources are some of the immediate effects of this new and complex economic model. The "satellite accounts" of the tourism sector are beginning to show the broad links and interdependence of this sector with other branches of production.

2. POURQUOI UNE ZONE DE TOURISME DURABLE DANS LA CARAIBE?

Dans l'actualité, le tourisme constitue la principale activité économique de la plupart des pays de cette région dénommée la «Grande Caraïbe» et dans ceux où le tourisme ne l'est pas, il se convertit dans un facteur important d'équilibre du compte courant de la balance des paiements.

Depuis la deuxième moitié de ce siècle, cette nouvelle activité continue à remplacer petit à petit le secteur primaire et l'industrie fade, s'incorporant ainsi au monde complexe de l'économie internationale du tourisme - l'une des toutes premières expressions de la globalisation sur la planète.

La complexe réalité que nous vivons à l'heure actuelle ne peut pas limiter la portée du tourisme en tant qu'une activité réduite à des fonctions très concentrées sur les services, puisque le fait de s'analyser sous cet angle empêchera une perspective de la dimension et dynamique de cette nouvelle «industrie» de l'époque postindustrielle. Les grands changements qui se sont produits à l'égard de la population des espaces et les processus de migration que ceci implique, l'urbanisation accélérée et en grande mesure non planifiée, la transformation de l'infrastructure et les équipements, les changements culturels et les conditions supérieures applicables aux ressources humaines hautement spécialisées ne sont que certains des effets immédiats de ce nouveau et complexe modèle économique. Les «Comptes satellites» du secteur touristique commencent à faire preuve des étroits liens et l'interdépendance du secteur avec d'autres branches de la production.

El crecimiento del turismo en la región ha sido significativo, sin embargo, ubicado éste dentro del contexto global es menor a la media mundial, lo cual se transforma en una seria limitación a las expectativas a futuro de esta

Tourism growth on the region has been significant. However, within the global context, it is lower than the world average, and this presents serious limitations where future expectations are concerned for this activity.

L'augmentation du tourisme dans la région a été assez importante, mais située dans le contexte mondial, celle-ci est moindre que la moyenne mondiale, et ceci se convertit dans une sérieuse limitation aux attentes futures que nous pourrions avoir de cette activité.



Año / Year / Année	Ingreso U\$A mill. AEC (1) / Income mill US\$ ACS (1) / Revenus USD mill. AEC (1)	Arribo miles AEC (1) / Arrivals thousands ACS (1) / Arrivées milliers AEC (1)
1986	7, 039	11,050
1990	10, 854	15,282
1997	18, 884	22,369
Indice / Index / Indice 97-86	2,683	2,024

Fuente: Elaborado por la Asociación de Estados del Caribe con información de la OMT-SECTUR.

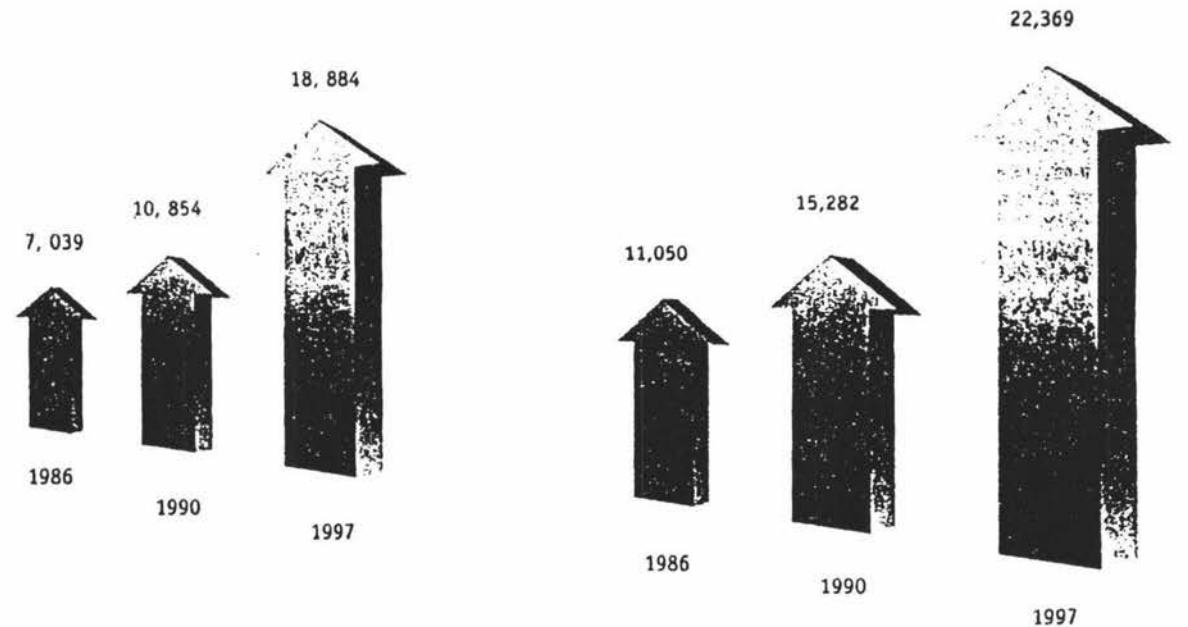
(1) En el caso de los arribos para México, solamente se incluye el turismo que arriba a Cancún y Cozumel que corresponde al Caribe Mexicano. Para Colombia y Venezuela se tomaron las cifras globales de los países.

Source: Prepared by the Association of Caribbean States using Information from WTO-SECTUR.

(1) In the case of Mexico, this includes only tourism arriving at Cancun and Cozumel, which are in the Caribbean region of Mexico. For Colombia and Venezuela, overall figures are used for both countries.

Source: Elaboré par l'Association des Etats de la Caraïbe en utilisant des données de l'OMT-SECTUR.

(1) Dans le cas du Mexique l'on a seulement tenu en compte le tourisme qui arrive à Cancún et Cozumel, ce qui correspond à la Caraïbe mexicaine pour ainsi dire. Pour la Colombie et le Venezuela, l'on a pris les chiffres généraux du pays.



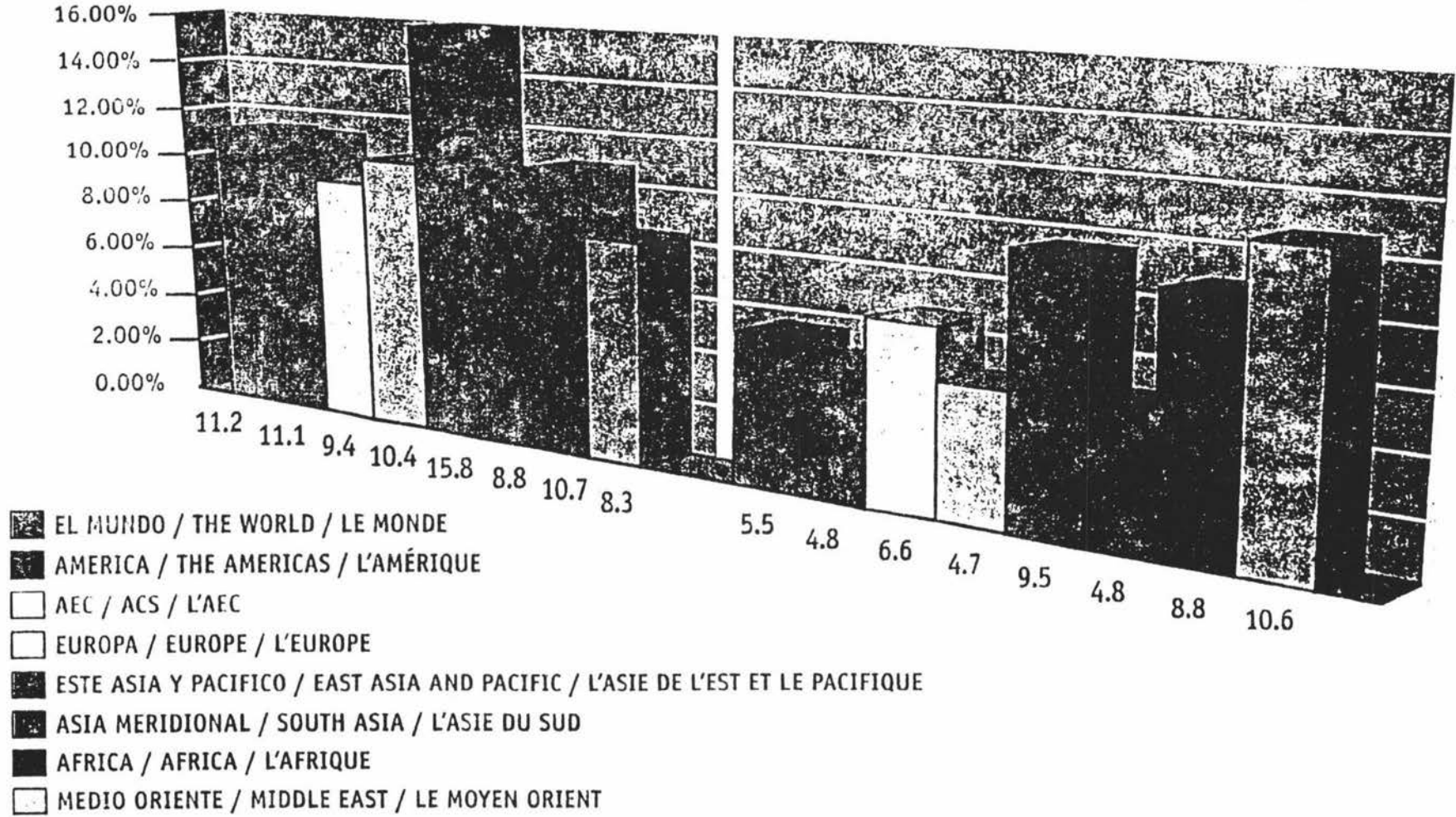
Fuente: Elaborado por la Asociación de Estados del Caribe con información de la OMT.

Source: Prepared by the Association of Caribbean States using information from WTO.

Source: Elaboré par l'Association des Etats de la Caraïbe en utilisant des données de l'OMT.

Ingresos en divisas Tasa de Crecimiento /
 Rate of growth of foreign exchange income /
 Revenus en devises - Taux de Croissance

Arribos de turistas Tasa de Crecimiento /
 Rate of Growth of tourist arrivals /
 Arrivées de touristes - Taux de Croissance



Algunos estudios que se han desarrollado, nos plantean un escenario preocupante que puede caracterizarse de la siguiente manera:

- La tasa de crecimiento de los ingresos turísticos de la región es inferior al promedio mundial, y a otros polos competitivos, mientras que la tasa de crecimiento del arribo de turistas es superior al promedio.
- La tasa de crecimiento de ingreso de divisas es decreciente.
- La eficacia (elasticidad-arribo-divisas) en la generación de divisas de los países del Gran Caribe es inferior al promedio mundial y otros destinos competitivos.
- El crecimiento de la demanda nominal de turismo se ajusta fundamentalmente por arribos y no por precios, esto indica mayor carga y menor calidad de servicios.
- El turismo es la fuente más importante de generación de divisas para los países de la AEC, tomados en forma individual.
- Los ritmos de crecimiento en conjunto son todavía elevados y el turismo es la actividad dinámica que empuja a las otras actividades de la economía, sin embargo, esta situación puede engañar y no permite observar las externalidades negativas que se están generando en el desarrollo de la actividad.

Los miembros de la AEC, conscientes de la vulnerabilidad de esta compleja actividad económica, decidieron elaborar una estrategia de consolidación de la misma, a partir de introducir cambios en el patrón de crecimiento de la actividad turística, combinando factores internos con la cooperación e interacción de los Estados, Países y Territorios, orientados a plantear una estrategia de mercado regional, manteniendo la diversidad e individualidades de cada uno.

En este marco contradictorio de crecimiento y asechanzas para la actividad dominante en la región del Gran Caribe: del turismo, nace la propuesta de la ZONA DE TURISMO SUSTENTABLE DEL CARIBE (ZTSC), la alternativa más audaz y realista que tiene por objetivo final, consolidar nuestra actividad fundamental en el siglo XXI, pese a las grandes competencias y retos que nos corresponde enfrentar.

Some of the studies carried out suggest a perturbing scenario which can be described as follows:

- The rate of growth of tourism-generated income in the region is lower than the world average and other competitive areas, while the growth rate for tourist arrivals is higher.
- The rate of growth of foreign exchange income is decreasing.
- Effectiveness (elasticity-arrival-foreign exchange) in generating foreign exchange in the countries of the Wider Caribbean is lower than the world average and other competitive destinations.
- Increases in nominal demand for tourism is adjusted basically according to arrivals and not prices; this indicates a heavier burden and lower quality service.
- Tourism is the most important source of foreign exchange for ACS countries taken individually
- Overall growth rates are still high, and tourism is the dynamic activity which drives other activities in the economy. However, this can be a deceptive situation, and it does not allow us to observe the negative externalities taking place in the development of this activity.

ACS members, conscious of the vulnerability of this complex economic activity, decided to devise a strategy to consolidate tourism, based on a series of ideas for making regional adjustments, based on the introduction of changes to the growth pattern of activity in tourism, combining internal factors with co-operation and interaction of countries and states, aimed at creating a regional marketing strategy for maintaining the diversity and individuality of each State, Country or Territory.

Out of this contradictory framework of growth and threats for tourism, the dominant activity in the Wider Caribbean, there arose a proposal for a SUSTAINABLE TOURISM ZONE OF THE CARIBBEAN (STZC), which is the boldest and most realistic alternative. Its final objective is to consolidate our most important activity in the 21st century, despite the major competition and challenges we must face.

Certaines études qui ont été réalisées nous pose un scénario préoccupant qui peut être caractérisé de la façon suivante:

- Le taux de croissance des revenus touristiques de la région est inférieur à la moyenne mondiale et à d'autres pôles compétitifs, pendant que le taux de croissance de l'arrivée de touristes est supérieur.
- Le taux de croissance de l'entrée de devises étrangères est en déclin.
- L'efficacité (élasticité - arrivées - devises étrangères) dans la génération de devises des pays de la Grande Caraïbe est inférieure à la moyenne mondiale et d'autres destinations compétitives.
- La croissance de la demande nominale du tourisme s'ajuste fondamentalement en termes d'arrivées et non pas en termes de prix, ceci indique une plus lourde charge et une qualité inférieure des services.
- Le tourisme est la source la plus importante de génération de devises pour les pays membres de l'AEC, pris individuellement.
- Les rythmes de croissance dans un ensemble sont toujours élevés et le tourisme est l'activité dynamique qui stimule d'autres activités de l'économie, mais cette situation peut être trompeuse et ne permet pas de remarquer les réalités externes négatives qui se produisent comme résultat du développement de l'activité.

Les membres de l'AEC, conscients de la susceptibilité de cette complexe activité économique, élaborent une stratégie de consolidation de celle-ci basée sur une série de plans visant à une certaine standardisation régionale ainsi que la coopération et l'interaction des Pays, Etats et Territoires, destinées à formuler une stratégie pour un marché régional, tout en maintenant la diversité et l'individualisme de chaque Etat, Pays ou Territoire.

Dans ce cadre contradictoire de croissance et pièges à l'égard de l'activité principale dans la région de la Grande Caraïbe - de tourisme, est née la proposition de la ZONE DE TOURISME DURABLE DE LA CARAÏBE (ZTDC) - alternative la plus audace et réaliste dont l'objectif final consiste à consolider notre activité fondamentale du XXIème siècle, en dépit de la concurrence et les grands défis auxquels nous devrions certes faire face.

