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Report No: ICR0000721

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(TF-027739)

ON A

GLOBAL ENVIRONMENT FACILITY TRUST FUND GRANT

IN THE AMOUNT OF US$11.0 MILLION

TO THE

CENTRAL AMERICAN COMMISSION ON
ENVIRONMENT AND DEVELOPMENT

FOR THE

CONSERVATION AND SUSTAINABLE USE OF THE

MESOAMERICAN BARRIER REEF SYSTEM (MBRS) PROJECT

December 26, 2007

Environmentally and Socially Sustainable Development Sector Management Unit
Central America Country Management Unit
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS

(Project operated in US$)

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

BICA	Bay Island Conservation Association
CAS	Country Assistance Strategy
CCAD	Central American Commission on Environment and Development
CORAL	Coral Reef Alliance
DO	Development objective
EIS	Environmental Information System
EOP	End of Project
FM	Financial management
GEF	Global Environmental Facility
GEO	Global Environment Objectives
GIS	Global Information System
ICR	Implementation Completion and Results Report
ICRAN	International Coral Reef Action Network
ISR	Implementation Status Report
M&E	Monitoring and evaluation
MAR	Mesoamerican Reef Fund
MBC	Mesoamerican Biological Corridor
MBRS	Mesoamerican Barrier Reef System
MC	Monitoring Coordinator
MPA	Marine Protected Area
MTR	Mid-Term Review
NBRC	National Barrier Reef Committee
NC	National Coordinator
NGO	Nongovernmental organization
PA	Protected Area
PACT	Protected Areas Conservation Trust in Belize
PAD	Project Appraisal Document
PCU	Project Coordinating Unit
PDF	Project Development Fund
PNAX	*Parque Nacional de Arrecifes de Xcalak*
PPF	Project Preparation Facility
PWG	Project Working Group
REIS	Regional Environmental Information System
RSC	Regional Steering Committee
SICA	*Sistema para la Integración Centroamericana*
SMP	Synoptic Monitoring Program
SPAWS	Fish spawning aggregation sites
TNC	The Nature Conservancy
TRCA	Threat and root cause analysis
TWG	Technical Working Group

UNDP	United Nations Development Programme
UNF	United Nations Foundation
USAID	United States Agency for International Development
WRI	World Resources Institute
WWF	World Wide Fund for Nature

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CENTRAL AMERICAN COMMISSION ON ENVIRONMENT AND DEVELOPMENT

Conservation and Sustainable Use of the Mesoamerican Barrier Reef System (MBRS)

CONTENTS

A. Basic Information			
Country:	Central America	Project Name:	Mesoamerican Barrier Reef System (GEF)
Project ID:	P053349	L/C/TF Number(s):	MULT-27739
ICR Date:	12/28/2007	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	CENTRAL AMERICAN COMMISSION ON ENVIRONMENT AND DEVELOPMENT
Original Total Commitment:	USD 11.0M	Disbursed Amount:	USD 10.8M
Environmental Category: B		**Global Focal Area: B**	
Implementing Agencies: CCAD			
Co-financiers and Other External Partners:			

B. Key Dates				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	03/11/1999	Effectiveness:	11/15/2001	11/30/2001
Appraisal:	12/11/2000	Restructuring(s):		
Approval:	05/22/2001	Mid-term Review:		03/09/2004
		Closing:	06/30/2006	06/30/2007

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Global Environment Outcome	Moderate
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance			
Bank	**Ratings**	**Borrower**	**Ratings**
Quality at Entry:	Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Satisfactory	**Overall Borrower Performance:**	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating**
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	None
GEO rating before Closing/Inactive status	Satisfactory		

D. Sector and Theme Codes		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Animal production	8	8
Central government administration	21	21
General agriculture, fishing, and forestry sector	50	50
General education sector	13	13
Other industry	8	8
Theme Code (Primary/Secondary)		
Biodiversity	Primary	Primary
Environmental policies and institutions	Primary	Primary
Export development and competitiveness	Primary	Secondary
Water resource management	Primary	Secondary

E. Bank Staff		
Positions	**At ICR**	**At Approval**
Vice President:	Pamela Cox	David de Ferranti
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Sector Manager:	Laura Tlaiye	John Redwood
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ICR Team Leader:	Marea Eleni Hatziolos	
ICR Primary Author:	Gunars H. Platais	

F. Results Framework Analysis
Global Environment Objectives (GEO) and Key Indicators (as approved)

The global objective of the project is to enhance protection of the ecologically unique and vulnerable marine ecosystems comprising the Mesoamerican Barrier Reef System (MBRS), by assisting the littoral states to strengthen and coordinate national policies, regulations, and institutional arrangements for the conservation and sustainable use of this global public good.

The global Development Objective (DO) has the following component DOs:

DO1: Ecoregional approach to MBRS Marine Protected Area (MPA) management incorporated into conservation planning.
DO2: Steps initiated toward regional harmonization of policies and legislation.
DO3: Forum for regional cooperation at technical and policy levels operational.
DO4: Biological representation and ecological interconnectivity maintained in coastal and marine ecosystems throughout MBRS.

Revised Global Environmental Objectives (as approved by original approving authority) and Key Indicators and Reasons/Justifications

(a) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1:	Steps toward harmonization of relevant policies and legislation regarding MPA Management in transboundary areas, sustainable fisheries, sustainable tourism, etc., initiated in all countries.			
Value (Quantitative or qualitative)	No harmonization in policies regarding use of shared MBRS resources at start of project.	Policies on the use of shared MBRS resources harmonized.		Belize, Guatemala, and Honduras have adopted, at ministerial level, a common policy framework for use of shared resources in these sectors. A bilateral agreement between Belize and Mexico is pending.
Date achieved	11/30/2001	09/05/2005		06/29/2007
Comments (incl. % achievement)				

Indicator 2:	Ecoregional approach to MBRS MPA management incorporated into conservation planning.			
Value (Quantitative or qualitative)	Paper parks established without management plans or trained personnel. Enforcement sporadic.	A fully representative network of MPAs established and functioning in the MBRS ecoregion.		MPA master management plans or operations plans drafted or updated for 17 representative MPAs. MPA management effectiveness tracking tool in use at each site; ecological and management baselines established.
Date achieved	11/30/2001	12/28/2006		12/30/2005
Comments (incl. % achievement)				
Indicator 3:	Renewed commitment to conservation and sustainable use of the MBRS, as agreed to in the Tulum Declaration signed in 1997, demonstrated at the highest levels as indicator of sustainability.			
Value (Quantitative or qualitative)	Heads of State of four MBRS countries sign the Tulum Declaration, outlining their commitment to jointly conserve and manage the MBRS and its resources for current and future generations, and commission the preparation of an Action Plan.			The four countries signed the Tulum+8 Declaration in which they reaffirmed their commitment. A revised Action Plan was prepared and endorsed by the four Ministers of Environment for future actions.
Date achieved	06/05/1997			07/10/2006
Comments (incl. % achievement)				
Indicator 4:	Increased awareness of value of MBRS by general public.			
Value (Quantitative or qualitative)	Little appreciation among general public of value of MBRS as a world-class resource.	The MBRS's importance as an economic, natural, and cultural regional resource is widely recognized.		The MBRS is now widely recognized as a world-class resource in part due to the inclusion in the school curriculum of material emphasizing its importance; media spots and other MBRS publicity.
Date achieved	11/30/2001	06/30/2007		06/30/2007
Comments (incl. % achievement)				

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1:	Three of four MBRS countries have agreed to harmonize policies at national level consistent with common policy framework adopted at a ministerial conference (Dec 04).			
Value (Quantitative or qualitative)	Ministers of Fisheries, Environment, and Tourism of Belize, Guatemala, and Honduras signed common policy framework governing closed seasons for fisheries, MPA management, dive tourism, etc.	Commitment to harmonize relevant policies across four MBRS countries embedded in legally binding instruments.		(a) Several regulations enacted by ministerial decree, but not all ratified; (b) Fishermen's Congress with 4 countries represented actively promoted harmonization; (c) Draft Regional Cruise Ship policy prepared.
Date achieved	05/22/2001	06/30/2006		06/30/2007
Comments (incl. % achievement)	Harmonization of policies is especially important for the transboundary areas. As a result, an agreement was signed for the Southern transboundary area between Belize, Guatemala, and Honduras. Negotiations between Belize and Mexico for a bilateral agreement in the northern transboundary area have stalled indefinitely, possibly due to federal/state jurisdictional issues in the area.			
Indicator 2:	Marine Protected Area managers using tracking tool to monitor management effectiveness regularly and reporting on progress.			
Value (Quantitative or qualitative)	No MPAs using any kinds of assessment of management effectiveness tool at outset of project.	Tracking tool introduced to all MPAs in the MBRS region and in use by MPA managers to assess management effectiveness over time.		A Baseline Report on MPA management effectiveness, based on Tracking Tool indicators, prepared for 20 MPAs and posted on the web.
Date achieved	11/30/2001	06/30/2007		06/30/2007
Comments (incl. % achievement)				
Indicator 3:	Heads of State of all four MBRS countries reaffirmed their commitment to the Tulum+8 Declaration in a summit in July 2006 where they signed a new declaration to protect the MBRS and coordinate efforts for its sustainable use.			
Value (Quantitative or qualitative)	No new joint declaration by all four Heads of State to demonstrate ongoing	Renewed commitment made by Heads of State		The Tulum+8 Declaration was signed in July 2006.

	commitment to protect MBRS since original Tulum+8 Declaration signed in June 1997.	to objectives of Tulum+8 Declaration and Updated MBRS Regional Action Plan endorsed to address gaps and new threats.		
Date achieved	11/30/2001	06/30/2007		06/30/2007
Comments (incl. % achievement)	This demonstrates sustained political support at highest levels for transboundary ecosystem management, transcending changes in administration.			