LA ZONA DE TURISMO SUSTENTABLE EN EL CARIBE

La Primera Cumbre de Jefes de Estado y de Gobierno celebrada en Trinidad y Tobago en 1995, se definieron los temas – prioridades de la agenda de la AEC:

Comercio
Transporte
Turismo

Sobre la base de estas prioridades, en la segunda Reunión del Consejo de Ministros, realizada en La Habana en 1996, retomó el tema del Turismo y se decidió la creación de una Zona de Turismo Sustentable del Caribe (ZTSC), estableciendo para esta tarea un Comité Especial de Turismo.

Los dos años siguientes fueron de arduos esfuerzos por parte del Comité Especial de Turismo, para lograr consensos y un programa de trabajo para la implementación de la ZTSC.

En la Reunión del Consejo de Ministros realizada en Barbados en diciembre de 1998, se aprobaron los documentos, que forman la base en la que se comienza a implementar la ZTSC.

Los tres documentos con los que se le da cuerpo a la ZTSC son: la Declaración para el Establecimiento de la ZTSC, la cual ha sido adoptada por los Jefes de Estado y de Gobierno, el Memorandum de Entendimiento firmado por los Ministros, Secretarios y Jefes de Departamento Encargados de las Relaciones Exteriores de los Estados, Países y Territorios de la Asociación de Estados del Caribe y el Plan de Acción Inmediato. (<http://www.acs-aec.org>)

3.1. LA DECLARACION PARA EL ESTABLECIMIENTO DE LA ZONA DE TURISMO SUSTENTABLE DEL CARIBE

Este documento es la síntesis de todas las acciones, los principios y las estrategias, descritas en el Memorandum de Entendimiento y el Plan de Acción.

La misma presenta dos partes complementarias:

La primera que plantea los antecedentes de la ZTSC, expresado en las diferentes reuniones y documentos aprobados, así como principios básicos de aceptación de la estrategia, el paradigma de desarrollo que ella implica,

3. THE SUSTAINABLE TOURISM ZONE OF THE CARIBBEAN

At the First Summit of Heads of State and Government held in Trinidad and Tobago in 1995, the priority areas of the ACS agenda were defined as follows:

- Trade
- Transport
- Tourism

Based on these priorities, the subject of Tourism was re-examined at the second Meeting of the Ministerial Council convened in Havana in 1996, and it was decided to create the Sustainable Tourism Zone of the Caribbean (STZC), and to set up a Special Committee on Tourism for this purpose.

Over the next two years, the Special Committee on Tourism worked laboriously to achieve consensus on a work programme for the implementation of the STZC.

At the Ministerial Council Meeting held in Barbados in December 1998, the background documents used in implementing the STZC were approved.

The three documents supporting the STZC are: The Declaration for the Establishment of the STZC, adopted by Heads of State and Government, the Memorandum of Understanding signed by Ministers, Secretaries and Heads of Departments of Foreign Affairs of the States, Countries and Territories of the Association of Caribbean States, and the Immediate Plan of Action. (<http://www.acs-aec.org>)

3.1 DECLARATION FOR THE ESTABLISHMENT OF THE SUSTAINABLE TOURISM ZONE OF THE CARIBBEAN

This document summarises all the actions, principles and strategies described in the Memorandum of Understanding and Plan of Action.

It is presented in two complementary parts:

*The first describes the background to the STZC, discussed at different meetings and in approved documents, as well as basic principles for accepting the strategy and the development paradigm involved. Among these, the most noteworthy are:

3. LA ZONE DE TOURISME DURABLE DE LA CARAIBE

Lors du Premier Sommet des Chefs d'Etat et de Gouvernement qui s'est tenu à la Trinité-et-Tobago en 1995, les thèmes prioritaires sur l'agenda de la AEC ont été définis comme suit:

- Le Commerce
- Le Transport
- Le Tourisme

Basé sur ces priorités, lors de la deuxième Réunion du Conseil de Ministres qui a été réalisée à la Havane en 1996, le thème du Tourisme a refait surface et l'on s'est mis d'accord pour créer la Zone de Tourisme Durable de la Caraïbe (ZTDC), tout en constituant un Comité Spécial sur le Tourisme qui sera responsable de cette tâche. Les deux ans prochains ont été marqués par des efforts intensifs de la part du Comité Spécial sur le Tourisme dans le but d'avoir le consensus ainsi qu'un programme de travail pour la mise en œuvre de la ZTDC. Lors de la Réunion du Conseil de Ministres qui s'est tenue à la Barbade en décembre 1998, l'on a approuvé les documents qui constituent la base de l'étape préliminaire de la mise en œuvre de la ZTDC.

Les trois documents qui donnent forme à la ZTSC sont: la Déclaration de la Création de la ZTDC, qui a été adoptée par les Chefs d'Etat et de Gouvernement, le Protocole d'Accord signé par les Ministres, Secrétaires et les Chefs des Départements chargés des Affaires Etrangères des Etats, Pays et Territoires de l'Association des Etats de la Caraïbe et le Plan d'Action Immédiat. (<http://www.acs-aec.org>)

3.1. LA DÉCLARATION DE LA CRÉATION DE LA ZONE DE TOURISME DURABLE DE LA CARAIBE

Ce document est la synthèse de toutes les actions, stratégies et tous les principes énoncés dans le Protocole d'Accord et le Plan d'Action.

Celle-ci présente deux parties complémentaires:

* La première qui présente les antécédents de la ZTDC, exprimée lors des différentes réunions et dans des documents approuvés, ainsi que des principes fondamentaux d'acceptation de la stratégie et le paradigme de développement que celle-ci implique, sont entre autres:

- El envejecimiento prematuro de los polos turísticos y su rápida desvalorización.
- Los cambios en la preferencia del consumidor del producto turístico.
- Las grandes afectaciones al medio ambiente terrestre y marítimo.

A estos problemas, la iniciativa de la ZTS contrapone respuestas viables, por ello se plantea:

- Garantizar la generación de divisas-empleos-producto (PIB) del turismo que es el motor de nuestras economías.
- Garantizar la participación de la comunidad en la planificación y en los beneficios de la actividad turística. El turismo transforma las sociedades y los espacios, por ello los ciudadanos deben asumir esta realidad y participar en la definición y control de las áreas turísticas, a través de los mecanismos del estado y los propios que genera la sociedad civil.
- Conservar el ambiente y la cultura, que son el patrimonio fundamental de nuestros países y tienen un rol importante en el desarrollo de la actividad turística.
- Garantizar la rentabilidad privada y social del sector.

¿Cómo abordar estas líneas estratégicas que implican una respuesta integral a nuestros grandes problemas de desarrollo? La respuesta a esta interrogante se planteó y quedó acordada en los documentos que generó el Comité Especial de Turismo, que a continuación pasamos a analizar.

- The premature ageing of tourist spots and their rapid devaluation.
- Changes in consumer preference for the tourism product.
- The major factors affecting the atmosphere on land and in the sea.

The STZ initiative is a viable response to these problems, and therefore aims to:

- Guarantee the generation of foreign exchange-jobs-product (GDP) by tourism, which is the driving force of our economies.
- Guarantee community participation in tourism planning and in the benefits of this activity. Tourism transforms societies and spaces, and citizens must accept this and help to define and control tourist areas through mechanisms introduced by the state and those generated by civil society itself.
- Conserve the environment and culture, which are the fundamental patrimony of our countries, and which plays an important role in the development of tourism.
- Guarantee the sector's private and social profitability.

How can we approach these strategies which call for an integrated response to our main developmental problems? The response to this question was proposed and agreed upon in documents produced by the Special Committee on Tourism, which will now be examined.

grands problèmes qui affectent le tourisme dans la région:

- Le vieillissement précoce des pôles touristiques et leur dépréciation rapide.
- Les changements de préférence de la part du consommateur à l'égard du produit touristique.
- Les énormes effets sur l'environnement terrestre et maritime.

L'initiative de la ZTD propose des réponses viables à ces problèmes, par exemple:

- Garantir la génération de devises étrangères - emplois - produit (PIB) du tourisme qui est le véritable moteur de nos économies.
- Garantir la participation de la communauté dans la planification et les bénéfices de l'activité touristique. Le tourisme transforme les sociétés et les espaces et pour cette raison, les citoyens doivent assumer cette réalité et participer dans la définition et le contrôle des zones touristiques, moyennant les mécanismes de l'Etat et ceux que génère la société civile.
- Préserver l'environnement et la culture - le patrimoine fondamental de nos pays qui jouent un rôle important dans le développement de l'activité touristique.
- Garantir la rentabilité privée et sociale du secteur.

Comment aborder ces lignes stratégiques qui impliquent une réponse intégrale à nos grands problèmes de développement? La réponse à cette question a été proposée et l'on s'est mis d'accord là-dessus dans les documents qu'a générés le Comité Spécial sur le Tourisme que nous pourrions analyser ci-après.

- El turismo industria estratégica de los países miembros de la AEC.
- Elección de una alternativa de desarrollo basada en la sustentabilidad.
- La sustentabilidad es la base para un desarrollo equitativo.
- La integración contribuye a contrarrestar la vulnerabilidad de los países y economías de menor desarrollo.

La segunda presenta los Principios que orientarán la acción coordinada de los gobiernos para la implementación de la ZTSC:

- LA SUSTENTABILIDAD, como condición.
- LA REGION, como unidad cultural, socioeconómica y biológica.
- EL TURISMO COMO EJE DE LAS ECONOMIAS e instrumento estratégico para el desarrollo de la mayoría de los países de la región.
- LA COOPERACION, como uno de los medios para lograr la sustentabilidad turística.
- EL CONSENSO, como base de la sustentabilidad (gobierno, sector privado, sociedad civil y organismos Internacionales)
- LA COMPETITIVIDAD debe fundamentarse en la sustentabilidad.
- LA INTEGRACION REGIONAL, COMO PROPOSITO, ya que el esfuerzo conjunto de países y otros actores genera una dinámica, que favorece la integración económica.

3.2. MEMORANDUM DE ENTENDIMIENTO

Este acuerdo firmado entre los Estados, Países y Territorios que forman parte de la AEC, reafirma el trabajo de los miembros en la creación de la ZTSC, actividad a la que se suman el resto de los Comité Especiales de la AEC y los Grupos técnicos de la propia Asociación, las organizaciones internacionales y las especializadas en el tema de la ZTSC.

Como inicio de la estrategia de la ZTSC, acuerdan la ejecución de un Plan de Acción Inmediato, que define doce líneas estratégicas.

- Tourism as a strategic industry in ACS member countries.
- The selection of a development alternative based on sustainability.
- Sustainability is the basis of equitable development.
- Integration helps to counteract the vulnerability of less developed countries and economies.

The second presents the Principles which are to guide co-ordinated action by governments for implementing the STZC.

- SUSTAINABILITY as a condition.
- THE REGION as a cultural, socio-economic and biological unit.
- TOURISM AS THE BASIS OF ECONOMIES and a strategic instrument for the development of most countries of the region.
- CO-OPERATION as one means of achieving sustainability in tourism.
- CONSENSUS as a basis of sustainability (Government, private sector, Civil society and International Organisations)
- COMPETITIVENESS must be based on sustainability.
- REGIONAL INTEGRATION AS AN OBJECTIVE, since the joint efforts of countries and other actors generate a dynamic force, which favours economic integration.

3.2 MEMORANDUM OF UNDERSTANDING

This agreement signed by States, Countries and Territories of the ACS reaffirms the members' task of creating the STZC, with the additional input of the other ACS Special Committees and the technical Working Groups of the Association itself, international organisations and those specialised in the subject of the STZC.

The STZC strategy began with the agreement to execute an Immediate Plan of Action along twelve strategic lines.

la région.

- Le tourisme - industrie stratégique des pays membres de l'AEC.
- La sélection d'une alternative de développement basée sur la durabilité.
- La durabilité est la base d'un développement équitable.
- L'intégration contribue à l'arrestation de la susceptibilité des pays et économies moins développées.

La deuxième présente les Principes qui guident l'action coordonnée des gouvernements pour la mise en œuvre de la ZTDC.

- LA DURABILITÉ en tant que condition.
- LA RÉGION en tant qu'unité culturelle, socio-économique et biologique.
- LE TOURISME EN TANT QU'AXE DES ÉCONOMIES et instrument stratégique pour le développement de la plupart des pays de la région.
- LA COOPÉRATION comme un des moyens pour avoir un tourisme durable.
- LE CONSENSUS, comme base de la durabilité (Gouvernement, secteur privé, Société civile et Organisations Internationales)
- LA COMPÉTITIVITÉ devrait se fonder sur la durabilité.
- L'INTÉGRATION RÉGIONALE EN TANT QUE BUT, puisque les efforts collectifs des pays et autres agents génèrent une dynamique qui favorise l'intégration économique.

3.2. PROTOCOLE D'ACCORD

Cet accord signé par les Etats, Pays et Territoires qui forment partie de l'AEC réaffirme l'effort des membres visant à la création de la ZTDC - activité à laquelle se consacrent les autres Comités Spéciaux de l'AEC et les Groupes techniques de ladite Association, les organisations internationales et agences spécialisées en matière de la ZTDC.

Comme début de la stratégie de la ZTDC, l'on s'est mis d'accord pour la mise en œuvre d'un Plan d'Action Immédiat qui définit douze lignes stratégiques.

PLAN DE ACCION INMEDIATO

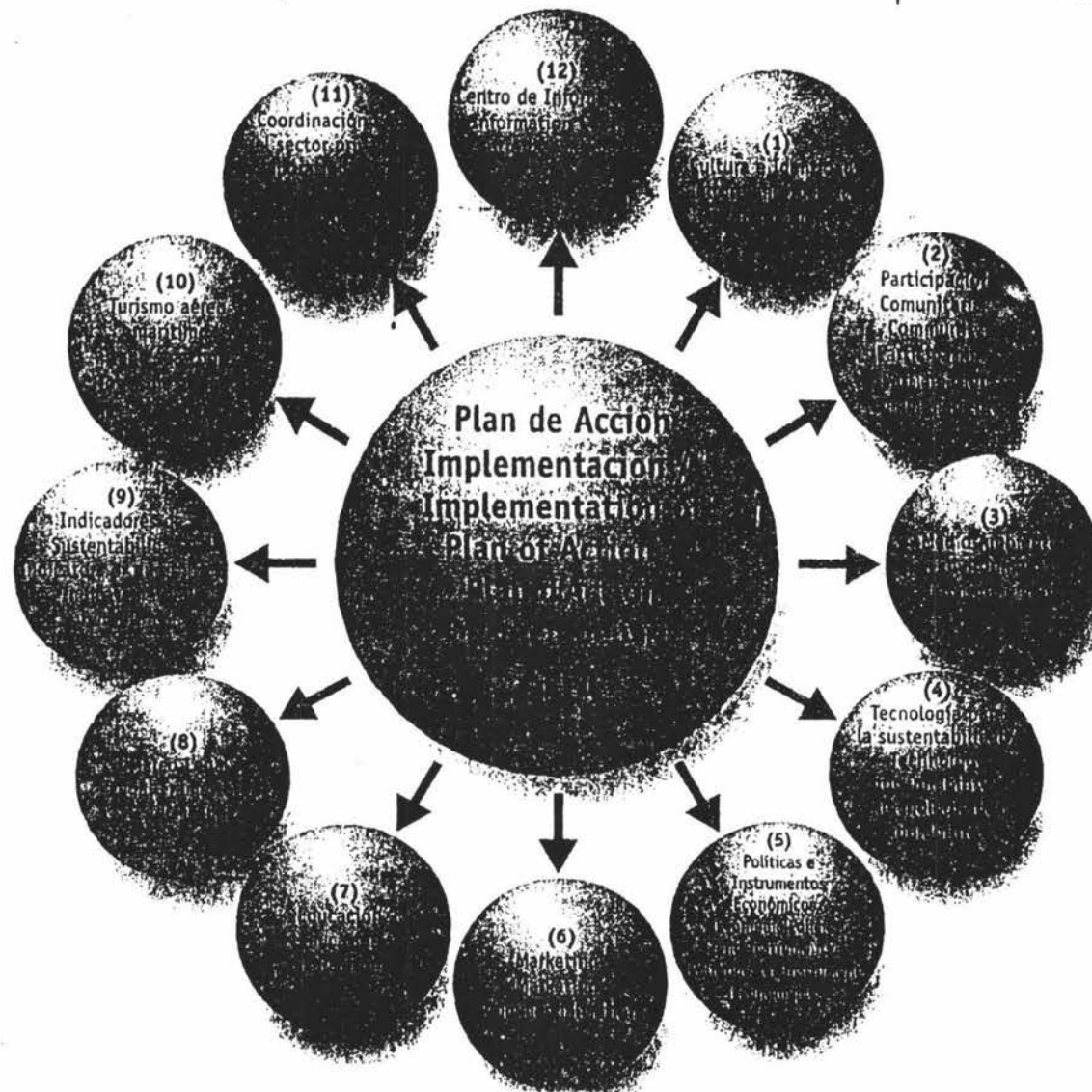
Este documento sintetiza en términos operativos la implementación de la ZTSC en su primera etapa. El mismo está compuesto de doce estrategias, y éstas a su vez, se expresan en cuarenta y tres acciones generales y ciento veintisiete tareas particulares, para operativizar a las mismas. Todas las acciones pueden ser definidas como de corto y mediano plazo.

3.3 THE PLAN OF ACTION FOR THE PERIOD 1999-2000

This document gives an operational summary of the implementation of the STZC in its first phase. This is made up of twelve strategies, and these are further sub-divided into forty-three general actions and one hundred and twenty-seven specific tasks for putting them into operation. All the actions can be described as short and medium term.

3. 3. LE PLAN D'ACCION POUR LA PÉRIODE 1999- 2000

Ce document résume en termes opérationnels la mise œuvre de la ZTDC dans sa première étape. Celui-ci est composé de douze stratégies et celles-ci à leur tour se expriment en quarante-trois actions générales et cent vingt-sept tâches particulières pour faire fonctionner les stratégies. Toutes les actions peuvent être définies comme étant court et de moyen terme.



objetivos y cómo que tienen cada una de las estrategias y analizaremos las principales acciones para su implementación.

3.3.1.CULTURA E IDENTIDAD:

El mar Caribe ha sido durante los últimos cinco siglos el puente de comunicación entre las Américas y el escenario de enfrentamiento de las grandes potencias coloniales e imperiales, lo cual derivó en la formación de un mundo de gran complejidad y diversidad, tanto de razas como de credos y culturas, y que hoy es un patrimonio fundamental de nuestro continente: el mundo Caribe.

El turismo que es la actividad más importante en la región, tanto por el empleo generado como por los ingresos y los profundos cambios que promueve; y la globalización como escenario mundial homogenizador, crean un gran reto para esta comunidad de países que tienen entre sus principales desafíos el mantener la cultura e identidad como elementos integradores.

Las poblaciones locales conviven gran parte del año en medio de un número de visitantes que muchas veces es mayor a la población total del país, lo que conlleva a una compleja relación que tiende a imponer un proceso de aculturación. Esta es una fuerte amenaza para la identidad regional del mundo Caribe que está formado por un crisol de razas unidas por un pasado común y una geografía de múltiples contrastes, lo cual aún nos permite percibir una identidad única en lo general y otra profundamente diversa en lo particular. De ahí la necesidad de realizar una serie de acciones orientadas a consolidar e integrar lo más importante de nuestras sociedades, la cultura e identidad, un reto al cual esta propuesta regional no puede dejar de prestar atención, y es por ello que se plantea los siguientes objetivos para los próximos dos años:

- Contribuir a la protección de los valores culturales de los países de la región.
- Contribuir a la consolidación de la identidad caribeña común, pero manteniendo la diversidad.

Ambos objetivos, parten de dos planteamientos, por un lado, el de recuperar todas las manifestaciones culturales y por el otro, promover éstas en todos los niveles y en todos los escenarios posibles.

proceed with the implementation of the strategies, and evaluate the main actions for their implementation.

3.3.1 CULTURE AND IDENTITY:

Over the last five centuries, the Caribbean Sea has been a bridge providing communication between the Americas, and the scene of confrontation among the colonial and imperial powers, which contributed to the formation of a very complex and diverse world in terms of race, creed and culture, and which today is the fundamental heritage of our continent: the Caribbean world.

Tourism, which is the most important activity in the region, because of the employment and income it generates, and because of the major change it promotes, and globalisation, which is a phenomenon of world-wide homogenisation, create a major challenge for this community of countries whose principles include maintaining culture and identity as elements of integration.

Local populations live much of the year among numbers of visitors who frequently outnumber the country's total population, and this leads to a complex relationship which tends to impose a process of acculturation.

This poses a great threat to the regional identity of the Caribbean, which is a melting pot of races united by a common past and a geography of multiple contrasts, which in general, have still allowed us to perceive a single identity, and in particular, another which is profoundly diverse.

It is therefore necessary to carry out a number of actions aimed at consolidating and integrating the most important aspects of our societies - culture and identity, a challenge to which this regional proposal cannot avoid paying attention, and the following objectives are proposed for the next two years:

- Contribute to the protection of the cultural values of the countries of the region.
- To contribute to the consolidation of the common Caribbean identity, while maintaining its diversity.

Both objectives are based on two notions - recovering all forms of cultural expression, and promoting them at all levels in all possible scenarios.

chacuna de las estrategias y nous allons analyser les principales actions destinées à leur mise en œuvre.

3.3.1.CULTURE ET IDENTITÉ:

La Mer de la Caraïbe a été au cours de derniers cinq derniers siècles le pont de communication entre les Amériques et la scène de conflit des grandes puissances coloniales et impérialistes, ce qui a résulté dans la formation d'un monde de la plus grande complexité et diversité, autant en termes de race qu'en termes de croyances et cultures, et cette Mer est devenue dans l'actualité un patrimoine fondamental de notre continent: le monde de la Caraïbe. Le tourisme constitue l'activité la plus importante de la région, autant pour l'emploi généré que pour les revenus et profonds changements qu'il provoque; et la globalisation comme scénario mondial d'homogénéisation, créent un grand défi pour cette communauté de pays dont les principaux défis comprennent le maintien de la culture et l'identité comme éléments d'intégration.

Les populations locales cohabitent pendant la plupart de l'année au milieu d'un nombre important de visiteurs qui souvent représentent un pourcentage supérieur à la population totale du pays, ce qui donne lieu à une complexe relation tendant à imposer un processus de culturisation. Ceci constitue une forte menace à l'identité régionale du monde caraïbe qui est constitué d'un mélange de races unies par un passé commun et une géographie de plusieurs contrastes, ce qui nous permet au moins d'avoir une identité unique en termes généraux et une autre profondément diverse dans l'aspect particulier. D'où la nécessité de réaliser une série d'actions destinées à consolider et intégrer les éléments les plus importants de nos sociétés - la culture et l'identité - défi auquel cette proposition régionale ne peut pas cesser de prêter une attention particulière. C'est justement pour cette raison que celle-ci présente les objectifs suivants pour les prochains deux ans:

- Contribuer à la protection des valeurs culturelles des pays de la région.
- Contribuer à la consolidation de l'identité caraïbe commun, tout en maintenant la diversité.

Tous les deux sont basés sur deux plans. D'une part, celui de récupérer toutes les manifestations culturelles et de l'autre, promouvoir celles-ci à tous les niveaux et dans tous les scénarios possibles.

Para implementar estos propósitos se realizarán diferentes acciones que combinarán para lograr el resultado esperado.

Se formará una red de los diferentes centros de estudios, institutos de cultura, universidades, centros culturales y demás instituciones regionales, con el objeto de poder realizar una doble tarea: por un lado hacer un inventario de las manifestaciones culturales de cada país y la región en general o por zonas, y por el otro, estrechar los lazos entre las culturas e investigadores de esta actividad para poder hacer permanente este macroforo de la cultura caribeña.

Promover ante la UNESCO, la declaratoria de importantes sitios históricos y ambientes de la región como patrimonio de la humanidad, con el objeto de poder así tener un mejor manejo de éstos, y a su vez lograr apoyos para mantenerlos y aprovecharlos para fines turísticos.

En el ámbito de la difusión, se pretende abarcar todos los espacios de nuestra sociedad, desde la población en general hasta las escuelas, llegando a las universidades y muy especialmente a las carreras ligadas con el desarrollo del turismo.

A nivel promoción, se plantea apoyar los principales festivales de la región como es el caso del CARIFESTA, pero también abrir nuevos encuentros regionales e internacionales como podrían ser los festivales del Ron y del Tabaco, ambos expresión de cuatro siglos de historia colonial y luego nacional, a través de la Economía de Plantación.

Una última acción es la creación de un premio regional dedicado a las diferentes manifestaciones de la cultura caribeña.

3.2. PARTICIPACION COMUNITARIA

El turismo es una actividad compleja en donde participan muchos actores y promotores. De ellos, destacan dos, los pueblos emisores y los pueblos receptores, a los primeros se les tratará de sensibilizar sobre las costumbres y cultura del Caribe a través de campañas masivas de difusión y promoción en el extranjero; a los segundos, es decir los receptores se le concientizará con amplios programas tendidos al conocimiento del significado amplio del turismo y la estrategia de

To implement these objectives, a number of actions have been combined for achieving the desired outcome.

- Form a network of the different study centres, cultural institutes, universities, cultural centres and other regional institutions in order to undertake a double task: on one hand, prepare an inventory of the different forms of cultural expression in each country and the region as a whole, or by areas, and on the other, forge closer ties between cultures and researchers, thereby creating a permanent macro-forum for Caribbean culture.
- Promote at the UNESCO forum, the declaration of important historical sites and environments in the region as the patrimony of mankind, with the objective of better managing them, and in turn obtaining support for their maintenance and use for the purpose of tourism.
- In the area of dissemination of information, it is hoped that every area of our society will be reached, from the population at large to schools, universities, and particularly professions associated with tourism development.
- At the promotional level, the main festivals in the region such as CARIFESTA will be given support, but in addition, new regional and international events such as the Rum and Tobacco festivals, which are both expressions of four centuries of colonial, then national history, through the plantation economy, will be initiated.
- One final activity will be the creation of a regional award for the different forms of cultural expression in the Caribbean.

3.3.2 COMMUNITY PARTICIPATION

Tourism is a complex activity involving a number of actors and promoters. Among these, the most notable are the peoples who provide it, and those who receive it. Attempts will be made to sensitise the former on Caribbean culture and customs through massive dissemination and promotion campaigns abroad. The latter, that is Caribbean people, will be made aware through programmes for imparting the broad meaning of tourism as well as the STZC strategy.

Afin de réaliser ces buts, il faut combiner par un certain nombre d'actions dont l'ensemble donne le résultat attendu.

- Créer un réseau incorporant les différents centres d'études, instituts de culture, universités, centres culturels et d'autres institutions régionales dans le but de pouvoir réaliser une double tâche: d'une part faire l'inventaire des manifestations culturelles de chaque pays et de la région en général ou par zones, et de l'autre part, faire de sorte qu'il y ait un plus intensif rapprochement entre les cultures et les chercheurs de cette activité pour rendre permanent ce macroforum de la culture caraïbe.
- Promouvoir devant l'UNESCO la déclaration d'importants sites historiques et écologiques dans la région comme patrimoine de l'humanité dans le but de pouvoir ainsi les gérer mieux, et à la fois, procurer le soutien nécessaire à leur maintien et exploitation dans l'intérêt touristique.
- A l'égard de la diffusion, l'on espère utiliser tous les espaces de notre société - depuis le grand public jusqu'aux écoles, universités et en particulier, les carrières liées au développement du tourisme.
- Au niveau de la promotion, l'on a proposé de soutenir les principaux festivals de la région tels que CARIFESTA, mais aussi d'ouvrir de nouvelles rencontres régionales et internationales comme par exemple, le Festival du Rhum et du Tabac - toutes les deux expressions de quatre siècles de l'histoire coloniale et puis nationale moyennant l'économie de la Plantation.
- Une dernière action est la création d'un prix régional consacré aux différentes manifestations de la culture caraïbe.

3.3.2. PARTICIPATION COMMUNAUTAIRE

Le tourisme est une activité complexe où se trouvent plusieurs agents et promoteurs dont deux se mettent en relief: les pays d'émission et les pays d'accueil. L'on va essayer de sensibiliser ceux-ci sur les coutumes et culture de la Caraïbe moyennant des campagnes intensives de diffusion et promotion à l'étranger. Dans le deuxième cas, c'est à dire les pays de la Caraïbe, il faudra les sensibiliser moyennant des programmes intensifs sur la connaissance de l'importance du tourisme et la stratégie de la ZTDC.

sentido estricto, sino que debemos promover un desarrollo equilibrado al interior de nuestros pueblos para hacer posible la sostenibilidad. El conocimiento por parte de la sociedad de acogida, los pueblos de la Zona de Turismo Sustentable del Caribe, le permitirá vislumbrar nuevos marcos para actitudes y acciones en sociedades turísticas. De allí que el objetivo principal sea el de promover la participación de la comunidad en la toma de decisiones, la planificación y en general, en los beneficios y en la solución de problemas que genera la actividad turística.

Para enfrentar este reto, se plantea una estrategia desde los dos grandes actores en nuestras sociedades: el estado como agente de gestión y cambio y la sociedad civil como nuevo actor emergente, en este fin de siglo de la era de la globalización.

Las estrategias para lograr este fin son:

- Integrar en una amplia comisión a los organismos del estado, instituciones mixtas y de la sociedad civil, con el objeto de elaborar una estrategia de promoción de la ZTSC en la comunidad.
- Promover e impulsar desde las propias comunidades propuestas para consolidar un desarrollo turístico sustentable en el marco de la ZTSC.
- Realizar una campaña permanente de promoción de la ZTSC en las comunidades, para mantenerlas alerta y vigilantes sobre el desarrollo del turismo en la región.

in the strict sense, but that we must promote balanced development among our peoples to make sustainability possible. Knowledge on the part of the receiving society, the peoples of the Sustainable Tourism Zone of the Caribbean, will allow it to perceive new frameworks for attitudes and actions in tourism-oriented societies. The main objective should therefore be to promote community participation in decision-making, planning, and in general, in the benefits and in the solution to problems generated by tourism activity. One strategy for facing this challenge involves the two main actors in our societies - the state as an agent of management and change, and the civil society as a new emerging actor, at the close of the century in this era of globalisation.

The strategies for achieving this are:

- Setting up a broad-based committee comprising state bodies, mixed institutions and those of civil society with the aim of devising a strategy for promoting the STZC in the community.
- Promoting and encouraging from these very communities proposals for consolidating sustainable tourism development in the framework of the STZC.
- Undertaking a permanent promotion campaign for the STZC within communities, for keeping them alert and vigilant where tourism development in the region is concerned.

écosystèmes dans le sens stricte du terme, sinon que nous devrions promouvoir un développement équilibré à l'intérieur de nos pays pour rendre possible un tourisme durable. Les connaissances obtenues par les sociétés d'accueil - les pays de la Zone de Tourisme Durable de la Caraïbe - permettra la formulation de nouveaux cadres pour les attitudes et actions au sein des sociétés touristiques. D'où l'objectif principal de promouvoir la participation de la communauté dans la prise de décisions, la planification et en général, dans les bénéfices et la résolution de problèmes générés par l'activité touristique. Pour faire face à ce défi, l'on propose une stratégie à être mise en œuvre par les deux grands agents de nos sociétés: l'Etat en tant qu'agent de gestion et de changement et la société civile en tant que nouvel agent émergent de cette fin de siècle à l'époque de la globalisation.