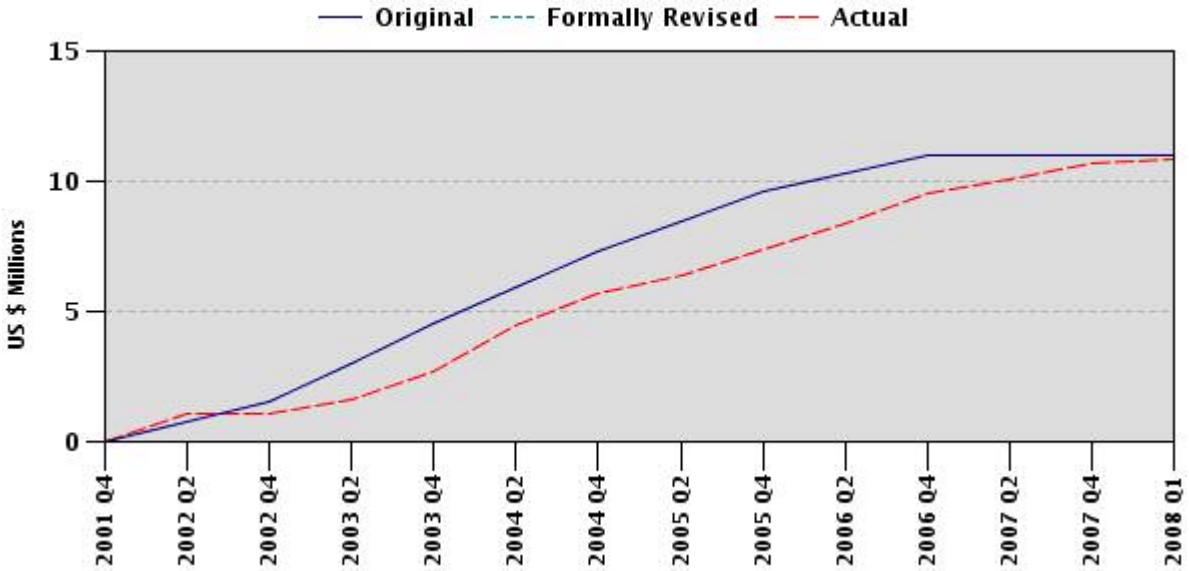
G. Ratings of Project Performance in Implementation Status Reports (ISRs)

No.	Date ISR Archived	GEO	Implementation Progress	Actual Disbursements (USD millions)
1	06/28/2001	Satisfactory	Satisfactory	0.00
2	12/26/2001	Satisfactory	Satisfactory	1.06
3	05/13/2002	Satisfactory	Satisfactory	1.09
4	08/19/2002	Satisfactory	Satisfactory	1.62
5	02/27/2003	Satisfactory	Satisfactory	2.12
6	06/24/2003	Satisfactory	Satisfactory	2.74
7	12/22/2003	Satisfactory	Satisfactory	4.46
8	06/21/2004	Satisfactory	Satisfactory	5.22
9	12/16/2004	Satisfactory	Satisfactory	6.32
10	04/30/2005	Satisfactory	Satisfactory	7.33
11	02/28/2006	Satisfactory	Satisfactory	8.56
12	11/20/2006	Satisfactory	Satisfactory	9.79
13	06/20/2007	Satisfactory	Satisfactory	10.65
14	12/09/2007	Satisfactory	Satisfactory	10.83

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. Project Context, Global Environment Objectives, and Design

1.1 Context at Appraisal

The Mesoamerican Barrier Reef System (MBRS), which extends from the north of the Yucatan Peninsula to the Bay Islands of Honduras, represents the longest barrier reef system in the Western Hemisphere. This highly diverse and complex ecosystem contributes to the stabilization and protection of coastal landscapes, helps maintain coastal water quality, and serves as breeding and feeding grounds for marine mammals, reptiles, fish, and invertebrates, many of which are commercially important. The MBRS is also of immense socioeconomic significance, providing employment and a source of income for an estimated 1 million people living in the adjacent coastal areas. Associated with the coral reefs of the MBRS are extensive areas of relatively intact coastal wetlands, lagoons, seagrass beds, and mangrove forests that sustain exceptionally high biodiversity and provide critical habitat for threatened species. Complementing this rich array of species and habitats are extensive Mayan ruins, dating back to the 12th century. The outstanding ecological and cultural significance of the MBRS has resulted in the establishment of numerous national parks and reserves, with several of these being designated World Heritage Sites. In the last 25 years, tourism development oriented around the MBRS, especially cruise ship and diving operations, has dramatically increased foreign exchange contributions to the gross national product of the four littoral nations, Belize, Guatemala, Honduras, and Mexico.

Despite the outstanding ecological and cultural amenities of this world-class destination, there were signs of declining reef health in the mid-to-late 1990s. A threat and root cause analysis (TRCA) was carried out to systematically determine the nature, location, magnitude, and root causes of current and anticipated threats to the ecological health of the MBRS. The TRCA showed that the ecological health of the MBRS was being compromised by rapid and unregulated coastal development, overfishing, pollution from land-based sources, habitat loss, and climate change. It would be only a matter of time before these destructive forces resulted in significant loss of ecosystem services, with important economic and social implications for the region. The transboundary nature of the MBRS called for a coordinated, regional approach, involving the four littoral nations working together to conserve and manage it for future generations.

The MBRS Project was created with the political support at the highest level of government and with a formal strategy for the management of the MBRS. In 1997, the leaders of the four countries convened in Tulum, Mexico, and pledged their commitment to protecting the MBRS in the Tulum Declaration. A 15-year Action Plan, aimed at safeguarding the integrity and productivity of the MBRS, was prepared with the help of the World Bank, the Global Environmental Facility (GEF), numerous nongovernmental organizations (NGOs), and representatives of the four countries. It was adopted in 1999 by all four Ministers of Environment under the sponsorship of the Central American Commission on Environment and Development (CCAD). The World Bank/GEF project was designed to focus on regional aspects of a strategy that would not normally be included in national action plans and the incremental costs of which would not be supported by national budgets. It was recognized that achieving meaningful outcomes that would safeguard the sustainability of the MBRS would require prolonged commitment—about 15 years. A single, five-year effort would not

be sufficient to transform human behavior and achieve measurable changes in environmental quality. This long-term commitment was implicit in the high-level political support contained in the Tulum Declaration, and the parallel support from donors, NGOs, and the conservation community to implement the Regional Action Plan. The visible and highly credible political and technical effort meant that the project was launched under highly favorable conditions.

The MBRS Project was designed to assist the four countries bordering the MBRS to:

- Strengthen existing Marine Protected Areas in transboundary locations and other key sites;
- Develop and implement a standardized regional monitoring and environmental information system for the MBRS;
- Promote measures to reduce nonsustainable patterns of resource use in the MBRS, focusing initially on the fisheries and tourism sectors;
- Increase local and national capacity for environmental management through education, information sharing, and training; and
- Strengthen and coordinate national policies, regulations, and institutional arrangements for marine ecosystem conservation and sustainable use.

1.2 Original Global Environment Objective and Key Indicators

The Global Environment Objective of the project was to enhance protection of the ecologically unique and vulnerable marine ecosystems comprising the MBRS. The Development Objective of the MBRS Project was to assist the countries of Belize, Guatemala, Honduras, and Mexico to manage the MBRS as a shared regional ecosystem, safeguard its biodiversity values and functional integrity, and create a framework for its sustainable use. This would be done by assisting the littoral states to strengthen and coordinate national policies, regulations, and institutional arrangements for the conservation and sustainable use of this global public good.

The global development objective (DO) had the following component DOs:

DO1: The incorporation into conservation planning of an ecoregional approach to MBRS Marine Protected Area management;
DO2: The initiation of steps toward regional harmonization of policies and legislation;
DO3: An operational forum for regional cooperation at the technical and policy levels;
DO4: The maintenance of biological representation and ecological interconnectivity in coastal and marine ecosystems throughout the MBRS.

While ambitious, this multifaceted development objective clearly responded to the need for a holistic approach to managing a shared coastal system. Although the multinational nature of the project added a substantial level of complexity to implementation, this regional approach was, and continues to be, an appropriate and desirable strategy, given the threats faced by the MBRS.

Key performance indicators include:

- Regional frameworks in place for management of diverse resources of the MBRS;

- Biological representation and ecological interconnectivity maintained in coastal and marine ecosystems throughout the MBRS;
- Capacity developed for an ecoregional approach to MBRS management and incorporated into conservation planning at the local, national, and regional levels;
- Heightened awareness of the value of the MBRS and of the benefits from its conservation; and
- Steps toward harmonization of relevant policies and legislation regarding MPA management in transboundary areas, sustainable fisheries management, sustainable tourism development, and protection of coastal water quality agreed and initiated in all four countries.