Les stratégies formulées pour réaliser ces objectifs sont:

- Incorporer dans une commission équilibrée les agences de l'Etat, des institutions mixtes et de la société civile dans le but d'élaborer une stratégie de promotion de la ZTDC dans la communauté.
- Promouvoir et stimuler au sein des mêmes communautés des propositions pour consolider un développement touristique durable dans le cadre de la ZTDC.
- Réaliser une campagne permanente de promotion de la ZTDC dans les communautés pour les maintenir alertes et vigilantes sur le développement du tourisme dans la région.

El sentido de este componente es fundamental, que la sustentabilidad implica una participación en la planeación, en la gestión y en la promoción del turismo, por ello no se puede asumir como único responsable al Estado ya que el desarrollo sustentable implica una distribución equitativa y una responsabilidad compartida entre gobierno y la sociedad.

3.3.3. MEDIO AMBIENTE

El medio ambiente es el escenario natural donde se desarrolla la actividad turística en esta región tropical, el mismo es una compleja realidad de ecosistemas marinos y terrestres que están interrelacionados de manera de que la afectación de uno incide en el otro y viceversa.

Si bien la sociedad, ya comienza a tomar conciencia de los problemas que trae consigo el alterar o destruir los ecosistemas, aún está lejos de transformarse en un verdadero defensor de éstos, ya que muchos de los problemas que son del dominio público como es el caso del adelgazamiento de la capa de ozono, no son perceptibles por la mayoría de la población. Pero en contrapartida, hay cada vez más empresas, que respondiendo a la demanda del consumidor exigen a los hoteles y prestadores de servicios ciertos niveles de calidad ambiental para continuar con la relación comercial.

The meaning of this component is essential, because sustainability implies participation in tourism planning, management and promotion. To this end, the State cannot be solely responsible, since sustainable development implies equitable distribution and shared responsibility between government and society.

3.3.3 ENVIRONMENT

The environment is the natural scenario for tourism in this tropical region. It is a complex set of marine and land-based ecosystems which are inter-linked in such a way that when one is affected, so are the others, and vice-versa.

Although society is becoming aware of the problems brought about by the changes in or destruction of ecosystems, it is still far from becoming its true defender, since many of the problems, such as the thinning of the ozone layer, fall within the public domain, and cannot be perceived by most of the population. However, there is a growing number of businesses which, in response to consumer requests, have demanded that hotels and other service providers ensure specific levels of environmental quality in order to maintain their business relationship. Environmental balance sought in sustainable development will have a significant effect on tourism as the region's most dynamic activity.

Le sens propre de cet élément est fondamental, parce que la durabilité implique une participation dans la planification, gestion et promotion du tourisme. A cet égard, l'On ne peut pas assumer que l'unique responsable c'est l'Etat puisque le développement durable implique une distribution équitable et une responsabilité partagée par le gouvernement et la société.

3.3.3. L'ENVIRONNEMENT

L'environnement est le scénario naturel où l'activité touristique s'effectue dans cette région tropicale. Il s'agit d'une complexe réalité d'écosystèmes marins et terrestres qui sont liés de façon à ce que les effets sentis sur l'un aient un impact sur l'autre et viceversa.

Si en fait la société a déjà commencé à être consciente des problèmes qui résultent dans la modification et la destruction des écosystèmes, elle reste toujours loin de se convertir dans un véritable défenseur de ceux-ci puisque beaucoup des problèmes qui sont dans le champ public, comme par exemple la dégradation de la couche d'ozone, ne sont pas perceptibles par la plupart de la population. Mais de l'autre part, il y a de plus en plus d'entreprises qui répondent à la demande du consommateur qui exige que les hôtels et fournisseurs des services respectent un certain niveau de qualité écologique afin de pouvoir perpétuer les rapports commerciaux.



sustentable tendrá una gran incidencia en el turismo como la actividad más dinámica de la región.

Para el caso de esta actividad, ya hay una larga experiencia en el Mediterráneo, primer destino de sol y playa en el mundo, o en las islas del Pacífico Tropical, quizás la región donde la aculturación llega a su mayor expresión. Estas dolorosas experiencias, aunadas a nuevas técnicas de prevención y control de daños ambientales, permitirán prevenir acciones u omisiones que incidan negativamente en el medio ambiente y así ser capaces de mantener en forma sostenida esta riqueza de capital natural que hoy tenemos. La ZTSC, ha tomado con mucha atención este problema planetario, ya que hoy en día los países emisores de visitantes, mayoritariamente del primer mundo, han comenzado a evaluar la sustentabilidad de los hoteles, las zonas costeras, en general, todos los ecosistemas en los que se desarrolla el turismo y cuando éstos no se ajustan a determinados parámetros, son excluidos como destinos turísticos. El objetivo principal del Plan de Acción para esta área se basa en el desarrollo y aplicación de modelos de preservación, conservación y aprovechamiento, desde una perspectiva sustentable en las zonas de uso turístico.

Para ello se han elaborado cuatro líneas estratégicas que son:

- Desarrollar, aplicar y luego promover, modelos de ordenamiento espacial en zonas de desarrollo turístico, que es el punto de partida para un desarrollo sustentable.
- Formular, experimentar y luego promover programas de manejo para las áreas protegidas, que están siendo utilizadas con fines turísticos, un mecanismo que permite lograr un uso sostenible, a zonas que por sus características se deben conservar.
- Definir criterios mínimos que deben considerarse en los desarrollos turísticos y en su gestión, con el objeto de reducir el impacto de las obras y el uso del espacio dentro de los marcos de la sostenibilidad
- Generar un proceso de intercambio de experiencias a fin de lograr una mayor perspectiva de los problemas y soluciones posibles y hacer de este instrumento de socialización un mecanismo permanente entre los entes especializados del estado y otros organismos de la sociedad civil.

both in the Mediterranean, the world's premier sun, sea and sand destination, and in the tropical Pacific islands, which is perhaps the region where aculturation has reached its highest level.

These painful experiences, together with new technologies for the prevention and control of environmental damage, will help to prevent actions or omissions which have a negative effect on the environment, thus making it possible to continue to sustain this natural capital wealth we have today.

The STZC has paid close attention to this global problem, because today, the visitors' home countries, many of which are in the first world, have begun to evaluate the sustainability of hotels, coastal areas in general, and all the ecosystems where tourism is based, and when they do not conform to certain parameters, they are excluded as tourism destinations.

The main objective of the Plan of Action for this area concerns the development and application of models for the sustainable preservation, conservation and use, of areas used by tourists.

For this purpose, four broad strategies have been prepared:

- Develop, apply and promote models for the use of space in tourism development areas, which is the starting point for sustainable development.
- Formulate, test and promote management programmes for protected areas used for tourism. This is a mechanism which can lead to the sustainable use of areas which, because of their nature, require conservation.
- Define minimum sustainability criteria which must be taken into account when developing and managing tourism areas, in an effort to reduce the impact of work done and the use of space.
- Generate a process of exchange of experiences so as to achieve a wider appreciation of possible problems and solutions, and make this socialisation instrument a permanent mechanism among specialised state bodies and other organisations in the civil society.

aura un grand impact sur le tourisme en tant que activité la plus dynamique de la région. Dans le cas de cette activité, il y a déjà une vaste expérience autant dans la Méditerranée - première destination de soleil et de plage dans le monde, que dans les îles du Pacifique Tropical, - peut-être la région où l'acculturation trouve ses meilleures expressions. Ces pénibles expériences, grâce aux nouvelles techniques de prévention et de contrôle de dommages écologiques, nous permettent de prévenir des actions ou omissions qui ont un impact négatif sur l'environnement et donc, sont capables de maintenir d'une façon durable cette richesse de capital naturel que nous avons à l'heure actuelle. La ZTDC a porté un grand intérêt à ce problème mondial puisque de nos jours, les pays d'émission de visiteurs, en grande partie en provenance du monde développé, ont commencé à évaluer la durabilité des hôtels, les zones côtières, et en général, tous les écosystèmes où se développe le tourisme et quand ceux-ci ne s'ajustent pas à des paramètres déterminés, ils sont exclus comme destinations touristiques. L'objectif principal du Plan d'Action pour cet espace est basé sur le développement et la mise en œuvre de modèles de préservation, conservation et exploitation, d'une perspective durable dans les zones d'utilisation touristique.

A cet égard, l'on a élaboré quatre lignes stratégiques, à savoir:

- Développer, mettre en œuvre et puis promouvoir des modèles de planification territoriale des zones de développement touristique qui est, en effet, le point de départ pour un développement durable.
- Formuler, tester et puis promouvoir des programmes de gestion de zones protégées exploitées pour des buts touristiques - mécanisme qui permettra l'exploitation durable de zones qui, dû à leurs caractéristiques, il faut conserver.
- Définir les critères minimaux qui devraient être considérés dans le cas du développement touristique et sa gestion dans le but de réduire l'impact des travaux et l'utilisation de l'espace dans le cadre de la durabilité.
- Générer un processus d'échange d'expériences dans le but d'avoir une meilleure perspective sur les problèmes et solutions éventuelles et faire de cet instrument de socialisation un mécanisme permanent pour les agences spécialisées de l'état et d'autres organisations de la société civile.

3.4. TECNOLOGIA PARA SUSTENTABILIDAD

...ado un papel fundamental no sólo
... de los grandes problemas ambientales, sino
... en su prevención.

Por ello, es que una de las áreas a las que más atención
... prestado la ZTSC, es el desarrollo, la promoción, el
... intercambio y la cooperación en materia de tecnologías para
... un desarrollo sostenible.

La tecnología adecuada a nuestra realidad debe enfatizar
... uso de las denominadas tecnologías blandas, que implican
... menor costo sin dejar de cumplir con su objetivo y
... mitirán una asimilación más amplia, no sólo a los
... presarios, sino a toda la sociedad, esto no excluye a las
... tecnologías de punta que pueden traer los inversionistas
... el área turística, que sirven para áreas muy específicas
... como son los controles de las zonas costeras o áreas
... protegidas por sistemas de control satelital.

Los Estados Miembros y Miembros Asociados de la AEC
... conscientes que la tecnología denominada verde tiene
... elevado costo que no siempre se puede cubrir, por ello
... han planteado diferentes líneas de acción para poder
... ceder a tecnologías adecuadas a las necesidades y que
... sean llamadas a jugar un papel fundamental en el éxito de
... ZTSC.

No se trata sólo de aplicar tecnologías sino de generar
... conciencia en la sociedad de que el uso de éstas es
... fundamental para evitar alteraciones irreversibles en nuestros
... sistemas. Esto iría en detrimento de los ingresos, ya
... el turismo es una actividad muy sensible a estos impactos
... cada día aumenta la presión para que haya un mayor control
... sobre los mismos.

3.3.4 TECHNOLOGIE FOR SUSTAINABILITY

Technology has played a key role, not only in the
detection of major environmental problems, but also in their
prevention.

In this regard, one area to which the STZC has paid
greatest attention is development, promotion, exchange and
co-operation in the area of technology to support sustainable
development.

Technology suitable to our reality must place emphasis
on the use of so-called soft technologies, which are less
costly but do not fail to meet their objective, and will provide
for greater assimilation, not only to businessmen but all of
society.

This does not include cutting edge technology which could
be brought by tourism investors, and which are used for
very specific purposes, such as controlling coastal areas or
areas protected by satellite control systems.

ACS Member and Associate Member States are aware that
so-called green technology has a high cost which cannot
always be covered, and a number of different actions have
been proposed for accessing required technology, and which
are required to play an essential role in the success of the
STZC.

It is not simply a question of applying technologies, but
generating a consciousness within society that their use is
essential for avoiding irreversible alterations in our
ecosystems. This would be detrimental to our income, since
tourism is very sensitive to such effects, and the pressure
for greater control over them is increasing daily.

3.3.4. LA TECHNOLOGIE POUR LA DURABILITÉ

La technologie a joué un rôle fondamental non seulement
dans la détection des grands problèmes écologiques sinon
aussi dans leur prévention. C'est justement pourquoi il s'agit
d'un des aspects auquel la ZTDC a prêté une attention
particulière, est le développement, la promotion, l'échange
et la coopération dans le domaine des technologies pour
soutenir un développement durable. La technologie adaptée
à notre réalité devrait mettre en relief l'utilisation des
technologies dites «douces», ce qui implique un coût réduit
sans laisser tomber l'objectif et celles-ci permettront une
assimilation plus ample, non seulement pour les
entrepreneurs, sinon pour toute la société. Ceci n'exclut
pas les technologies de pointe qui peuvent attirer des
investisseurs à l'espace touristique et qui sont fort
recommandables dans des domaines très spécifiques tels
que le contrôle des zones côtières ou des zones protégées
par des systèmes de contrôle satellite.

Les Etats Membres et Membres Associés de l'AEC sont
conscients du fait que la technologie dite «verte» est plus
coûteuse et que l'on n'a pas toujours les moyens de l'avoir
et c'est justement pourquoi l'on a proposé de différentes
lignes d'action afin de pouvoir avoir accès aux technologies
adaptées aux besoins qui sont appelées à jouer un rôle
fondamental dans la réussite de la ZTDC. Il ne s'agit pas non
seulement d'appliquer les technologies sinon de générer une
sensibilisation au sein de la société sur le fait que l'utilisation
de celles-ci est essentielle pour éviter des modifications
irréversibles de nos écosystèmes. Ceci irait au détriment
des revenus puisque le tourisme est une activité très
susceptible à ses effets et tous les jours la pression augmente
pour qu'il y ait un meilleur contrôle de ceux-ci.

3.3.5. POLITICAS E INSTRUMENTOS ECONOMICOS

La ampliación de los espacios habitables, por el crecimiento de la población mundial ha llevado a que los procesos de expansión de la frontera urbana se hagan a expensas de zonas frágiles y con alto nivel de vulnerabilidad, mayoritariamente las zonas costeras que son donde radica la mayor parte de la población mundial.

En el Caribe, el desarrollo del turismo se realiza principalmente en las franjas costeras. Estas zonas son muy vulnerables a las transformaciones que pueden recibir en su geografía así como a altas densidades de construcción o a una sobrecarga de visitantes. Estos cambios generalmente tiene incidencia directa en zonas compartidas como el mar, de ahí la necesidad de que cada gobierno deba asumir el control de esos impactos a partir de generar una política clara de instrumentos económicos, donde las externalidades negativas se reduzcan a favor de mantener la sustentabilidad. Esto es una meta importante de la ZTSC, por ello es que se han definido una serie de estrategias para enfrentar estas contradicciones que genera el desarrollo. Las mismas combinan la acción del sector privado, la sociedad civil y el Estado, el cual debe ejercer el papel rector a partir de una política consensuada con todos los actores que están en juego en esta compleja actividad que es el turismo y que van desde las empresas constructoras, los servicios aéreos y portuarios, el sistema comercial y su infraestructura, a las propias del turismo.

Por esto, el objetivo de esta estrategia es el promover el desarrollo de instrumentos de política, economía y finanzas para poder impulsar un verdadero turismo sustentable. Las principales acciones son:

- Obtener fuentes de financiamiento blandas para aplicar en la ZTSC, para ello se identificarán las mismas y a partir de allí se difundirán en la comunidad de gobiernos del Gran Caribe. A ello se le sumaría asistencia técnica para poder formular los proyectos necesarios para lograr estos financiamientos.
- Proponer, en forma paralela instrumentos para estimular la inversión regida por los principios de un desarrollo turístico sustentable, lo cual implica un desarrollo nacional sustentable.

3.3.5 ECONOMIC POLICIES AND INSTRUMENTS

Because of the increase in habitable spaces as a result of increasing world population, urban borders have expanded at the expense of fragile, highly vulnerable areas, mainly coastal areas where the largest section of the world's population live.

In the Caribbean, tourism has been developed mainly along the coastal strips. These areas are highly vulnerable to changes in their geography, high densities of construction or an excessive influx of visitors. These changes generally have a direct effect on shared areas such as the sea, and each government must assume control of these by establishing a clear policy of economic instruments, in which negative external factors are reduced in favour of maintaining sustainability.