1.3 Revised Global Environment Objective and Key Indicators, and Reasons/Justification

Neither the original Global Environment Objective nor key indicators were revised. Some adjustments were introduced, however, after the Mid-term Review, in the Output Indicators in order to better account for the activities being supported by the project. These are presented in Annex 10 (Amendment to Grant Agreement TF027739).

1.4 Main Beneficiaries

The project improved conservation outcomes and opportunities for sustainable use of the MBRS and its resources. By encouraging a transboundary focus, which replaced historically national and sector-specific management interventions, it resulted in a systemwide approach to coastal and marine resource management, enhancing regional cooperation, uniform and high performance standards, and sustainability of outcomes.

Beneficiaries of the Project included:

- The global and regional environment, including ecosystems of Belize, Honduras, Guatemala, and Mexico;
- Local populations in the four countries, including women and indigenous groups, such as the Garifuna, Ladino, Mayan, and Miskito communities;
- Various sectors including the private sector, the tourism industry, fishing cooperatives, NGOs, and the scientific community; the donor community; and regional institutions, such as CCAD.

1.5 Original Components

To achieve the development objectives in the context of significant knowledge gaps, weak technical capacity, and the absence of any regional coordination, the Project was designed around four components:

Component 1. Marine Protected Areas (US$5.0 million). This component focused on planning, management, and monitoring of a select group of Marine Protected Areas (MPAs) and institutional strengthening. This was done recognizing that many of the MBRS's more than 60 existing and proposed coastal and MPAs exist only on paper and have little or no on-site management, and that a significant number lack up-to-date master and operational plans

and the associated basic infrastructure and equipment needed for their implementation. It was divided into two subcomponents: *Subcomponent A* – Planning, Management, and Monitoring of Marine Protected Areas (US$4.45 million); and *Subcomponent B* – Institutional Strengthening of MPAs (US$0.55 million).

Component 2. Regional Environmental Information System (US$4.4 million). This component focused on providing timely and reliable data to managers and decisionmakers. It established and distributed a web-based Regional Environmental Information System (REIS) to provide an essential tool to organize and manage data to support improved decisionmaking. A second objective of the component was the establishment of a Synoptic Monitoring Program (SMP) to be used to support more informed management decisions. It has two corresponding subcomponents: *Subcomponent A* – Creation and Implementation of a Distributed, Web-based Environmental Information System (EIS) (US$1.70 million); and *Subcomponent B* – Establishment of a Synoptic MBRS Monitoring Program (US$2.65 million).

Component 3. Promoting Sustainable Use of the MBRS (US$1.9 million). The objective of this component was to support the introduction of new policy frameworks and management tools to increase institutional capacity, disseminate key information, and create the necessary incentives for stakeholders to shift toward patterns of sustainable use of MBRS resources. The subcomponents reflect the focus on the two most important and potentially harmful economic sectors dependent on the MBRS, fishing and tourism: *Subcomponent A* – Promotion of Sustainable Fisheries Management (US$1.04 million); and *Subcomponent B* – Facilitation of Sustainable Coastal and Marine Tourism (US$0.85 million).

Component 4. Public Awareness and Environmental Education (US$1.5 million). A major underlying cause of threats identified in the Threat and Root Cause Analysis completed in support of MBRS Program preparation was the lack of public education on and awareness of the significance of the MBRS and the issues that need to be addressed to ensure its sustainability. The component consisted of the development of an environmental awareness campaign and formal and informal education: *Subcomponent A* – Development of an Environmental Awareness Campaign (US$0.93 million); and *Subcomponent B* – Formal and Informal Education (US$0.55 million).

1.6 Revised Components

Not Applicable

1.7 Other Significant Changes

The project was granted a one-year extension to allow for disbursement of the remaining funds and preparation of a follow-on phase, which had been anticipated from the beginning.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design, and Quality at Entry

Because adequate preparation and stakeholder buy-in was considered essential for a regional project of this scope, significant effort went into project preparation and planning. This was

carried out over a 26-month period at a cost of US$1.2 million, or 10 percent of the total GEF amount. Preparation was financed by several donors: the Dutch Trust Fund I (US$360,000), the Canadian Government (US$150,000); the Food and Agriculture Organization (FAO) (which financed a fisheries specialist); and GEF in the form of a Project Development Fund (PDF) Block A grant (US$25,000), and two GEF Block B grants (totaling US$494,000). Both the Mid-Term Review and the Terminal Evaluation teams judged the participatory decisionmaking and coordination among the four countries (see below) to be one of the key factors in the project's success.

Learning from Earlier Operations

Experience has taught that gaining the commitment of stakeholders to regional cooperation to solve transboundary issues requires creating a sense of ownership in the management process, and consultation, consensus, and a reaffirmation of the benefits of a regional compared to a nationalist approach. Overcoming the tendency to focus on national priorities rather than the regional good was a challenge to the Project. Thus, the project team included several activities to promote public awareness and dialogue about the importance of the MBRS to create a strong constituency for the harmonization of policies and enforcement of legislation that would be needed to sustain a regional approach.

Another key lesson drawn from environmental management projects around the world was that initiatives of this type are typically long-term efforts, requiring sustained commitments of political will and resources. With this in mind, the Project was designed as the initial phase of a 15-year program, with the expectation that funding for the out-years would be secured by leveraging GEF financing and expanding the partnership to new stakeholders, including the private sector.

Consultation and Participation

Project preparation included three multistakeholder, regional workshops, each hosted by a different member country. A social assessment involving national-level consultations was carried out with the help of national coordinators under the aegis of a regional coordinator, whose job was to consolidate the findings. To ensure that participation in the design phase would be carried over during implementation, several mechanisms were incorporated into the project structure. These included regional technical working groups, drawn from multistakeholder National Barrier Reef Committees (NBRC) established in each country, to help design relevant components of the project, and later monitor their implementation through review and approval of annual work plans. A regional Steering Committee, comprised of the ministers of environment from each country and the executive secretary of CCAD (appointed by the Council of Environment Ministers of Mesoamerica) provided overall policy guidance and acted as the key agents for harmonizing relevant policies and regulations across the four countries. With a multinational Project Coordination Team drawn from the four participating countries and reflecting both gender and ethnic diversity to execute the project, the MBRS project was seen as highly representative of interests in the region.

Quality at Entry

Quality at entry is rated Satisfactory. The project enjoyed a high level of political support, and reflected shared objectives of the four countries. It was consistent with Country Assistance Strategy (CAS) goals for all four countries, including improving public sector

governance in Mexico through institutional development and better management of natural resources. Belize, Guatemala, and Honduras shared similar CAS goals of reducing rural poverty through improved environmental security and better management of natural resources. Building social capital through information networking, training, and broader participation of local stakeholders in the management of resources was identified as a complementary goal among the three countries. The Project supported these goals by first promoting a regional vision of ecosystem sustainability and productivity. It further supported public awareness about the importance of the MBRS as a world-class resource, its importance to the cultural and economic future of the region, and its role as a vital component of the biosphere.

The Project would further seek to reduce fragmentation in the governance of the MBRS and promote regional integration by creating a platform for regional coordination, improving regional information systems for decisionmaking and harmonizing policy frameworks across the four countries in line with principles of environmental and social sustainability. In light of the above, the project's Quality at Entry is rated Satisfactory to Highly Satisfactory.

2.2 Implementation

2.2.1 Factors Outside the Control of Government or Implementing Agency

During the lifetime of the project there were no major forces (such as natural disasters) that affected its implementation or that were outside the control of the four governments or the implementing agency.

2.2.2 Factors Generally Subject to Government Control

Project effectiveness was delayed six months due to the unusual amount of coordination necessary for this unprecedented regional effort involving four countries managing a complex ecosystem. Part of this delay was due also to the project aligning its financial management (FM) with the World Bank's FM requirements. Although this six-month delay did not substantially affect project implementation once the project was launched, it did affect the disbursements schedule, resulting in the need for a one-year project extension to fully disburse project funds.

2.2.3 Factors Generally Subject to Implementing Agency Control

The quick recovery from the six-month effectiveness delay can be directly linked to the substantial investments during project preparation in consultation, representative decisionmaking, and coordination among the four countries. Housed in new facilities in Belize City, which also included the Coastal Zone Management Authority and the Belize Fisheries Department, the Project was able to coordinate effectively with both the Ministry of Environment (as a member of CCAD) and the Ministry of Agriculture, whose Director of Fisheries served as the MBRS National Coordinator. The National Barrier Reef Committee (NBRC), which provided input into the Project's annual work plans through representation on the regional Technical Working Groups (comprised of NBRC members according to their technical expertise), also lent stability, credibility, and a high degree of local ownership to this regional initiative.

2.3 Monitoring and Evaluation (M&E) Design, Implementation, and Utilization

2.3.1 M&E Design

Monitoring was one of the main pillars of the project—both in terms of assessing implementation outcomes and in evaluating the health of the MBRS. As mentioned, the project's preparation had a strong participatory nature, with technical working groups contributing to annual work plans, the review of project benchmarks, and, in the Synoptic Monitoring Program of the Project, the identification of key indicators. The M&E design benefited from this participatory nature, resulting in a set of indicators that was widely agreed, succinct, and targeted.

2.3.2 M&E Implementation

The M&E plan was carried out in a timely manner. Results and progress were a vital part of the national and regional M&E program. They were tracked through a log frame matrix and Annual Progress Reports (Annex 11). Another important aspect of the M&E program was its state-of-the-art website (http://www.mbrs.org.bz/), which not only posted a rich array of technical and scientific reports, but also was used to post progress reports, agreements, and other administrative documents. This allowed the project to not only disseminate pertinent technical information but also to be transparent.