This is an important goal of the STZC, and to this end, a number of strategies have been defined to deal with these contradictions resulting from development. They combine action by the private sector, civil society and the State, which must assume a guiding role based on a policy agreed upon by all the actors involved in the complex activity of tourism - from construction companies, air and port services, the commercial system and its infrastructure to tourism policies.

That is why the objective of this strategy is to promote the development of political, economic and financial instruments in order to promote truly sustainable tourism. The main actions are:

- To obtain sources of soft financing for application in the STZC. These sources will be identified, and distributed within the community of governments of the Wider Caribbean. In addition, there will be technical assistance for formulating the projects required for obtaining such financing.
- To propose in a parallel manner instruments for stimulating investment governed by the principles of sustainable tourism development, which implies national sustainable development.

3.3.5. POLITIQUES ET INSTRUMENTS ÉCONOMIQUES

L'augmentation des espaces habitables, dû à la population mondiale accrue a conduit aux processus d'expansion de la frontière urbaine aux dépens des zones fragiles et hautement susceptibles qui se trouvent en grande partie dans les zones côtières où est située la plupart de la population mondiale.

Dans la Caraïbe, le développement du tourisme se réalise principalement dans les frontières côtières. Ces zones sont très susceptibles aux transformations qui peuvent affecter sa géographie ainsi que les hautes densités de construction ou à une surcharge de visiteurs. Ces changements généralement affectent directement les zones partagées, comme par exemple la mer, d'où la nécessité pour chaque gouvernement d'assumer le contrôle de ces effets moyennant la génération d'une politique claire d'instruments économiques où les réalités externes négatives sont réduites à faveur de maintenir la durabilité. Ceci est un défi important pour la ZTDC, et c'est précisément pour cette raison que l'on a défini une série de stratégies pour faire face à ces contradictions générées par le développement. Celles-ci incorporent l'action du secteur privé, la société civile et l'Etat qui est censé jouer le rôle clé basé sur une politique de consensus avec tous les agents qui sont en jeu dans cette complexe activité qui s'appelle le tourisme et qui comprend les entreprises de construction, les services aériens et portuaires, le système commercial et son infrastructure, et même ceux du tourisme.

Pour cette raison, l'objectif de cette stratégie est de promouvoir le développement d'instruments de politique, économie et finances afin de pouvoir stimuler un véritable tourisme durable.

Les actions principales figurent ci-dessous:

- Procurer des sources de financement dites douces pour les appliquer à la ZTDC. Il faudra donc les identifier et à partir de cette constatation, les diffuser au sein de la communauté de gouvernements de la Grande Caraïbe. Il faudra ensuite fournir de l'assistance technique afin de pouvoir formuler les projets nécessaires à l'obtention de ce financement.
- Proposer d'une façon parallèle des instruments pour stimuler les investissements gouvernés par les principes du développement d'un tourisme durable, ce qui implique

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- Proposer d'une façon parallèle des instruments pour stimuler les investissements gouvernés par les principes du développement d'un tourisme durable, ce qui implique



3.3.6. MERCADEO

El crecimiento cada vez más importante de la actividad turística ha llevado a este sector a ubicarse en los primeros lugares en cuanto a generación de empleo y divisas en el ámbito mundial, lo que implica un gran reto para nuestra región.

El auge de nuevas áreas como el sudeste asiático, una serie de potencias emergentes, alrededor de los grandes países de la región Japón y China, intentan captar gran parte del turismo mundial, lo que obliga a entrar en la compleja carrera por la competencia de mercados a partir de consolidar la calidad y una marca común de referencia.

Ello implica una serie de acciones que parten de la diferenciación y diversificación del producto, ya que si bien hoy el principal atractivo de la región es el sol y la playa, derivado de la situación geográfica en medio del trópico, esto debe ser complementado con otros atractivos como son la cultura, la historia y las zonas de reserva natural, todos ellos patrimonios fundamentales de esta región.

3.3.6 MARKETING

The increasing growth of tourism has made this a leading sector in the generation of employment and foreign exchange throughout the world, and this implies a great challenge for our region.

New areas such as South East Asia, a number of emerging powers surrounding the large countries of the region such as Japan and China, are trying to capture a large part of world tourism. To do this, it is necessary to enter the complex race of competing for markets by consolidating quality and having a common frame of reference.

This involves a number of actions based on product variety and diversification, since today, the region's main attraction is sun, sea and sand, since it is located in a tropical region. This must be complemented with other attractions such as culture, history and natural reserves, which are all part of this region's patrimony.

3.3.6. LE MARKETING

La croissance de plus en plus importante de l'activité touristique a conduit au fait que ce secteur se trouve dans les premiers classements en ce qui concerne la génération d'emplois et devises étrangères au niveau mondial, ce qui implique un grand défi pour notre région.

Suite à l'émergence de nouveaux espaces tels que l'Asie du Sud-Est et toute une série de puissances émergentes autour des grands pays de la région, à savoir le Japon et la Chine qui cherchent à attirer une grande partie du tourisme mondial, l'on a constaté que ceci nous oblige à entrer dans le complexe course de la concurrence des marchés moyennant la consolidation de qualité et un cadre commun de référence.

Ceci implique une série d'actions basées sur la variété et diversification du produit, puisque si en fait à l'heure actuelle la principale attraction de la région est le soleil et la plage, dû à la situation géographique au milieu de la zone tropicale, ceci devrait se compléter d'autres attractions telles que la culture, l'histoire et les réserves naturelles – tous constituant le patrimoine fondamental de cette région.

ZTSC, no partirá de cero, ya que existe una importante experiencia a nivel subregional que viene desarrollando CTO (Caribbean Tourism Organization), organización pionera en el turismo del Caribe insular oriental y luego el SICA (Sistema de Integración Centroamericana) que han logrado importantes avances en la región. Existen además otros proyectos subregionales como el Mundo Maya, que abarca a los países unidos por una cultura prehispánica común y otras experiencias, que permitirán generar una consistente política de mercadeo regional.

El objetivo de esta estrategia es el de aumentar el flujo turístico hacia la región, dentro de una política de desarrollo sustentable, orientado a generar un mercadeo regional que privilegie la diversidad del producto y los elementos del multidestino, propiciando incrementos en el gasto promedio de los visitantes.

Estas propuestas se sintetizan en seis grandes acciones, tres a desarrollar en el primer año y las otras tres en los otros tres años restantes.

Desarrollar un producto turístico caribeño, a partir de realizar un inventario, buscando promover las individualidades y las cosas comunes de la región, con el objeto de lograr una oferta multidestino que beneficie a la mayor parte de la misma.

Promover la región como una zona de turismo sustentable, para ir generando una imagen común y nueva de la zona.

Crear una marca propia, como resultado de los acuerdos generados por la Primera Zona de Turismo Sustentable del Mundo: región Caribe.

En la segunda etapa, se plantea realizar:

- Diagnóstico de posicionamiento, a partir de todos los recursos de la región. Este será un análisis interno y externo.

Estrategia de Mercadeo, orientada a la creación del nuevo producto en sus dos versiones el uni y el multidestino.

Política común de comunicaciones que apoye toda la estrategia de mercadeo, en esta compleja lucha por los mercados de los principales países emisores.

The STZC will not have to start from scratch, since considerable experience at sub-regional level has been gathered by the CTO (Caribbean Tourism Organisation), a pioneer organisation in tourism in the eastern Caribbean islands, and SICA (Central American Integration System) which has made significant progress in the region. Additionally, there are other sub-regional projects such as Mundo Maya, which involves countries united by their common pre-Hispanic culture, and several other experiences which can contribute to a consistent regional marketing policy.

The objective of this strategy is to increase the flow of tourists to the region, as part of a consensual policy of sustainable development, aimed at generating a regional marketing which promotes product diversity and the elements of multiple destinations, favouring an increase in the average spending of visitors.

These proposals are condensed into six major areas of action, three of which are to be carried out during the first year, and the other three over the remaining four years.

- To develop a Caribbean tourist product, by drawing up an inventory, seeking to promote individual characteristics and common factors in the region, with the aim of providing multiple destinations benefiting most of it.
- To promote the region as a sustainable tourism zone, so as to generate a new and common image of the area.
- To create its own framework as a result of agreements arising out of the world's First Sustainable Tourism Zone, that is, the Caribbean region.

During the second phase, it is proposed that there will be:

- An assessment to determine all the region's resources. This will be done internally and externally.
- A marketing strategy geared towards creating the new product in its two versions: single and multiple destinations.
- A common communications policy which supports the entire marketing strategy, in this complex struggle for the markets of the main countries of origin.

La ZTDC no comenzará pas par zéro puisqu'il existe déjà une expérience importante au niveau sous-régional qu'a développé la CTO (Organisation Caraïbe du Tourisme) - organisation pionnière du tourisme dans la Caraïbe insulaire de l'Est ainsi que le SICA (Système d'Intégration de l'Amérique Centrale) qui ont fait des progrès importants dans la région. En plus, il existe d'autres projets sous-régionaux tel que le Monde Maya dans les pays unis par une culture pré-hispanique commun et une autre série d'expériences qui permettront de générer une consistante politique de marketing au niveau régional.

L'objectif de cette stratégie est d'augmenter le flux touristique envers la région, dans le cadre d'une politique de développement durable, destinée à générer un marketing régional qui est en faveur de la diversité du produit et les éléments de la destination multiple, tout en stimulant l'augmentation des dépenses moyennes des visiteurs.

Ces propositions sont résumées en six grandes actions, trois à être développées au cours du premier an et les autres trois au cours des quatre ans qui restent.

- Développer un produit touristique caraïbe moyennant l'élaboration d'un inventaire, tout en essayant de promouvoir les individualités et les aspects communs de la région, dans le but de fournir une destination multiple qui est en faveur de la plupart de celle-ci.
- Promouvoir la région comme une zone de tourisme durable, tout en cherchant de générer une nouvelle image commun de la zone.
- Créer un cadre en tant que résultat des accords générés par la Première Zone de Tourisme Durable du Monde: la région de la Caraïbe.

Dans la deuxième étape, l'on propose les éléments suivants:

- Un diagnostic de position à partir de toutes les ressources de la région. Ceci sera une analyse interne et externe.
- Une stratégie de marketing destinée à créer le nouveau produit dans ses deux versions: la destination unique et la destination multiple.
- Une politique commun de communications qui soutient toute la stratégie de marketing dans cette complexe lutte pour les marchés des principaux pays d'émission.

La ZISC es una estrategia que implica grandes retos, principalmente el de entender que ésta es una nueva perspectiva del desarrollo de los países y de la región, teniendo como eje la actividad más importante: el turismo.

Esto lleva a un doble reto: por un lado, el de la información, concientizando a la sociedad, lo cual ha sido planteado en la primera acción y por otra parte, lo que es el centro de ésta, la formación de los recursos humanos, motor de las transformaciones.

El esfuerzo educativo en la región puede ser uno de los principales elementos de cooperación intra-regional, ya que las diferencias existentes pueden ser superadas con acciones comunes, que tiene sus antecedentes en políticas regionales de intercambio académico, congresos, estudios y en general, espacios comunes por lo menos en ciertas áreas de esta vasta región, como es la cooperación académica. La búsqueda de políticas similares en la educación, nos permitirá lograr actitudes y estrategias comunes, fundamentales para poder desarrollar un producto turístico como el multideestino.

Así mismo, las diferentes experiencias en segmentos y mercados, tanto como las distintas tradiciones educativas basadas en sistemas diferenciales, formarán un importante elemento enriquecedor que permitirá un conocimiento amplio del vasto mundo del turismo y sus actores externos: los visitantes.

Por ello, el objetivo de esta acción educativa es mejorar la calidad de los servicios a través de programas de formación de recursos humanos.

- Generar un programa de capacitación que abarque las diferentes áreas de la actividad turística y que las defina a partir de un modelo de competencia laboral.
- Homogeneizar los programas de formación de personal profesional del turismo, a partir de un inventario de los mismos y buscando un plan que abarque los temas prioritarios para la región de ZISC.
- Generar un Consejo de Educación Turística del Caribe, como institución coordinadora y promotora de este proceso interactivo en el ámbito educativo.

3.3.7 EDUCATION

The STZC is a strategy involving major challenges, mainly such as understanding that this is a new perspective of development for the countries of the region, based on tourism, its most important activity.

This leads us to a two-fold challenge: on the one hand, providing information and sensitising society as noted in the first action, and on the other, training human resources, which are the driving force behind change and a key element of the first action.

Efforts to educate the region can be a major element of intra-regional co-operation, since existing differences can be overcome through common action, which originates in regional policies for academic exchanges, congresses, studies, and in general common spaces at least in certain parts of this vast region, such as academic co-operation in the eastern Caribbean.

The search for similar policies in education will allow us to adopt common attitudes and strategies which are essential for developing a tourism product such as multiple destinations.

Similarly, the different experiences in segments and markets and the different educational traditions based on different systems, will contribute to our enrichment and facilitate a broad knowledge of the vast world of tourism and its external actors, who are the visitors.

The objective in the area of education is therefore to improve the quality of services through human resource training programmes.

- Generate a training programme which covers the different areas of tourism, and defines in accordance with a model of labour competence.
- Homogenise training programmes for tourism professionals based on an inventory of such programmes, and seek to create a plan which deals with the priority subjects of the STZC.
- Set up a Caribbean Tourism Education Council as a coordinating and promoting institution for this interactive process in the field of education.

3.3.7. L'ÉDUCATION

La ZTDC est une stratégie qui implique de grands défis, principalement celui de comprendre que celle-ci est une nouvelle perspective du développement des pays de la région, tout en prenant comme axe l'activité la plus importante: le tourisme. Ceci comprend un double défi: d'une part le défi de l'information, tout en sensibilisant la société. Cette notion a été proposée dans la première action et de l'autre part, ce qui est au cœur de tout cela, c'est la formation des ressources humaines - moteur des transformations.

L'initiative éducative dans la région peut être l'un des principaux éléments de coopération entre régions, puisque les différences existantes peuvent être surmontées grâce aux actions communes dont les antécédents se trouvent en politiques régionales d'échange académique, de congrès, d'études et en général, d'espaces communs au moins dans certaines parties de cette vaste région, tels que la coopération académique dans la Caraïbe de l'Est. La recherche pour des politiques pareilles dans le domaine de l'éducation nous permettra d'avoir des attitudes et stratégies communes - chose fondamentale pour pouvoir développer un produit touristique tel que la destination-multiple.

Au même temps, les différentes expériences en segments et marchés, tout comme les différentes traditions éducatives basées sur des systèmes différenciés constitueront un élément important et enrichissant qui permettra une ample connaissance du vaste monde du tourisme et ses agents externes: les visiteurs. Pourtant l'objectif de cette action éducative est d'améliorer la qualité des services moyennant des programmes de formation des ressources humaines.

- Générer un programme d'entraînement qui touche les différents aspects de cette activité touristique et qui les définit à partir d'un modèle de compétence laborale.
- Homogénéiser les programmes de formation de personnel professionnel dans l'industrie touristique basée sur un inventaire de ceux-ci et tout en cherchant un plan qui touche les thèmes prioritaires pour la région de la ZTDC.
- Créer un Conseil d'Éducation Touristique de la Caraïbe qui servira d'institution de coordination et de promotion de ce processus interactif dans le domaine de l'éducation.

- Preparar recursos humanos especializados en las áreas de investigación y evaluación de programas y proyectos, para poder tener personal capacitado y con criterios homogéneos a partir de la ZISC. Para promover una sana pero eficiente competitividad se promoverá la instauración de un premio anual al mejor trabajo de investigación.
- Integrar los avances científico - tecnológicos regionales con los empresarios que aplicarán estas tecnologías a fin de que utilicen estos productos y también promuevan nuevos estudios para resolver problemas concretos de la región.
- La educación ambiental como la divulgación científica será la promoción de los resultados de los avances antes mencionados, con ello se cierra el círculo de la formación, haciendo que sus resultados se aprovechen en su máxima expresión, es decir, en toda la sociedad.

- Train human resources specialised in the areas of research and programme and project evaluation to provide staff trained according to standardised criteria within the ZISC. To promote efficient but healthy competition, an annual award for the best research work shall be instituted.
- Integrate regional scientific and technological progress among businessmen who will apply these technologies to utilise these products and promote new studies for solving specific problems in the region.
- Environmental education, like the dissemination of scientific information, will consist of promoting the results of this progress, thus completing the cycle of training and using it for maximum expression, in other words, throughout the society.

- Former les ressources humaines spécialisées dans les domaines de la recherche et l'évaluation des projets et programmes, afin de compter sur un personnel entraîné tout en se basant sur des critères homogènes à partir de la ZTDC. Pour promouvoir une saine mais efficace compétitivité, il faudra promouvoir l'instauration d'un prix annuel accordé au meilleur travail de recherche.
- Incorporer les développements scientifiques et technologiques de la région et les entrepreneurs qui mettront en œuvre ces technologies pour qu'ils utilisent ces produits et puissent aussi promouvoir de nouvelles études pour résoudre les problèmes concrets de la région.
- L'éducation écologique telle que la divulgation scientifique sera la promotion des résultats des développements mentionnés ci-dessus, ce qui met fin au cercle de la formation, de sorte que ces résultats soient exploités dans leur expression maximale, c'est à dire, dans toute la société.



3.3.8. EL MARCO LEGAL

El estado de derecho es el común denominador de nuestros países, de ahí la necesidad imperiosa para un buen funcionamiento de la ZTSC, que reconozca el alcance y los límites de las legislaciones de cada país, punto de partida para acciones comunes.

En el Caribe existen sistemas jurídicos diferentes, pero una voluntad política para la integración puede superar estas aparentes limitaciones. Los tratados internacionales, los convenios multi o bilaterales, las convenciones y otros instrumentos del derecho internacional nos anteceden en el proceso de integración y de búsqueda de políticas comunes.

El conocimiento en otros países del marco legal de sus vecinos enriquecerá por vía de la experiencia jurídica al derecho de cada país, por ello se consideró importante en el primer año de operación de la ZTSC realizar un inventario, como punto de partida para buscar la elaboración de instrumentos jurídicos más amplios, un largo camino que le dará sustentación legal a nuestro proceso de integración y cooperación multinacional. El objetivo de esta estrategia se define como la generación de un entorno legal que potencialice y consolide la ZTSC.

Las acciones que se plantean son las siguientes:

- Identificar el marco legal de todas las acciones que tengan relación con la actividad turística, a partir de inventarios nacionales, para de allí derivar cuales podrían ser los vacíos legales que se requiere legislar a fin de poder hacer realidad la ZTSC.
- Conocer y analizar la legislación existente en cada país en lo referente al aseguramiento de la calidad para de allí inferir cuales son los requerimientos de legislación adicional para hacer efectiva esta meta.
- Reconocer y luego estudiar cuáles son las normas legales que regulan la seguridad y facilitación turística, para verificar cuáles son las carencias y potenciales adiciones a las legislaciones nacionales para poder cumplir con esta meta.

3.3.8. LE CADRE JURIDIQUE

The state of law is the common denominator of our countries. It is the imperative need for a good functioning ZTSC, that recognizes the scope and limits of each country's legislation as the starting point for common actions.

In the Caribbean there are different legal systems, but the political will to integrate can overcome these apparent limitations. Treaties, international, multilateral or bilateral agreements, conventions and other instruments of international law have been concluded in the process of integration and the search for common policies.

The knowledge in other countries of their neighbours' legal frameworks will enrich each country's law through legal experience. It is therefore considered important in the first year of the ZTSC to develop an inventory as a first step in seeking to prepare broader legal instruments. This is a long journey that will lead legal support to our process of integration and multinational cooperation.

The objective of this strategy is defined as the generation of a legal environment which gives potential to and consolidates the ZTSC.

The following actions are proposed:

- To identify the legal framework of all tourism-related activities using national inventories, to determine the legal gaps where there is need for legislation to bring the ZTSC to fruition.
- To become familiar with and analyse existing quality assurance legislation in each country in order to determine the need for additional legislation to put the legal instruments.
- To recognize and study the laws governing safety and the provision of tourist services, in order to verify where there are deficiencies and the possibility for additions to national legislation to overcome the gaps.

5.3.8. LE CADRE JURIDIQUE

L'Etat de droit est le dénominateur commun de nos pays, d'où la nécessité impérieuse d'avoir un bon fonctionnement de la ZTDC, qui reconnaît la portée et les limites des législations de chaque pays - point de départ pour des actions communs.

Il existe dans la Caraïbe de différents systèmes juridiques, mais aussi une volonté politique pour que l'intégration puisse surmonter ces limitations. Les traités internationaux, les accords bilatéraux ou multilatéraux, les conventions et d'autres instruments de droit international nous mènent au processus d'intégration et de recherche de politiques communes.

La connaissance dans d'autres pays sur le cadre juridique de ses voisins enrichira moyennant l'expérience juridique le droit de chaque pays, et c'est pour cette raison que l'on estime important au cours du premier an d'opération de la ZTDC faire un inventaire, comme point de départ dans le but d'élaborer des instruments juridiques plus amples, un long chemin qui fournira la base juridique de notre processus d'intégration et de coopération multinationale. L'objectif de cette stratégie est défini comme la génération d'une ambiance juridique qui rend possible et consolide la ZTDC.

Les actions proposées figurent ci-dessous:

- Identifier le cadre juridique de toutes les actions qui sont liées à l'activité touristique basées sur des inventaires nationaux, afin de pouvoir déterminer des vides juridiques éventuels qu'il faut combler dans le but de convertir la ZTDC en réalité.
- Connaître et analyser la législation existante dans chaque pays en ce qui concerne le contrôle de la qualité pour ainsi déduire quelles sont les conditions d'une législation supplémentaire afin de réaliser ce but.
- Reconnaître et puis étudier quelles sont les normes juridiques qui régissent la sécurité et la facilitation touristique pour vérifier quelles sont les lacunes et éventuelles additions aux législations nationales afin de pouvoir réaliser ce but.

3.3.9. INDICADORES DE SUSTENTABILIDAD

La globalización tiene entre sus ventajas una unificación de la información, del conocimiento, del manejo de las finanzas y especialmente el mercado. Esta situación se refleja en un mundo de competencias cada vez más cerrado, donde las marcas y franquicias, expanden su geografía a partir de garantías de calidad. Esta situación ha llevado a los países a modernizarse, adecuarse o bien, quedar fuera de esta nueva dinámica mundial. Ante estos nuevos problemas mundiales, los países han debido buscar acuerdos regionales, los cuales no siempre se han logrado por las diferencias propias de los países y los requerimientos urgentes de sus poblaciones.

Esta realidad no siempre se logra, por lo que la misma ha derivado en que algunos países exijan de manera unilateral o en grupos, ciertas políticas de aseguramiento de calidad en sus relaciones comerciales y de servicios.

Hoy en día se ve en el turismo, una serie de instrumentos generados fuera del entorno que se pretende hacerlo obligatorio en los países para poder seguir manteniendo una relación comercial. Estas directrices se dan sobre sostenibilidad hotelera, manejo de zonas costeras, políticas de transporte y otras. Ante ello la AEC, dentro de marco normativo de la ZTSC, está planteando la generación de modelos propios de refrendación de la sustentabilidad.

Las principales acciones son:

- Diseñar un conjunto de indicadores de sustentabilidad para la actividad turística en la región, aplicar los mismos y derivar de allí una red dedicada a monitorear los comportamientos de éstos, además de permitir una evaluación regional de la sustentabilidad a partir de los mismos.
- Diseñar indicadores sociales y económicos para evaluar el desarrollo turístico sustentable, los cuales puedan aplicarse e intercambiar información regional para así evitar problemas focales o apoyar al país que lo requiera.
- Promover una capacitación especializada para el desarrollo de estos mecanismos institucionales orientados a consolidar la instrumentación de indicadores de sustentabilidad.

3.3.9 SUSTAINABILITY INDICATORS

One of the advantages of globalisation is that it unifies information, knowledge, financial management, and in particular, the market. This is reflected in the world where competition is becoming increasingly tight, where brands and franchises are becoming more widespread based on a guarantee of quality. This has led countries to modernise, adapt or be left behind this new world dynamism. In light of these new world problems, countries have had to seek regional agreements, which have not always been successful because of differences between countries and the urgent needs of their populations.

This cannot always be achieved, because some countries either unilaterally or in groups have demanded certain quality assurance policies in their commercial and service relationships.

Today in tourism, there are a number of instruments which have been generated outside the framework which seeks to make them compulsory within countries in order for business relationships to be maintained. Such cases have been noted in hotel sustainability, coastal zone management, transport policy and other areas. In view of this, the ACS, within the regulatory framework of the STZC, is proposing the creation of models for checking sustainability.

The main actions are:

- To design a set of sustainability indicators for tourism in the region, apply them and derive a network for monitoring their behaviour and permitting a regional evaluation of sustainability based on these indicators.
- To design social and economic indicators which can be applied for evaluating sustainable tourism development, and exchange regional information to avoid problems of focus or give support to the country needing it.
- To promote specialised training for the development of these institutional mechanisms aimed at consolidating the co-ordination of sustainability indicators.

3.3.9. INDICATEURS DE LA DURABILITÉ

Les avantages de la globalisation comprennent l'unification de l'information, les connaissances, la gestion des finances et surtout le marché. Cette situation est reflétée dans un monde de compétences de plus en plus fermées où les marques et concessions étendent leur géographie moyennant des garanties de la qualité. Cette situation a conduit à la modernisation et à l'ajustement des pays, ou bien, l'isolement de cette nouvelle dynamique mondiale. Face à ces nouveaux problèmes dans le monde, les pays se sont mis d'accord pour chercher des accords régionaux qui n'ont pas toujours été possibles dû aux propres différences des pays et les besoins urgents de ses populations.

On ne peut pas toujours réaliser cette réalité, et pourtant ceci a fait de sorte que certains pays exigent d'une façon unilatérale ou en groupements, certaines politiques de contrôle de la qualité dans leurs rapports commerciaux et de services.

A l'heure actuelle, l'on remarque dans le contexte du tourisme une série d'instruments générés à l'extérieur de l'environnement qui assume un aspect obligatoire dans les pays afin de pouvoir continuer à maintenir une relation commerciale. Ces contestations se font sur la durabilité hôtelière, la gestion des zones côtières, des politiques de transports entre autres. Devant cette situation, l'AEC, dans le cadre juridique de la ZTDC, propose la génération de modèles soutenant la durabilité.

Les actions principales figurent ci-après:

- Formuler un ensemble d'indicateurs de la durabilité pour l'activité touristique dans la région, appliquer ceux-ci et puis créer un réseau destiné à contrôler le comportement de ceux-ci et en plus, permettre une évaluation régionale de la durabilité basée sur ceux-ci.
- Formuler des indicateurs sociaux et économiques pour évaluer le développement du tourisme durable. Ceux-ci pourraient être appliqués à et échangés avec les informations régionales pour ainsi éviter des problèmes spécifiques ou soutenir le pays qui en ont besoin.
- Promouvoir la formation spécialisée pour le développement de ces mécanismes institutionnels destinés à consolider l'application des indicateurs de la durabilité.

3.3.10. TRANSPORTE AEREO Y MARITIMO

El turismo de masas emerge a partir de un gran cambio en los transportes masivos de personas, principalmente en transporte aéreo, que a mitad de siglo inició la denominada era del jet.

La aviación comercial es el motor del turismo de masas, de allí la importancia de su fomento pero también su adaptación a los grandes cambios tecnológicos y exigencias de control ambiental que se presentan hoy como un reto a superar.

Los cruceros también deberán adecuarse a estas normas para poder convivir con el desarrollo del turismo en tierra, una relación compleja pero factible de manejar por todos los países. En el Caribe, principalmente en el área insular, el problema de transporte es complejo, dadas las serias limitaciones que tienen algunas islas de espacio disponible para seguir creciendo y la escasez de recursos para realizar esas inversiones en puertos marítimos y aéreos.

3.3.10 AIR AND SEA TRANSPORT

Mass tourism arises because of major changes in mass passenger transport, especially in air transport, which in the middle of the century began the so-called jet era.

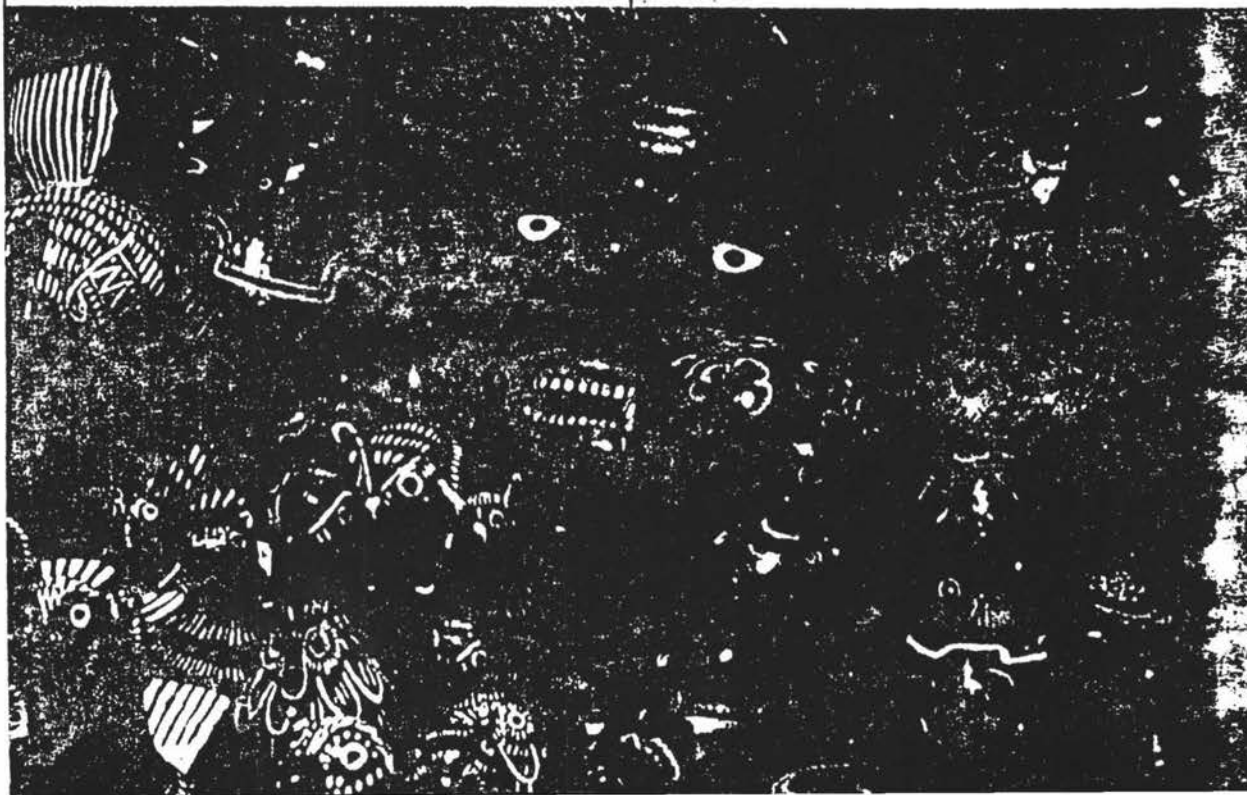
Commercial aviation is the driving force of mass tourism, hence the importance of promoting it, but also adapting it to the main technological changes and the demands for environmental control, as presented today in the form of a challenge to be overcome.