The M&E plan was put into effect as planned, and tracked project outputs and outcomes. The Key Performance Indicators were robust enough to track progress toward reaching the project's goals, but they did not provide enough information to monitor the long-term financial sustainability of the project.

2.3.3 M&E Utilization

The Synoptic Monitoring Program and the Regional Environmental Information System (REIS), a component of the project's overall M&E System, represent the first such standardized information gathering and dissemination on the status of MBRS indicators in the region. The results from monitoring are slowly making their way into the decisionmaking process of MBRS management. The use of evidence collected from fish Spawning Aggregation Sites (SPAWS) has contributed to setting some of these areas aside with fishing communities' support. At the scientific level it has provided input for technical reports and articles in peer-reviewed journals. More important, monitoring results (including socioeconomic aspects) will constitute a major input to the biannual report on the State of MBRS Health, commissioned by the Ministers of Environment in the updated Regional Action Plan for the Mesoamerican Barrier Reef System, endorsed in 2006.

2.4 Safeguard and Fiduciary Compliance

An Environmental Analysis was carried out during Project preparation. Recommendations on how to mitigate potential adverse impacts from the Project related primarily to small-scale infrastructure for MPAs. These were presented in the form of an Environmental Management Plan, including preparation of guidelines for siting of construction and operation of MPA infrastructure. These were incorporated into Project design and applied during project implementation in the selected MPAs.

A Social Assessment, involving extensive consultations, was carried out during Project preparation. The results and recommendations were incorporated into an Indigenous People's Participation and Development Plan, which was implemented under the Project.

2.5 Post-completion Operation/Next Phase

As noted, a second-phase project following on the heels of phase 1 was anticipated at the outset and is now in the early stages of preparation. However, a key determinant of whether the Project will move forward with GEF support is the identification of adequate co-financing. Donors often wish to leverage their resources and are reluctant to make a commitment until there is already evidence of strong financial support from one or more partners. Several partners have indicated their interest in supporting a second phase and have committed to raising funds if core funding is forthcoming.

3. Assessment of Outcomes[1]

3.1 Relevance of Objectives, Design, and Implementation

The overall objective of the MBRS Project was to enhance protection of the unique and vulnerable marine ecosystems comprising the MBRS, and to assist the countries of Belize, Guatemala, Honduras, and Mexico to strengthen and coordinate national policies, regulations, and institutional arrangements for the conservation and sustainable use of this global public good.

This objective continues to be highly relevant to the MBRS, particularly in the wake of information gleaned from the baseline monitoring—the first such effort of its kind in the region—which indicates that human pressures on the reef are increasing and climate change is having a significant impact on coral reefs throughout the MBRS region.

Strengthening the management of Marine Protected Areas (MPAs) has significantly improved the potential effectiveness of these tools for conservation.[2] In many instances, the Project turned MPAs from marginally operating, well-intentioned efforts into functional MPAs that were able to attract new funding through entrance fees, grant writing, and other financing strategies. The Project also brought public awareness of the value of the reef to a much higher level throughout the region, from the elementary classroom to the highest levels of government.

The regional approach pioneered by this Project, including human and institutional capacity building to identify and address issues of regional importance, and access to key decisionmakers to both communicate these findings and provide a conduit for regional action, remains even more valid in the face of globalization (including tourism and demand for fish products) and other threats to the MBRS such as climate change.

The Project was, however, less successful in its attempts to manage tourism impacts, promote sustainable tourism development, or create alternative livelihoods for those engaged in unsustainable natural resource extraction, such as fisheries. In particular, it was felt that one of the shortcomings of the project was its inability to bring the tourism sector into strategic

[1] This section should be read in conjunction with the independent Terminal Evaluation of the Project, commissioned by the Bank and submitted to the GEF. The evaluation rated the project between Satisfactory and Highly Satisfactory on all but one of the Outcomes.

[2] The results of the first baseline report on MPA Management Effectiveness, using a tracking tool developed by the Bank and partners in the region, highlights both the strengths and weaknesses of these protected areas, alerting managers where strategic investments are most likely to have a payoff in achieving overall objectives.

discussions and engagement in implementation of tourism-related activities and alternative livelihoods. While less effort was put into the design of this subcomponent, it was always anticipated that capacity building in the tourism sector would come from a parallel investment project prepared as co-financing for the MBRS Project—Sustainable Coastal Tourism—in Honduras. Unfortunately, the *Instituto Hondureño de Turismo*, which was implementing the latter project, chose not to become involved in the regional tourism forum that was to bring stakeholders in the industry together, with the result that this component of the MBRS project had little technical support or institutional buy-in.

3.2 Achievement of Global Environmental Objectives and Sustainability

The Global Objective of the MBRS Project was to enhance the protection of the ecologically unique and vulnerable marine ecosystems comprising the MBRS, by assisting the littoral states to strengthen and coordinate national policies, regulations, and institutional arrangements for the conservation and sustainable use of this global public good.

The Project has been highly successful in achieving its Global Objective. It catalyzed international cooperation among Belize, Guatemala, Honduras, and Mexico and is widely regarded as a model for regional coordination and joint management of a transboundary resource. Key achievements of the Project are:

1. Catalyzed the adoption of a common policy framework for sustainable management of resources in the areas of fisheries, tourism, and Marine Protected Areas (MPAs) among the three countries on the Gulf of Honduras; adoption in Mexico is pending.

2. Fostered new mechanisms for coordination and multistakeholder representation within the countries themselves via the National Barrier Reef Committees (NBRCs), comprised of representatives from both the public and private sectors.

3. Established a standardized regional Synoptic Monitoring Program, including information on reef health, seagrass, and mangrove status, water quality, and water contamination to track changes in MBRS ecosystem health.

4. Developed and established a web-based Regional Environmental Information System (REIS) with over 20 institutions permanently contributing data to the system.

5. Strengthened management capacity in 16 MPAs through the development and implementation of numerous MPA training tools, the training of more than 200 park rangers, infrastructure support, and tracking tools to report on management effectiveness.

6. Harmonized primary and secondary school curriculums in all four countries on the value of the MBRS to the people of the region and to future generations, and trained over 2,000 teachers in their use.

7. Organized the first-ever Mesoamerican Fishermen's Congress to gain fishers' support for harmonized policies and norms.

8. Formulated a Draft MBRS Cruise Ship Policy.

9. Served as a catalyst in achieving recognition of the MBRS as a region of global importance, attracting attention and interest of numerous international actors.

3.3 Efficiency

The objectives of the Global Environment Facility (GEF) to conserve and sustainably manage globally important biodiversity resources in a transboundary setting were met. With GEF support of US$11 million, the project was able to catalyze additional investments (in-kind and in cash) by the countries and other partners in the region, to achieve substantial, concrete results in capacity building (technical and physical), policy reform, and collection of baseline data on the reef system. Given these outcomes, the Project was highly efficient in its use of limited project resources.

3.4 Justification of Overall Outcome Rating

Rating: **Satisfactory**

Given its high relevance and the significant outputs and the resulting outcomes achieved in a complex regional context, this project has an overall satisfactory outcome rating.

3.5 Overarching Themes, other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

The Project did not directly target poverty alleviation, gender, or social development. Its impact on these issues, if any, was indirectly through the improved management of the marine resources, which would in the medium to long term improve sustainability of fisher and other communities that depend on the MBRS.

(b) Institutional Change/Strengthening

The Project made important contributions to institutional strengthening in the region, first by setting a standard for regional cooperation in addressing issues of common concern over a shared resource. With the help of CCAD, the executing agency for the Project, it created the political space for unprecedented regional coordination and progress toward policy harmonization in the governance of marine resources in the region. Second, the project strengthened the technical capacity of MPA managers and facilitated public access to key information about the value of the MBRS and its condition. This, in turn, has empowered civil society to demand greater accountability from policymakers on MBRS resource governance.

(c) Other Unintended Outcomes and Impacts

The GEF support was a magnet for new investments in conservation and sustainable use of the MBRS, with the result that considerable leverage from the international conservation community was brought to bear on decisionmaking in the region.

As a result of information from spawning aggregation studies supported by MBRS and other partners, new fishing regulations to protect remaining spawning aggregations of the threatened Nassau Grouper in Belize have been issued. Other reforms, including the banning of commercial fishing and the sale of parrotfish, key grazers that keep in check overgrowth of seaweed on the reef, are pending. Closure of fishing seasons and gear restrictions have been harmonized across the four countries, reducing poaching opportunities and destructive fishing. In Mexico, a new law has been passed to strengthen protection of mangroves in

response to greater public awareness and concern over coastal erosion in exposed areas from more frequent and intense hurricanes. Effective enforcement, however, remains a challenge, given the money to be made from tourism development.

The capacity of MPAs to raise funds (for example, from entrance fees, grants from the Protected Areas Conservation Trust in Belize [PACT], and the Mesoamerican Reef [MAR] Fund [a regional facility established by NGOs in the region to finance marine conservation activities at US$50 million over the next 10 years]) is far greater now than when the Project started. The infrastructure, human resources development, and MPA operational management plans supported by the Project are an important legacy that can be used to leverage additional resources from external sources to cover some operating and program costs.

Despite these solid achievements, however, some outcomes will most likely not be sustained in the absence of continued external support. The Synoptic Monitoring Program (SMP) and the Regional Environmental Information System (REIS) do not currently have a dedicated source of funds to continue beyond phase 1. While the Governments of Belize and Mexico are committed to funding basic monitoring in the absence of external support, this is not the case in Guatemala and Honduras. A second phase project was regarded as essential to creating a market demand for data to be generated by the SMP.

4. Assessment of Risk to Development Outcome
Rating: **Moderate**

The main threat to the development outcome of the project is lack of long-term funding for the continued monitoring and data collection that feeds both the Regional Environmental Information System (REIS) and the Synoptic Monitoring Program (SMP).

The Regional Coordinator at the time of this report was actively seeking resources for the continued financial support for these and other project-related activities. While some commitments have been made, for example, for construction of a Regional MBRS Center, and pledges to raise funds have been obtained (for example, for priority activities under a phase 2 to reduce threats in the watersheds draining into the MBRS), a critical mass of core funding will need to be identified soon to secure the additional co-financing required.

5. Assessment of Bank and Borrower Performance

5.1 Bank
(a) Bank Performance in Ensuring Quality at Entry
Rating: **Satisfactory**

The World Bank Task Manager's extensive expertise in marine biology was an important factor in the success of project preparation. Given the complexity of the Project, it was important not only to have this expertise but also to be able to rely on a broad range of experts. Even though project design reflected this broad range of skills, adjustments were recommended and later adopted.

(b) Quality of Supervision
(including of fiduciary and safeguards policies)
Rating: **Satisfactory**

The World Bank Task Manager has been with the Project since its inception and was acknowledged by all interviewed as highly committed to the project and an important driving force in the project's success. The long-standing relationship with the project provided important continuity, which was even more essential given the complex nature of the Project.

The Project's March 2004 Mid-Term Review (MTR) provided extensive guidance, with some 50 recommendations. These included: consultation with political partners outside the current cast of MBRS ministries, coordination with bilateral donors and international NGOs, socioeconomic studies to identify alternative livelihood opportunities, directly engaging coastal communities in project planning and execution, developing a plan for approaching the private sector to help set up an endowment fund for coastal and marine resource conservation, and securing financing sources via user fees. In the end, fewer, more targeted recommendations, and more systematic follow-up would probably have been more effective.

Perhaps the biggest constraint in terms of Bank performance was the lack of a policy dialogue between the Country Departments and the governments on key policy reforms. This is often the case with grant funding, where significant investments are not at stake, and even more likely with regional projects, such as this one, which cut across three country departments in the Bank.

(c) Justification of Rating for Overall Bank Performance
Rating: **Satisfactory**
The Bank's supervision is rated as satisfactory given its commendable effort on a complex project in a multinational setting, contending with difficult ecological conditions and institutional arrangements. As is to be expected, certain shortfalls were identified during project implementation and were captured in the recommendations of the mid-term evaluation. A concerted effort was made to address these to the extent possible under the remaining time frame of the project.

5.2 Borrower
(a) Government Performance
Rating: **Moderately Satisfactory**

Given the project's regional approach involving four separate countries, implementation arrangements were by necessity, complex and multilayered (Annex 12).

The involvement of CCAD elevated the profile of the MBRS as a system of regional importance to the ministerial level, which should result in continued institutional interest. The Steering Committee provided an essential mechanism for coordination among the participating countries and was an effective tool for project implementation and regional-level oversight of the Project Coordinating Unit (PCU).

The funding of the National Coordinator (NC) was part of the countries' counterpart contribution, meant to demonstrate their commitment to the project. However, the ability of

the NCs to adequately fulfill their roles was constrained by limited human and financial resources intrinsic to their countries. All the NCs mentioned that, in retrospect, the lack of a dedicated person to the MBRS Project hampered their country's ability to participate optimally. The Project was deliberately designed not to finance NC salaries in deference to sustainability concerns. Perhaps an arrangement can be considered in the future, whereby the NC is provided resources to employ help for specific project-related activities. While this means additional costs to the project, strengthening the capacity at the national level may be a cost-effective investment.

At the field level, some Protected Areas personnel reported problems getting basic support, and felt that responsiveness to their needs was highly variable.

The NBRC committees were established by ministerial decree at the outset of the project to represent multistakeholder interests in management of the MBRS. Their degree of engagement varied from country to country (Belize, for example, had a strong and active NBRC, while those in Guatemala, Honduras, and Mexico met irregularly).

The Technical Committees met with varying degrees of success. One limitation was that the members in these committees served in an honorary capacity, and as such, were not always able or willing to give the project the level of attention needed. Still, members participated in the development of the Annual Work Programs, and many individuals generously gave many hours of their time and expertise at little or no cost to the project.

The benefits envisioned in the Project Appraisal Document of the Consultative Group—a donor/partner group in the MBRS region—were not fully realized. While the group met formally on two occasions on how to improve collaboration and increase synergy, these meetings were not sustained. Bilateral meetings were more frequent between the Bank and other partners in the region and resulted in a productive collaboration, *Healthy Reefs for Healthy People*, with guidance to managers on reporting on the health of the MBRS.

As mentioned, the Heads of State of the four participating countries gave the project strong political support; however, this did not always filter down to the line ministries with jurisdiction over MBRS resources. More often than not, economic interests in one ministry trumped efforts by another to protect valuable but threatened resources. This underscored the need, in the future, to include all relevant ministries in project implementation and as part of the Steering Group. This is anticipated in the updated regional Action Plan for the MBRS.

(b) Implementing Agency or Agencies Performance
Rating: **Satisfactory**

The Central American Commission on Environment and Development (CCAD) was selected to execute the project after a detailed institutional analysis during project preparation indicated that CCAD was the only organization in Central America that had the mandate and government buy-in to deal with environmental policy at the regional level. Its convening power and ability to raise policy issues to the highest levels of government through the *Sistema para la Integración Centroamericana* (SICA) made it the strategic choice for advancing regional coordination and harmonization of policies governing shared resource use in the MBRS. Although CCAD's operational experience in coastal and marine issues was

limited at the outset, it put together a strong regional coordination unit (the Project Coordinating Unit, PCU), of technical experts from all four participating countries to run the day-to-day operations of the project. CCAD proved to be invaluable in facilitating agreement on the Common Policy Framework in the Southern Transboundary Area, and in bringing Mexico on board as an Observer to CCAD. This opened the door to discussions on a common policy framework for the Northern Transboundary area of the MBRS, and the signing of the Tulum+8 Declaration.

At the operational level, National Coordinators were unanimous in expressing their satisfaction with the way the PCU carried out its responsibilities. In particular, the PCU executive director was both highly qualified and efficient, and provided strong leadership and direction to the Project. The feedback received from government officials interviewed indicated that the PCU was respectful of their countries' sovereignty, receptive to their input, and responsive to their needs. There was a sense among those interviewed that the PCU had managed the Project in a fair and transparent manner.

One area of weakness of the PCU, however, was procurement expertise. The PCU suffered from repeated turnover in staff assigned to this function, beginning with the United Nations Development Programme (UNDP) (originally contracted to oversee this and later replaced by contracted local staff). Although this did not detract substantially from project implementation, it did point out the need for adequate training to administer a project as complex as this one.

The Project was rated satisfactory on its financial management and accounting function until the last supervision mission, when several discrepancies regarding documentation of expenditures and submission of withdrawal requests for the Special Account led to certain expenditures being ruled ineligible, and delays in final reconciliation of the project accounts were noted. This was corrected and a final independent audit of expenditures during this period found no outstanding issues with respect to the overall accounting and financial management. However, in the final Implementation Status Report (ISR) the financial management function was rated as Marginally Satisfactory because of the earlier documentation problems.

The PCU posted on its website all the information related to project activities, including all Annual Work Programs, Annual Progress Reports, and Auditors Reports. This level of transparency lends a high degree of credibility to the project.

(c) Justification of Rating for Overall Borrower Performance
Rating: **Satisfactory**

Despite some delays, all countries eventually were aligned with project objectives not only at a high political level but also at a policy and technical implementation level. The Tulum+8 Declaration committed and reaffirmed the four countries' support of the objectives of the MBRS. The transboundary agreement in the south, among Belize, Guatemala, and Honduras, was a major achievement, but needs to be followed up with regulations in each country. Negotiations are still pending for a similar agreement on the northern transboundary area between Belize and Mexico. The Bank could help clear the bureaucratic impasse that appears to be blocking this agreement.

6. Key Lessons Learned

- Implementing regional projects to protect transboundary public goods is complicated by (a) processes and institutional arrangements in the Bank that are designed primarily for single-country operations, (b) differences in client country readiness and capacity, and (c) biases that favor national interests over shared regional ones. Overcoming these barriers requires flexibility in administrative processes, innovative financing to access regional financing, and educating stakeholders about the benefits of a regional approach through continuous dialogue, consultation, and outreach.
- Flexibility is needed in designing and allocating budgets to project activities to accommodate unanticipated externalities (such as climate change), to respond to new opportunities, and to meet changes in client needs during implementation.
- Regional data collection and dissemination should be demand-driven to ensure use of information and markets to pay for it.
- Alternative livelihoods must be introduced in tandem with restrictions on former resource use and closures on new entrants to the sector to reduce pressure on targeted resources. Training in alternative livelihoods must be accompanied by marketing and incubation of new lines of business.
- The private sector must be involved in setting codes of conduct for sustainable tourism and in generating investments in greener operations, but to engage the industry effectively, regulatory policies must be aligned with economic incentives.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/Implementing Agencies

Most of the issues raised by the borrower related to Bank procedures, which often proved cumbersome and resulted in implementation delays. An example was the Loan Administration Change Initiative, a financial management (FM) procedure that was imposed as a condition of effectiveness. This led to several delays in the PCU's establishment of its FM function, and was later abandoned by the Bank as being impractical. Procurement also proved to be a continuous problem in that different thresholds and procurement procedures were required for different countries, depending on their capacity. Inadequate field training opportunities and repeated turnover in procurement staff in the PCU contributed to the problem.