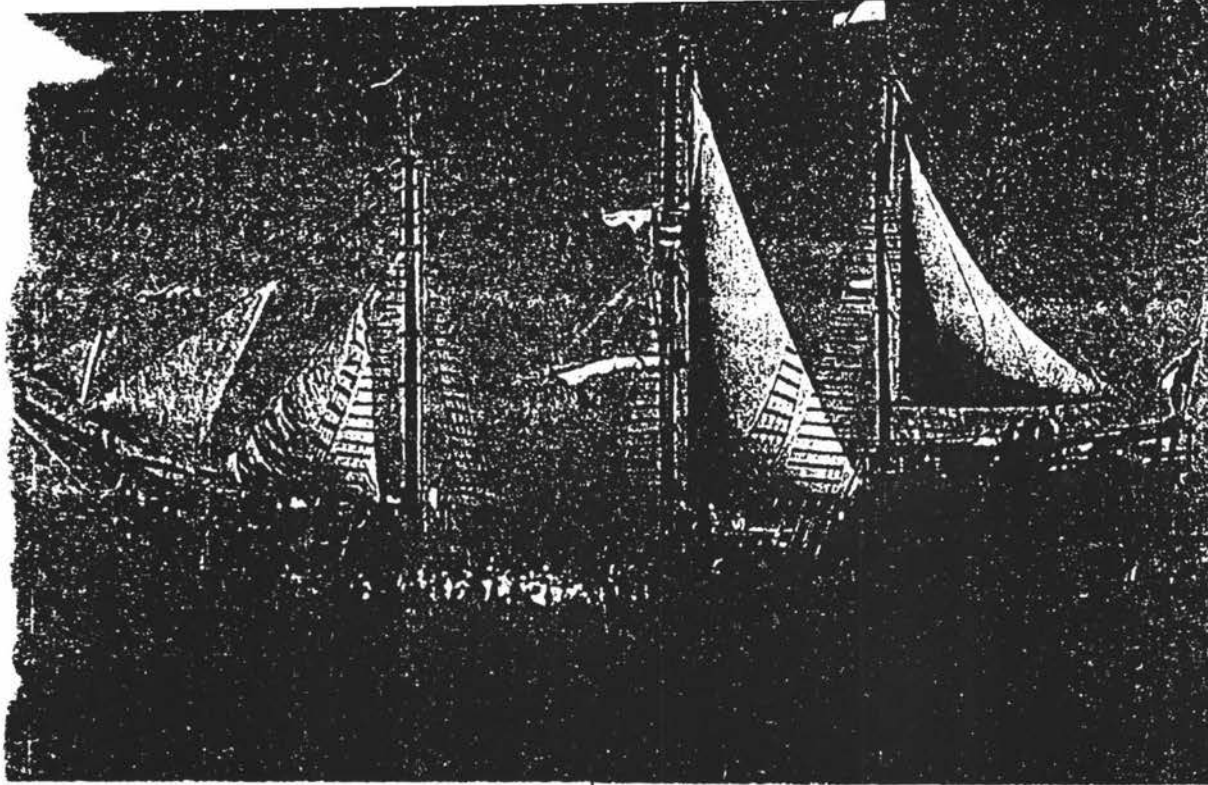
Cruise ships must also adapt to these rules in order to co-exist with tourism development on land, a complex but manageable relationship by all countries. In the Caribbean, particularly in the islands, the problem of transport is complex, given the serious limitations of some islands in terms of available space for continued growth, and the lack of resources for making these investments in sea ports and airports.

3.3.10. LE TRANSPORT AÉRIEN ET MARITIME

Le tourisme de masse émerge à partir d'un grand changement dans les transports en gros de personnes, surtout dans le cas du transport aérien qui, au milieu du siècle, a initié l'ère dudit «jet».

L'aviation commerciale est le moteur du tourisme de masse, d'où l'importance de l'encourager mais aussi de l'adapter aux grands changements technologiques et aux exigences de contrôle écologique qui de nos jours se présentent comme un véritable défi à surmonter. Les croisières doivent aussi s'adapter à ces normes afin de pouvoir cohabiter avec le développement du tourisme terrestre - une relation complexe mais tout à fait possible de gérer dans le cas de tous les pays. Dans la Caraïbe, et surtout dans les zones insulaires, le problème des transports est très complexe étant donné les graves limitations qu'ont certaines îles en ce qui concerne l'espace disponible pour continuer à se croître et la rareté de ressources pour réaliser des investissements dans les ports maritimes et aériens.





La ZTSC se ha adherido a la estrategia que generó el Comité Especial de Transporte de la AEC, conocida como "Uniendo al Caribe por aire y mar", que viene a sintetizar el objetivo de esta estrategia que es el de impulsar la integración del turismo y el transporte en la región.

Las acciones a desarrollar son:

- Adoptar la iniciativa del Comité de Transporte de la AEC.
- Proponer a partir de ésta, iniciativas complementarias, a fin de garantizar el desarrollo de la actividad turística y mantener comunicada a la población con todos los demás destinos regionales y extra-regionales.

The STZC has adhered to a strategy generated by the ACS Special Committee on Transport, known as "Uniting the Caribbean by Air and Sea", which summarizes the objective of this strategy, that is, to encourage the integration of tourism and transport in the region.

The action to be pursued is:

- Adopting the initiative of the ACS Transport Committee
- Proposing, based on this, complementary initiatives to guarantee tourism activity and keep the population informed of all the other regional and extra-regional destinations.

La ZTDC s'est adhéree à la stratégie qu'a générée le Comité Spécial sur le Transport de l'AEC, c'est à dire, «Unifier la Caraïbe par l'Air et la Mer», ce qui résume l'objectif de cette stratégie qui consiste à stimuler l'intégration du tourisme et le transport dans la région.

Les actions à réaliser figurent ci-dessous:

- Adopter l'initiative du Comité sur le Transport de l'AEC.
- Proposer à partir de celle-ci des initiatives complémentaires afin de garantir le développement de l'activité touristique et maintenir les communications entre la population et les autres destinations régionales et à l'extérieur de la région.

Uno de los actores fundamentales en el desarrollo del turismo es, sin lugar a dudas, el sector privado, un motor de inversión que comparte el riesgo con el sector público en el proceso de impulsar el desarrollo del turismo.

De allí la importancia de su participación para hacer posible la ZTDC, ya que su punto de vista basado en el mercado complementa las visiones más sociales de los estados, lo cual lleva a una interesante combinación de estrategias que van a servir de guía para lograr el éxito de la iniciativa de la AEC.

El sector privado aporta gran parte del capital financiero, la experiencia y la gestión en el proyecto, mientras que el estado debe garantizar las condiciones necesarias para la operación de las empresas, logrando así combinar una ecuación que es la base de la sostenibilidad.

El objetivo de esta estrategia es el de crear dentro de la región, mecanismos que faciliten el trabajo conjunto de los entes públicos y privados ayudando a desarrollar productos turísticos sustentables, y para ello se plantean las siguientes acciones:

- Promover y en el caso de existir, fortalecer mecanismos de consulta entre los sectores público y privado.
- Crear o en su caso, fortalecer foros de discusión entre estos sectores, para que de allí deriven propuestas que permitan fortalecer el desarrollo de la ZTDC.
- Promover la creación de programas conjuntos, ya sea para desarrollar nuevas actividades, promover el turismo o realizar inversiones complementarias especialmente en el área de infraestructura que es un sector que está en camino a una mayor participación del sector privado.

There is no doubt that one of the most important actors in tourism development is the private sector, a driving force for investment, which shares the risk with the public sector in encouraging tourism development.

It is therefore important for them to participate in making the ZTDC possible, since their point of view on the market complements the more social visions of states. This involves an interesting combination of strategies which will serve as a guide for the success of the ACS initiative.

The private sector contributes considerable financial capital, experience and management in the project, while the state must guarantee the conditions necessary for the operation of the companies, thus fulfilling the basic sustainability equation.

The objective of this strategy is to create in the region mechanisms which facilitate the joint work of public and private bodies, helping to develop sustainable tourism products, and for this the following is suggested:

- Promote and where they exist, strengthen consultation mechanisms between the public and private sectors.
- Create or where necessary, strengthen discussion fora between these sectors so that proposals can be made for reinforcing the development of the ZTDC.
- Promote the creation of joint programmes for developing new activities, promoting tourism or making complementary investments especially in the area of infrastructure which is a sector in which broader participation by the private sector.

L'un des agents clés dans le développement du tourisme est certes le secteur privé - moteur d'investissements qui partage le risque avec le secteur public dans le processus de stimuler le développement du tourisme.

D'où l'importance de sa participation pour rendre possible la ZTDC puisque son point de vue basé sur le marché se complète les visions plus sociales des Etats, ce qui mène à un intéressant mélange de stratégies qui serviront de guide pour assurer la réussite de l'initiative de l'AEC.

Le secteur privé apporte une grande partie du capital financier, l'expérience et la gestion des projets, pendant que l'Etat doit garantir les conditions nécessaires à l'opération des entreprises, réalisant ainsi une équation qui est la base même de la durabilité.

L'objectif de cette stratégie est la création au sein de la région de mécanismes qui facilitent le travail collectif des agences publiques et privées, aidant ainsi à développer des produits touristiques durables. Ceci nécessite un certain nombre d'actions, à savoir:

- Promouvoir des mécanismes de consultation et où ceux-ci existent, les consolider parmi le secteur public et le secteur privé.
- Créer des forums de discussion, ou si ceux-ci existent déjà, les fortifier parmi les différents secteurs afin de formuler des propositions qui permettront de fortifier le développement de la ZTDC.
- Promouvoir la création de programmes conjoints pour développer de nouvelles activités, promouvoir le tourisme ou réaliser des investissements complémentaires surtout dans le domaine de l'infrastructure qui est un secteur en train de profiter d'une plus grande participation du secteur privé.

12. CENTRO DE INFORMACION

La información es el eje de la revolución informática, uno de los pilares de la actual globalización, pero también el punto de partida de toda planeación, evaluación o seguimiento en los diferentes campos del desarrollo.

El ZTSC requiere de un manejo permanente de información no sólo como mecanismo evaluador y de seguimiento de los avances, problemas y alteraciones que genera esta estrategia multinacional. La información se debe lograr a partir de integrar redes locales y en el ámbito regional, de generar modelos e indicadores a aplicar y fundamentalmente de lograr una coordinación efectiva para hacer de este instrumento un verdadero sostén de la ZTSC.

Las dificultades sobre la generación de estadísticas turísticas, así como las diferentes perspectivas sobre indicadores o sobre valores hacen que esta tarea se haga muy compleja, pero en los desarrollos de las estrategias que le preceden se irá realizando un proceso de integración de equipos, redes y grupos de trabajo, de organismos gubernamentales, empresariales y de la sociedad civil, que unidos podrán reducir en gran medida los retos que implica el lograr una información certera, constante, sin grandes distorsiones y con interpretaciones previas. Por ello, es que el objetivo de esta estrategia es el de establecer un Centro de Información, que genere una amplia base de datos turísticos, históricos, culturales, ambientales, que permita a los consultantes tener información para desarrollar su actividad dentro de los marcos del desarrollo sustentable.

Se plantea que este Centro genere información sobre:

Historia, conceptos y categorías del turismo, información contemporánea, técnica, antecedentes de la ZTSC, programas de capacitación y educación en turismo, así como estadísticas turísticas.

Para su operación se trabaja en combinación con OMT, WTTC, CTO, CAST, PNUMA, CEHI y otros organismos regionales.

Las acciones próximas serían: recopilar, estandarizar la información, elevar a páginas Web las mismas, establecer un programa trimestral de base de datos y una metodología de análisis y retroalimentación por aporte de los usuarios con respecto a la calidad de la información.

3.3.12 INFORMATION CENTRE

Information is the basis of the informatics revolution, and one of the pillars of current globalisation, but it is also the starting point for all planning, evaluation or follow-up in the different areas of development.

The STZC requires permanent information management as the only mechanism for evaluating and following up progress, problems and changes generated by this multinational strategy. Information should be obtained by forming local networks, and at regional level, by creating models and indicators to be applied, and basically by achieving effective co-ordination for using this instrument as a true support of the STZC.

Difficulties in producing tourism statistics and different perspectives on indicators or values make this a very complicated task. However, in the development of strategies prior to this, a process of integration will be carried out for equipment, networks and working groups, educational and business organisations and civil society which can together substantially reduce the challenges involved in obtaining correct information on a constant basis without major distortion or prior interpretation. The objective of this strategy is therefore to set up an information centre which would provide a broad base of tourism, historical, cultural and environmental information for use by consultants in obtaining information for their work in the context of sustainable development.

It is proposed that this Centre will generate information on:

- History, concepts and categories of tourism, contemporary and technical information, the background to the STZC, training and education programmes in tourism, tourism statistics.
- For its operation, it would work with the WTC, WTTC, CTO, CAST, UNWTO, CEHI and other regional bodies.
- The next tasks to be carried out would be: gathering and standardising information, putting these on Web pages, setting up a three-monthly database programme and a methodology for analysis and feedback for the contribution of users with respect to the quality of information.

3. 3.12. CENTRE D'INFORMATION:

L'information est l'axe de la révolution informatique - l'un des piliers de la globalisation actuelle, mais c'est aussi le point de départ de toute planification, évaluation ou tout suivi des différents champs de développement.

La ZTDC exige une gestion permanente d'information en tant qu'unique mécanisme d'évaluation et de suivi des progrès, problèmes et changements que génère cette stratégie multinationale. L'information est obtenue moyennant l'intégration de réseaux locaux et régionaux, la génération de modèles et indicateurs, l'application et surtout la coordination effective pour transformer cet instrument dans un véritable soutien de la ZTDC.

Les difficultés dans la génération de statistiques sur le tourisme, ainsi que les différentes perspectives sur les indicateurs ou valeurs rendent cette tâche très complexe, mais dans la formulation des stratégies qui les précèdent, il faudra réaliser un processus d'intégration des équipements, réseaux et groupes de travail, institutions éducatives, commerciales et de la société civile qui, unis, pourraient réduire en grande mesure les défis qu'implique l'obtention de l'information précise, constante, sans de grandes distorsions et sans interprétations antérieures. L'objectif donc de cette stratégie est de créer un Centre d'Information qui génère une ample base de données touristiques, historiques, culturelles, écologiques, qui permettront aux experts-conseil d'obtenir des informations pour développer leur activité dans le cadre du développement durable.

On a proposé que ce Centre pourrait générer des informations sur les sujets qui figurent ci-dessous:

- L'Histoire: concepts et catégories de tourisme, information contemporaine, technique, antécédents de la ZTDC, programmes de formation et éducation sur le tourisme, statistiques sur le tourisme.
- Pour son fonctionnement, il faudra collaborer avec l'OMT, le WTTC, le CTO, CAST, le PNUMA, CEHI et d'autres organisations régionales.
- Les prochaines actions consisteront à: recueillir et standardiser l'information, transférer l'information à des pages Web, créer un programme trimestriel sur la base de données et obtenir du feedback des utilisateurs à l'égard de la qualité de l'information.



Esta edición del Establecimiento de la Zona de Turismo Sustentable del Caribe, que consta de 1000 ejemplares, ha sido una aportación del gobierno de México a través de su Secretaría de Turismo, a la Asociación de Estados del Caribe para contribuir a la divulgación de sus propósitos y logros.

This edition of "The Establishment of the Sustainable Tourism Zone of the Caribbean", published in one thousand copies, is a contribution made by the Government of Mexico, through its Ministry of Tourism, to the ACS to provide information on the Association's aims and achievements.

Cette édition de "La Création de la Zone de Tourisme durable de la Caraïbe" dont on a publié mil exemplaires, a été offert à l'AEC par le Gouvernement du Mexique, par l'intermédiaire du Ministère du Tourisme pour contribuer à la diffusion des objectifs et réalisations de l'AEC.