The PCU also indicated that they felt that the Bank did not have good arrangements in place to deal with absences of their disbursement officers—when this officer was on leave, the person covering for them did not know the project well enough, creating disbursement delays and imposing additional burdens on the PCU by requesting documentation already provided.

(b) Co-financiers

There was parallel co-financing from the World Wide Fund for Nature (WWF), the Oak and Summit Foundation, the United States Agency for International Development (USAID), the United Nations Foundation (UNF), and The Nature Conservancy (TNC). It is estimated that their cumulative contribution was approximately US$10million.

(c) Other Partners and Stakeholders

The TNC, USAID, WWF, the World Resources Institute (WRI), and the Coral Reef Alliance (CORAL) were all stakeholders in a complementary USAID/UNF-supported initiative called the International Coral Reef Action Network (ICRAN), totaling US$3 million. This initiative focused on the ridge-to-reef approach for managing land-based threats to the MBRS, sustainable tourism, and sustainable fisheries. The MBRS Project collaborated with CORAL in the production of Voluntary Codes of Conduct for Tour Guide Operators, with TNC in the organization of the first MBRS Fishermen's Congress, and with other NGOs in the production of a draft Cruise Ship Tourism Policy, thus leveraging its resources with partners to achieve common objectives. Despite its track record of collaboration, there was criticism from some of the larger NGOs that the MBRS Project used its unique relationship with the four governments to advance its own agenda at the expense of others. However, the interest expressed by several groups in collaborating in a second phase if core funding from the GEF is forthcoming suggests this criticism is more related to differences in management style and turf issues than substance.

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in US$ million equivalent)

Components	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
MARINE PROTECTED AREAS	**5.00**	**2.13**	**43**
REGIONAL ENVIRONMENTAL MONITORING AND INFORMATION SYSTEMS	**4.40**	**2.61**	**59**
PROMOTING SUSTAINABLE USE OF THE MBRS	**1.90**	**1.19**	**63**
PUBLIC AWARENESS AND ENVIRONMENTAL EDUCATION	**1.50**	**0.94**	**62**
REGIONAL COORDINATION AND PROJECT MANAGEMENT	**2.40**	**3.95**	**164**
Total Baseline Cost	**15.20**	**10.82**	**71**
Total Financing Required	**15.20**	**10.82**	**71**

(b) Financing

Source of Funds	Type of Co-financing	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
Local Sources of Borrowing Country		**3.70**	**4.13**	**111.52**
Global Environment Facility (GEF)		**11.03**	**10.82**	**98.10**

Annex 2. Outputs by Component[3]

Component 1. Marine Protected Areas (MPAs)

(US$5.0 million; GEF funding US$2.5 million)

Component Rating: Satisfactory

Objective: Support immediate improvements in MPA protection and management while increasing the sustainability of management efforts; measure management effectiveness and build capacity to manage through the development of management and operational plans, trainings, and infrastructure development; improve regional conservation efforts through transboundary cooperation.

Subcomponent A. Planning, Management, and Monitoring of Marine Protected Areas

MPAs played a significant role in the Mesoamerican Barrier Reef System (MBRS) Project by protecting important areas of recognized biodiversity significance from overuse, degradation, and destruction. In addition, the project built new constituencies for conservation around MPAs through educational efforts, and promoted new opportunities for livelihoods that are compatible with conservation objectives, principally through tourism.

The project successfully assisted in upgrading the operational plans of 11 MPAs and in the drafting of four new master plans. The project also produced a "Training Manual on Design and Development of Management Plans for Marine Protected Areas" that can be used throughout the region for new areas or for updating existing plans as necessary, and carried out trainings for management plan development, increasing MPA planning capacity throughout the MBRS.

The MBRS Project expended considerable time and effort reviewing existing systems for measuring effectiveness and created a new hybrid system for use in MPAs, described in MBRS Technical Document No. 5, "Recommendations for Monitoring Management Effectiveness in Marine Protected Areas" (available in English and Spanish). The Project developed a suite of 11 biophysical and 8 socioeconomic measures, and an application methodology for measuring management effectiveness. This is an explicit commitment to the adaptive management model that seeks to achieve area objectives by responding to local conditions and changes in those conditions as measured by agreed-upon measurements (standards). Identifying the relevant indicators and then agreeing to

[3] The Implementation Completion and Results Report (ICR) has borrowed liberally from the findings of the independent Terminal Evaluation of the Project, prepared for submission to the Global Environmental Facility (GEF), because a thorough review of project components was carried out at this time and there was no desire to reinvent the wheel.

standards has always presented a great challenge for Protected Area (PA) managers and planners. This was equally true for the MBRS team. Extensive review of many effective management models led to the creation of a survey instrument that was distributed to the target MPAs (Reserva Biosfera Banco Chinchorro, Arrecifés de Xcalac Reserve, Santuario del Manati, Corazol Bay Wildlife Sanctuary, Bacalar Chico Marine Reserve and National Park, South Water Caye Marine Reserve, Glovers Reef Marine Reserve, Gladden Spit, Sapodilla Cayes Marine Reserve, Port Honduras-Deep River Forest Reserve, Sarstoon-Temash National Park, Rio Sarstón Proposed National Park, Punta de Manabique Proposed Special Protection Area, Omoa-Baracoa Proposed Marine Reserve, and Turtle Harbor Wildlife Refuge and Marine Reserve).

The documentation produced, and the process of developing a model for measuring effectiveness in MPAs, are major accomplishments and represent significant project outcomes. However, they do not necessarily translate to improved management effectiveness in the target MPAs and, as noted in the document, neither the process proposed nor the measurement of effectiveness was full achieved. It was possible to make general assessments only about the effectiveness of specific areas and the state of MPAs in the region. Important information was gathered but at an expense and effort that may not have been effective. The questions as to who should be responsible for measuring effectiveness, at what cost and in what manner, require further investigation. The project did provide important insights and practical advice about measuring management effectiveness for MPAs and terrestrial Protected Areas (PAs). The report recognizes the high cost of measuring effectiveness relative to scarce resources and staffing, "Given the average staffing level of 3.9 persons in each of the 13 MPAs for which we have data (range of 0 to 7), and the reports on their current responsibilities and funding (Section 4), it is clear that the human resources are not in place to undertake even the basic monitoring protocol, much less the full suite of 43 metrics recommended to be monitored. The managers are too busy managing to evaluate their management effectiveness!" (p. 46) and suggests that establishing effectiveness must be a long-term process that will involve greater cooperation of a variety of governmental agencies, the private sector, nongovernmental organizations (NGOs), and other conservationists.

It is important to emphasize that the entire concept of measuring management effectiveness is unsettled among conservation scientists and practitioners. To say that we *should* measure effectiveness implies that we *can*, and this may not be possible due to the complexity of biotic and cultural variables that influence natural systems. Equally important is the effectiveness of measuring management effectiveness. As pointed out in the MBRS report, even the most basic efforts may not be merited within the constraints of extremely limited resources. It may be much wiser to dedicate such resources to measuring the effectiveness of particular management actions and using those results in the adaptive management framework. For example, if poaching protected species on reefs is a major problem, it may be worth measuring the effectiveness of enforcement compared to education to determine which action merits resources or greater emphasis.

The construction of five multifunction buildings that serve as administration, visitor, and community centers, and lodging for park personnel and researchers, is one of the largest

investments of the project. Major investments were made in Bacalar Chico (Belize), Xcalak (Mexico), Sapodilla Cayes (Belize), Rio Sarstún (Guatemala), and the Turtle Harbor Wildlife Refuge and Marine Reserve (Honduras).

During the planning process it was decided that one basic design would be chosen and modified as necessary for specific sites. This approach was intended to save design costs and standardize construction details. Facilities included a multi-use room, offices, dormitories, bathrooms, and food preparation areas. In addition, an interpretative trail was built in most areas so that visitors could understand and experience the terrestrial environment. The project also supplied significant amounts of furnishings, and equipment such as computers, boats, scuba gear, and communication equipment. In all cases the management presence, capacity, and effectiveness were greatly augmented and strengthened by these investments.

The new infrastructure legitimized the MPA presence and has been a major factor in securing grants, partners, and co-financing. There is strengthened governmental support for interpretation, educational, and enforcement activities, and operational and maintenance funding. Site examinations and interviews with staff at all of the MPAs that received infrastructure indicated that the infrastructure was very helpful in maintaining management presence, improving morale, and providing the base for implementing management plans. This was exactly what the Project Appraisal Document (PAD) had envisioned.

It is notable that each MPA uses its facility differently. In Bacalar Chico the public area is devoted to interpretation and has a strong tourism/education/visitor orientation. At Xcalak, the public area is more devoted to community involvement and public awareness, as is suited for this site since it is located in the community. The center at Rio Sarstún provides a base of operations for the managing NGO, a hub for patrolling and housing for staff, volunteers, and university researchers. In Sapodilla Cayes MPA the facility is jointly used by the Belize Fisheries and TASTE NGO, which co-manage the site. The Sapodilla Cayes facility is still awaiting educational and interpretative materials.

At Utila, the Project provided a multi-use center based on the uniform design used in the other sites. The Bay Island Conservation Association (BICA), the NGO in charge of the PA, used only a small part of the center because the rest of the building was temporarily used as classroom facilities by the local school until May 2007. This was a good example of community integration promoted by the MBRS.

Subcomponent outputs:

- Management and/or operational plans for 15 target areas;
- System for measuring MPA effectiveness;
- Target MPAs measured and rated as to their capacity for conservation activities;
- Significant equipment provided to regional protected areas for monitoring, operations, environmental education and tourism management; and
- Major infrastructure investments at five protected areas.

Subcomponent outcomes:

- Greatly increased capacity at national, regional, and local levels for marine conservation;
- New constituencies to support conservation in the MBRS region;
- Greater NGO capacity and recognition locally and regionally;
- Major contributions to the protected area literature on the themes of MPA management, community involvement, and transboundary cooperation;
- Greatly improved morale and respect among rangers, managers, and others involved in MBRS conservation initiatives;
- Assistance with Belize National Protected Areas System Plan;
- Regional cooperation among Protected Areas; and
- Improved baseline data on protected area effectiveness.

Subcomponent B. Institutional Strengthening of MPAs

The Project successfully carried out a series of regional training courses and workshops for Protected Area directors, technical staff, rangers, and key collaborators from local and national government agencies, collaborating NGOs, and local communities. One of the most significant outputs was a series of bilingual manuals that will serve far beyond the life of the Project for many aspects of MPA management. The Project, by undertaking these activities, also developed significant training and facilitation capacity for management planning, community involvement, income generation, and financial planning.

Examples include courses held early in the project in MPA Management Plan Development for directors and administrators of MPAs, park management staff, governmental organizations, NGOs, and universities involved in management and co-management of MPAs within the MBRS region. The training course covered zoning, environmental education, tourism, research, monitoring, park protection and patrolling, and financial strategies, among other subjects. A bilingual *Training Manual on Design and Development of Management Plans for Marine Protected Areas* was published and distributed throughout the region.

A Training Workshop on Income Generation for Protected Areas was held in Puerto Barrios, Izabal, Guatemala in 2002. The workshop was a joint effort of the MBRS Project, PROARCA/APM, the Mesoamerican Biological Corridor, WWF-Central America, and the Nature Conservancy. Financial strategies were proposed for several MPAs as a direct result of the workshop.

To promote greater regional MPA effectiveness, both Southern and Northern Trans-boundary Park Commissions were established. Commission meetings produced recommendations on fisheries, tourism, and MPAs, which were then used to formulate regional policies.

The Project developed a wealth of training materials, technical manuals, environmental educational materials and other books, pamphlets, curriculums, and co-management strategies to aid MPAs carry out their activities. This body of material is one of the most important contributions of the project and will serve the intended MPAs and the global conservation community. The original objective was to have a standardized training library in each MPA headquarters and in ranger stations throughout the region. While the material does exist and most is available on the Internet, not one of the MPAs visited had the library as described in the PAD. This is unfortunate because the material could be quite helpful to managers, rangers, community members, and other MPA partners. Most of the MPAs visited do not have Internet access, so the online versions are of little use to them. In addition, it would be quite costly and beyond the means of the areas to reproduce the materials.

Subcomponent outputs:

- High-quality manuals and guides on MPA management techniques, training, community conservation and involvement, and alternative livelihoods; and
- Trainings and workshops for rangers, fishers, community members, and NGOs.

Subcomponent outcomes:

- Regional cooperation among protected areas; and
- Increased capacity in multiple sectors to promote conservation in the MBRS region.

Component 2. Regional Environmental Information System
(US$4.4 million; GEF funding US$2.3 million)

Component Rating: Satisfactory

Objective: Increase knowledge and dissemination of information relating to coastal and marine ecosystem health in the MBRS.

Subcomponent A. Creation of a Regional Environmental Information System (REIS)

The REIS was designed to consolidate and analyze data collected from various sources, including the Synoptic Monitoring Program. The database was designed by national and international experts as part of several consultancies and is well thought out, easy to understand, and is a good example of the high standards of project products. There is extensive documentation on how to enter data, and attention has been paid to accommodate two languages, different names for the same species across the region, and different categories of species threats across the region.

The oversight of not initially designing the database to be spatially explicit in a Global Information System (GIS) format possibly delayed the release of some of the spatial information relevant to the region. However, the addition of GIS functionality in 2005–06 greatly enhanced the future of the database and its power to focus monitoring and

management activities. The maps show key health indicators such as seagrass biomass, disease coverage, and presence of nutrients, and provide a snapshot of the situation across the region. Data from the REIS will help provide status reports on the health of the MBRS region to decisionmakers and on-the-ground managers.

In addition, the website interface of the REIS serves as the gateway to all the MBRS documents and technical reports. It is easy to use and is available in two languages with exceptional transparency in terms of documentation. This is in itself a landmark for a large conservation project.

Subcomponent Outputs:

- REIS designed and fully operational;
- Web-based interface for data providers and users;
- GIS-based dataset;
- Public access to database;
- Baseline and summary maps in JPEG format for 13 sites;
- Ninety-eight biologists trained to date in the use of the REIS database;
- Web-based, CD, and printed format of all published material;
- Documents:
  - *User Manual for the REIS Volume 1–3, June 2005*
  - *Database Design Documentation, August 2005*.

Subcomponent Outcomes:

- First regional, public database on Marine Protected Area information;
- Essential tool to fill in information gaps needed for sound decisionmaking on natural resources;
- Greatly improved capacity to disseminate regional patterns and results;
- Regional coordination of scientists and biologists;
- Greatly improved transparency of data through public access to data;
- First steps to integrate data from the socioeconomic monitoring program under Component 4 (Public Awareness and Environmental Education) with REIS.

Subcomponent B. Establishment of a Synoptic Monitoring Program (SMP)

The SMP was developed as a regional, multilevel methodology to monitor changes in ecosystem health. It was designed to be comprehensive in terms of data collection, time frames (short, medium, and long term), and geographic coverage. The SMP methodology was developed to be implemented by monitoring teams, consisting largely of a mixture of members from the MBRS Support Agencies (government, NGOs, and fishers) in the four countries. A Monitoring Coordinator (MC) in each country had the responsibility for supervising each monitoring team. The MC then liaised with the PCU to update and verify data. The PCU managed and maintained the database and created summary base maps.

For a decade prior to the MBRS Project, several attempts were made to establish a regional monitoring program. When the project was designed, the goal was to streamline existing methodologies and agree on and adopt a regionwide program. The process for developing the methodology appears to have been very consultative and assimilates most of the best practices in comprehensive coral reef monitoring worldwide. It is tailored to meet the specific needs for monitoring the health of the reef in the four countries involved. Four types of data are collected at each site (site description, meta data, physical data, and specific parameters) and the time window (season) for each is well described. At each monitoring site, several locations are included that contain different ecosystems to maximize the information collected. This stratification is strategic and cost-efficient and is based on best practice sampling methodologies. The project also produced a well-organized data entry system in two languages, with established protocols for entering data for species that may have different names across the region. This is a key accomplishment in itself. Finally, the methodology covered both *static* and *dynamic* measures of reef and ecosystem health.

The first summary of results, taken as the baseline for all future monitoring episodes, was published in October 2006 in *Linea Base del Estado del Sistema Arrecifal Mesoamericano*. The report summarizes sites monitored and baseline data for each area of interest. The results for coral reefs are comprehensive and clearly presented. Results for seagrass and mangroves are, however, fairly sparse. Results for water contamination and water quality are preliminary and not as robust in terms of temporal and spatial sampling. The lack of seagrass and mangrove data is most notable in Belize, where only one site has been monitored. By 2006, 49 sites were included, 13 of which received comprehensive assessments. Results for 2004 and 2005 are posted on the MBRS website. Data for 2006 were released internally to users and will be made public in early 2007. A full analysis of the SMP data is expected by March 2007, including an executive summary for decisionmakers.

Overall, the SMP would not have been achieved without the partnerships established with the Supporting Agencies, which, as mentioned earlier, included a mix of NGOs, fishers, and private partners, who contributed generously to this effort. The SMP enabled synergies among disparate groups monitoring different sections of the MBRS and supported the harmonization and standardization of a monitoring methodology, which is in itself a considerable accomplishment. By producing a simple method that was well documented, the SMP was made accessible to a large number of people in the region, and this enhanced its credibility. More data collection is needed on seagrasses and mangroves, as are data on water quality and contamination (as capacity is built and effective partnerships for analysis are established). In the final analysis, the long-term usefulness of the SMP for management and decisionmaking will depend on continuing the process of analyzing results on a regular basis and disseminating the information.