MEXICO



APPENDIX 7

LIST OF MEMBERS OF THE NATIONAL BIODIVERSITY STRATEGY FOR MEXICO

2. PARTICIPANTES

INTEGRANTES DEL EQUIPO PLANIFICADOR

Dr. Guillermo Castilleja
World Wildlife Fund, México

Ing. Adolfo Chávez López
Comunidad Indígena, Nuevo San Juan

Dr. Exequiel Ezcurra Real de Azúa
San Diego Natural History Museum

Dr. Arturo Gómez Pompa
Programa de Acción Forestal Tropical

Dr. Gonzalo Halffter Salas
Instituto de Ecología, A.C.

Dr. Brian Houseal
The Nature Conservancy

Dr. Helmut Janka
Programa Acuerdo México-Alemania

Ing. Andrés Marcelo Sada
Fondo Mexicano para la Conservación de la Naturaleza

Dr. José Sarukhán Kérmez
Comisión Nacional para el Conocimiento y Uso de la Biodiversidad

Dr. Victor Manuel Toledo Manzur
Instituto de Ecología, UNAM

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Secretaría de Medio Ambiente, Recursos Naturales y Pesca

INTEGRANTES DEL GRUPO ASESOR EXTERNO

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Dr. Daniel Piñero Dalmau
Instituto de Ecología, UNAM

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Ing. Lorenzo Rosenzweig
Fondo Mexicano para la Conservación de la Naturaleza, A.C.

Dr. Víctor Urquidí
El Colegio de México

Ing. Lorenzo Zambrano
CEMEX

APPENDIX 8

DRAFT PROPOSAL FOR THE PROJECT OF CENTRAL AMERICAN REGION-CONSERVATION AND SUSTAINABLE USE OF THE MESOAMERICAN BARRIER REEF SYSTEM (FOR BELIZE, GUATEMALA, HONDURAS, AND MEXICO)

Project Name	Central American Region-Conservation and... Sustainable Use of the Mesoamerican Barrier Reef System (for Belize, Guatemala, Honduras, and Mexico)
Region	Latin America and the Caribbean
Sector	Environment
Project ID	6CGE53349
Project Focal Area	Biodiversity
Project Eligibility	Belize ratified the Convention on Biological Diversity (CBD) on 12/30/93; Honduras ratified CBD on 7/31/95; Mexico ratified CBD on 7/31/93.
Total Project Costs and Related Cofinancing	US\$19.1 million
Project Financing	GEF Grant: US\$10.35 million World Wildlife Fund US\$2.5
Project Co-Financing	Government of: Mexico US\$.5 Belize US\$.25 Guatemala US\$.25 Honduras US\$.25
Related Co-financing	IA: IDA US\$5 million to the Government of Honduras for a complementary national project
Operational Focal Point	Ministry of Economic Development and Finance (Belize), SERNA (Honduras), CONAMA (Guatemala) SHCP (Mexico)
Implementing Agency	The World Bank Group
Government Implementing Agency	Yet to be determined
Local Counterpart Agency	Central American Commission on Environment and Development (Comision Centroamericana de Ambiente y Desarrollo - CCAD)
When this PID was Prepared	April 1, 1999
Project Appraisal Date	CY00 (exact date to be determined)
Project Board Date	CY00 (exact date to be determined)
Project Duration	5 Years
Preparation Costs	PDF Block Grant US\$360,000; The

www.worldbank.org/pics/gef/6c53349.txt

Netherlands US\$330,000; Canada
US\$90,000, PHRD US\$100,000; FAO
US\$50,000; USAID US\$15,000

Country and Sector Background. The Country Assistance Strategy for Mexico, Belize, Guatemala, and Honduras give high priority to environmental protection and improved management of environmental resources. The forthcoming new Country Assistance Strategy for Mexico identifies three core themes for World Bank Group assistance to Mexico: (a) social sustainability, (b) removing obstacles to sustainable growth, and (c) effective public governance. Within this broad framework, the CAS identifies a few priority areas for Bank involvement in the Environment Sector, including institutional development and decentralization of environmental management, better management of natural resources (e.g. forests, water and biodiversity), and assistance in the design of sector policies. In Guatemala, Honduras and Belize, similar CAS goals of reducing rural poverty through improved production of natural resources are identified.

While actions to enhance and protect the environment have increased in recent years, environmental problems in Central America have continued to grow, causing great impacts on the health and well being of the population and on natural resources, including coastal and marine resources. Principal threats to the ecological integrity and continued productivity of the MBRS have been primarily anthropogenic. These include : habitat loss and sedimentation from dredging and construction , frequently without benefit of environmental review or permitting; increased human pressure from expanding and unplanned human settlements and tourism infrastructure along the coast and cays of the MBRS; and eutrophication from untreated wastewater, industrial effluent and non-point source pollution from agricultural runoff. Other more recent threats include natural disturbances associated with regional and global oceanic and atmospheric processes (such as El Niño) which may be related to climate change. These are posing a significant new threat to the MBRS and to reefs around the world, as a result of their increased frequency and impacts.

Project Objectives. The main objectives of the Mesoamerican Barrier Reef project are: (i) to enhance protection of unique and vulnerable marine ecosystems comprising the MBRS (in Mexico, Belize, Guatemala, and Honduras); and (ii) to assist these countries to strengthen and coordinate national policies, regulations, and institutional arrangements for the conservation and sustainable use of this global public good. The GEF Grant will seek to conserve the MBRS through a variety of mechanisms including : (a) regional harmonization of natural resources management policies related to the MBRS, including water quality, fisheries, and critical habitats; (b) maintenance of agreed monitoring and enforcement protocols; (c) identification and establishment of priority sites for a regionally representative system of Marine Protected Areas; (d) promoting mechanisms for regional coordination and planning for sustainable development, particularly with respect to tourism; (e) integration of development activities at the local level with protected area management; and exploring innovative ways to ensure that benefits from the capture of these resource rents are reinvested locally and distributed equitably.

Project Description. The proposed Regional MBR project would support implementation of regional elements of the MBRS Action Plan—a strategy document prepared by the four countries with PDF A Grant funds from the GEF. Conserving the integrity of the MBRS to preserve ecological processes and continued productivity of its resources would be a major thrust. Identifying and adopting best practice in the use of these goods and services, e.g, marine based tourism, harvesting of reef

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resources, etc. would be supported. In light of recent reports of significant devastation to various parts of the MBRS in the wake of two recent natural disasters--severe coral bleaching associated with El Niño events in September 1998, and heavy sedimentation and destruction of corals associated with Hurricane Mitch in October 1998--the project would also focus attention on coral reef assessment and monitoring in the four riparian countries. This would promote a better understanding of the most important sources of stress on reefs within the MBRS, their immediate and longer term impacts, and ways to mitigate these impacts in the future, while enhancing natural rates of recovery. Specifically, the project would include the following components:

- a) Harmonize policies and legislation and strengthen coordination at the regional level;
- b) Promote the conservation of the MBRS;
- c) Promote sustainable use of the MBRS;
- d) Expand environmental education and awareness;
- e) Develop a regionally compatible ecosystem/biodiversity monitoring program and information system.

Project Financing. The total project cost is estimated at about US\$ 14 million, of which the GEF would finance US\$10.35 million, the Governments of Honduras, Mexico, Belize, and Guatemala would finance about US\$1.25 million and the World Wildlife Fund about US\$2.5 million. Related co-financing of a \$5 million World Bank/IDA Credit to the Government of Honduras for a separate Learning and Innovation Loan project for sustainable coastal tourism planning and management along the Caribbean Coast would complement the total GEF (regional) project amount. GEF will co-finance all five components of the MBRS Project.

Rationale for GEF and Bank Involvement. The World Bank brings to this project its considerable capacity to address marine-related environmental issues and its ability to convene governments around issues of common concern. The Bank has extensive experience in the design and implementation of Regional Seas Programs around the world, has been a long-standing member and active supporter of the International Coral Reef Initiative, and has a growing portfolio of coral reef related operations currently valued at nearly US\$100 million. The Bank's investment and partnership with the GEF in the Mesoamerican (Terrestrial) Biological Corridor Program is an indication of its commitment to the objectives of conservation of globally important biodiversity resources in the region. The Bank is in a unique position to provide financial support for equally important and threatened coastal and marine resources in the region through leveraging GEF grant, credit and bilateral trust funds in the design and implementation of this project. The GEF's role is essential in that the issues being addressed under this project are transboundary in character; thus the incremental cost aspects can only be adequately addressed through GEF support.

Project Implementation. Implementation arrangements have yet to be determined, however, a grant from the Global Environment Facility would be made to a regional institution, such as the Central American Commission on Environment and Development (Comisión Centroamericana de Ambiente y Desarrollo - CCAD), on behalf of the four participating countries, to be allocated for the regional activities identified in the project document. As the environmental directorate of the System for Central American Integration (Sistema de Integración Centro América - SICA), CCAD would be closely involved in project implementation. CCAD is composed of Ministers of Environment from all six Central American countries, with Mexico participating as an observer. CCAD is currently responsible for overall coordination of the Mesoamerican Biological Corridor Program--an umbrella program to

consolidate a corridor of natural habitats along the Mesoamerican isthmus , linking protected areas from Mexico to Panama. This program includes financing from bilateral institutions, the Global Environment Facility, World Bank, UNDP, UNEP, and many non-governmental organizations. Under the Mesoamerican Barrier Reef Systems Project a complementary marine initiative , CCAD would work closely with project counterparts in the four line ministries that oversee natural resource management--the Ministry of Environment, Natural Resources and Fisheries (Mexico); the Coastal Zone Management Authority (Belize); the National Commission on Environment (Guatemala); and the Ministry of Natural Resources and Environment (Honduras)--to coordinate support on policy issues, proposed legislation and enforcement at the regional level.. To ensure project buy-in by all concerned ministries and to foster intersectoral coordination in the implementation of the project, intersectoral project advisory committees would be formed in each country, with the environment/natural resources management ministry taking the lead. A national coordinator would be appointed from this committee to liaise directly with the regional Project Coordination Unit (PCU) to be based in Belize. Together, these coordinators would form the Project Coordination Team (PCT), and would be responsible for day to day management of the project. Communication between the PCU and the national coordinators will be facilitated through regular e-mail contact and a dedicated electronic project workspace. Coordination will be further enhanced through regular field visits by the regional coordinator to Honduras, Guatemala and Mexico, and periodic meetings of the PCT.

The PCU would likewise coordinate efforts with other national and regional activities such as the UNDP/GEF Conservation and Sustainable Use of the Barrier Reef Complex in Belize; the complementary World Bank/IDA-financed Sustainable Coastal Tourism and Management Project for the Caribbean Coast in Honduras; the Interamerican Development Bank-financed Natural Resources Management of the Bay Islands in Honduras; and the World Wildlife Mesoamerican Barrier Reef Ecoregion Project.

Project Sustainability. In this complex regional setting, stakeholder buy-in at the highest political levels is critical. It will also be essential to ensure the good will and collaboration of coral reef scientists and practitioners in coastal and marine resources management at the field level. To maintain conservation of the MBRS high on the agenda of political leaders and technical specialists, vigorous public awareness campaigns and environmental education would need to be carried out. Continuous coalition-building of stakeholders through consultation, media coverage and monitoring and dissemination of results would help ensure the sustainability of momentum during the project. Mechanisms for conflict resolution would also be built into the project, based on lessons learned from regional seas experience and best practice in environmental negotiation. Ways to enhance financial sustainability beyond the life of the project would be explored through the introduction of economic instruments, including user fees, permits, penalties, environmental funds, and other cost recovery mechanisms. Reinvestment of revenues from tourism, fisheries and other productive activities to support marine conservation and management would also be explored during project implementation.

Lessons Learned from Previous Bank Involvement. Project preparation will incorporate lessons learned from previous experience in the Mesoamerican Biological Corridor Program, various Regional Seas Programs, (with particular emphasis on the Baltic Sea in the context of stakeholder buy-in and conflict management), the Bank's growing experience in Coral Reef Conservation and Integrated Coastal Zone Management Projects, and bilateral and NGO efforts to conserve marine biodiversity.

Poverty Category. The project objective of linking conservation of MBRS resources with improved natural resources management and compatible revenue generating activities (including ecotourism, sustainable production of capture and culture fisheries, and the introduction of economic instruments for local capture of revenues) is consistent with CAS goals of stimulating economic growth and reducing rural poverty in the four participating countries.

Environmental and Social Aspects. The environmental category is "B." Although it is anticipated that the project will achieve significant positive environmental benefits for marine and coastal areas that form the MBRS, a social assessment will be prepared to determine the economic impacts of current use patterns and management regimes on coastal populations, particularly of traditional resources users. Developing the elements of a sound regulatory framework that will enhance the sustainability of coastal and marine resources within the MBRS without jeopardizing the welfare of dependent human populations will be an important part of the Social Assessment and recommendations for project design..

Project Objective Category. Environmentally Sustainable Development.

Benefits. Anticipated benefits from the project to local populations include a long-term stream of economic and social benefits from fisheries and tourism through improved management of coastal and marine ecosystems and a more equitable distribution of these benefits. At the national level, benefits include improved revenue generation from more efficient use of coastal and marine resources and an enhanced natural capital base for future use options and benefit flows. At the regional and global levels, consolidation of efforts to safeguard the integrity of the MBRS would lead to enhanced protection of global public goods relating to international waters and marine biodiversity, and long-term economic, environmental and cultural benefits to the four countries bordering the MBRS.

Risks. The project will be designed to ensure full participation of all interested parties and stakeholders in the process of prioritizing project components and sub-components and sequencing them in a way that will reduce project implementation risks. The commitment of key stakeholders, from the highest level decision-makers to communities and resources managers on the ground will be essential to project success. To reinforce this stakeholder commitment, at the political, technical and community levels, project preparation and implementation will support continuous dialogue through joint working groups, media coverage, consultation with local communities, seminars and workshops, and periodic briefings to the CCAD. Environmental education and outreach, and close monitoring of project performance, will also raise awareness about the importance of the MBRS and the extent to which the project is helping to ensure continuous benefits from improved management of this shared resource.

Project Monitoring and Evaluation. The regional coordination unit (RCU) would report regularly to a regional project advisory committee (RPAC), comprised of the representative to CCAD in each country (normally the Minister of Environment and Natural Resources), the executive director of CCAD and the director of the RUTA office in San Jose, Costa Rica. At least two meetings per year should be scheduled between the RPAC and the PCT, to ensure that issues requiring high level political engagement will be taken up and acted upon at the appropriate level. The chief function of the PAC would be to help resolve institutional issues related to project coordination among the four countries, and to support a dialogue on policy issues related to protection and management of shared resources of the MBRS. The RPAC

would serve as the chief link between the project and CCAD, reporting to CCAD on project progress, using this forum to advance the debate on policy harmonization and enforcement, and to enhance coordination with the terrestrial Mesoamerican Biological Corridor Project. Project performance indicators would measure how well coordination is being operationalized--at the working level and at the level of the RPAC.

The project would be formally reviewed annually against project performance indicators, by the regional coordination unit, national coordinators in each country and members of the project team during the course of supervision missions. A mid-term review would be carried out in the third year by an independent team comprised of technical specialists in the areas supported by the project, and experts in evaluation. As in the annual review, indicators for the mid-term review would be worked out in detail by project stakeholders during the project launch workshop. The project would be implemented over an initial five year period. The possibility of a second phase, supporting implementation of specific regional policy frameworks and investments would be considered at the time of the mid-term review. A project completion assessment would be prepared at the end of the five years, documenting important lessons learned regarding regional coordination in the implementation of a joint plan of action for coastal and marine ecosystem management.

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Note: This is information on an evolving project. Certain activities and/or components may not be included in the final project.

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