Subcomponent Outputs:

- SMP designed and under implementation;

- Monitoring of 49 sites to date;
- Comprehensive baseline data for 13 sites across region;
- Results analyzed for 13 sites;
- Basic field equipment provided to Support Agencies;
- Training of monitoring personnel in Support Agencies;
- Documents:
  - *Manual Methods for the MBRS Synoptic Monitoring Program, April 2003*
  - *Linea Base del Estado del Sistema Arrecifal Mesoamericano, October 2006*
  - *Measuring Coral Reef Ecosystem Health, September 2006.*

Subcomponent Outcomes:

- Increased capacity at national, regional, and local levels for monitoring ecosystem health;
- Harmonized monitoring methodologies across the MBRS region;
- Increased Support Agency capacity to identify important indicators for coral reefs, mangroves, and seagrass beds, sources of marine pollution, and ocean circulation and gyres patterns;
- Improved baseline and temporal data on key ecosystem indicators;
- Improved regional and interagency cooperation;
- Inclusion of baseline results in Belize's "State of the Reef" report; and
- Clear local ownership of the methodology.

Component 3. Promoting Sustainable Use of the MBRS
(US$1.9 million, GEF funding US$1.12 million)

Component Rating: Moderately Satisfactory

Objective: To support the introduction of new policy frameworks and management tools to increase institutional capacity, disseminate key information, and create the necessary incentives for stakeholders to shift toward patterns of sustainable use of MBRS resources.

Subcomponent A - Promotion of Sustainable Fisheries Management

Working with local fishers, researchers, and MPA personnel, the project identified fish spawning aggregation sites (SPAWS) and established monitoring protocols for those areas. Trainings and workshops, including the first regional workshop involving fishers, community leaders, NGOs, and agency personnel, moved the area toward consensus on policy and best practice guidelines. Extensive trainings to promote alternative livelihoods, principally carried out by local NGOs, built new constituencies and training capacity.

Subcomponent outputs:

- Policy agreements and regulation standardization on gill net use and on conch, lobster, and snapper takes;
- Agreement on seasons for lobster and queen conch;
- Four training manuals (themes: business management and tour guiding) that contribute to sustainable tourism; and
- Training of over 300 individuals on various aspects of sustainable tourism development and practices.

Subcomponent outcomes:

- Groundbreaking regional cooperation on sustainable use of the MBRS;
- Policy dialogue among the four participating countries;
- New dialogue between fishers and policymakers;
- Elevated profile of the importance of conservation of the Reef; and
- New constituencies for sustainable activities.

Subcomponent B - Facilitation of Sustainable Coastal and Marine Tourism

This subcomponent sponsored regional forums to establish baseline information and clarify the current tourism landscape in the MBRS region. Several important policy guidelines were developed including the Policy Proposal for Sustainable Cruise Tourism in the MBRS Region and a Training Manual on Environmental Impact Assessments. All documents were produced in English and Spanish.

Subcomponent outputs:

- Regional tourism forums that raised the profile of conservation and the environment in regional tourism;
- "Training Manual on Environmental Impact Evaluations and Environmental Auditing of Coastal Marine Tourism Operations and Infrastructure";
- A new policy proposal for cruise tourism in the MBRS region.

Subcomponent outcomes:

- Elevated profile of the importance of conservation of the reef system;
- New constituencies for sustainable activities;
- Increasing involvement of the tourism sector in sustainability issues;
- Increasing interest of governmental ministries involved in tourism regulation throughout the MBRS.

Component 4. Public Awareness and Environmental Education (US$1.5 million; GEF funding US$1.26 million)

Component Rating: Satisfactory

Objective: To increase environmental awareness among a variety of stakeholders and develop the human capital necessary to plan and manage the diverse resources of the MBRS within a proven framework of conservation and sustainable use.

Subcomponent A. Development of an Environmental Awareness Campaign

This subcomponent created and fostered constituencies for sustainable reef use by working with public and private sectors to increase recognition of the importance of the MBRS to the tourism and fishing industries, and all those who benefit from the environmental services the reef provides. The MBRS Project website is particularly notable as a high-quality source of educational materials, scientific data, training and management manuals, and Project information.

Subcomponent outputs:

- Prepared and distributed more than 550 "Environmental Eco-tips" containing practical advice for preventing pollution of coastal marine ecosystems;
- At least 1,000 posters and 1,200 brochures on cultures in the MBRS were distributed in English, Spanish, and Garifuna;
- Production of the Regional Strategy for Environmental Awareness and the Manual of Graphic Standards for the institutional logo;
- Provided materials and support to other components of the project such as graphics, and sociocultural data, and assisted in communication and outreach;
- Training for press chiefs in environmental ministries;
- Publicity spots on appropriate fishing techniques for radio;
- Numerous T-shirts, caps, posters, and other promotional material to "brand" the MBRS activities; local and regional TV and radio spots to promote environmental awareness;
- National Journalists Workshop to promote activities in Belize and Guatemala; and
- Innovative program to put conservation messages in utility bills.

Subcomponent outcomes:

- Greatly elevated the profile of the MBRS at the national, regional, and institutional levels;
- Created new constituencies for MBRS conservation in institutions (government ministries and educational institutions); and
- Wider distribution of MBRS materials.

Subcomponent B. Formal and Informal Education

The project wisely invested in future generations by introducing educational curriculums and training methods that teach the value of the MBRS and its importance to the lives of all members of the region. A leader in the development of school curriculums in Belize said that the MBRS Project not only helped revamp the entire natural history curriculums regarding the environment, but that it also brought a dynamic new methodology for curriculum development that was now being used countrywide. Curriculum uptake has been slower in Guatemala, Honduras, and Mexico, where national curriculum review is more complicated. It is expected that the MBRS-developed curriculums will be integrated into the schools as new curriculum reviews are undertaken in all four countries.

Subcomponent outputs:

- Preparation and production of teachers' guides;
- Regional teachers' workshops to promote environmental awareness in teaching activities and to demonstrate products available through the project;
- Training of teachers as trainers for promoting MBRS-developed materials;
- National Workshops in Omoa and Utila in Honduras, Puerto Barrios in Guatemala, and five local workshops in Punta Gorda, Sarteneja, South Water Caye, Belize City, and Dangriga in Belize; two local workshops in Puerto Cortes and Cuyamel in Honduras; 657 teachers trained; 5 teacher workshops in Mexico; and 514 teachers trained.

Subcomponent outcomes:

- Created new constituencies for MBRS conservation in institutions (government ministries and educational institutions); and
- New methods for curriculum generation for public education.

Annex 3. Economic and Financial Analysis

N/A

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team Members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Marea Eleni Hatziolos	Task Team Leader	ENV	Coastal and Marine Resources Management
John Kellenberg	Natural Resource Economist	LCR	
Arsenio Rodriguez	Consultant	LCSEN	Environmental and Natural Resource Management
Juan Martinez	Social Scientist	LCSSO	Social Science, Indigenous Peoples
Luz Zeron	Financial Management Specialist	LCSFM	
Irani Escolano	Procurement Specialist	LCSPT	
Ferenc Molnar	Legal Specialist	LEGLA	
Jeff Lecksell	Cartographer	GSDPG	
Katherin George Golitzen	Consultant	ENV	Editing and Quality Control
Lourdes Guzzone	Team Assistant	ENV	Contracting and SAP
Bari Robin	Operations Analyst	ENV	
Reynaldo Pastor	Legal Specialist	LEGLA	
Supervision/ICR			
Dinesh Aryal	Operations Officer	LCSEN	
Edward William Bresnyan	Sr. Rural Development Economist	LCSAR	
Irani G. Escolano	Procurement Spec.	LCSPT	Procurement
Carlos Eduardo Gallegos Kattan	E T Consultant	LCSSD	Natural Resource Management
Lina Maria Ibarra Ruiz	Junior Professional Associate	ENV	
Emmanuel N. Njomo	Consultant	LCSFM	Financial Management
Diana P. Rebolledo	Language Program Assistant	LCSAR	
Nelvia Diaz	Language Program Assistant	LCSEN	
Luz A. Zeron	Consultant	LCSFM	Financial Management
Charles Di Leva	Legal Specialist	LEGLA	
Gunars Platais	Sr. Environmental Economist	LCSEN	ICR Author

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	Number of Staff Weeks	US$ Thousands (including travel and consultant costs)
Lending		
FY98	4.81	17.34
FY99	26.87	96.83
FY00	26.83	91.73
FY01	23.00	86.87
FY02		0.08
FY03		0.00
FY04		0.00
FY05		0.00
FY06		0.00
FY07		0.00
FY08		0.00
Total:	81.51	292.85
Supervision/ICR		
FY98		0.00
FY99		0.00
FY00		0.00
FY01		0.00
FY02	15.04	111.60
FY03	14.87	58.38
FY04	10.38	139.11
FY05	9.33	78.10
FY06	42.55	114.04
FY07	19.29	67.40
FY08	7.00	14.19
Total:	118.46	582.82

Annex 5. Beneficiary Survey Results

Not applicable

Annex 6. Stakeholder Workshop Report and Results

Not applicable

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

Executive Summary

The Mesoamerican Barrier Reef System (MBRS) Project was satisfactorily implemented, for the most part, with a lesser degree of success in the fisheries and tourism sectors. Marine Protected Areas (MPAs) benefited tremendously from investments made in management planning and institutional strengthening. The Synoptic Monitoring Program and the Regional Environmental System were successful in establishing a regional baseline on reef health, on which future monitoring efforts can be based and decisions made for the improved management of this global resource. Primary and secondary schools in the region are now formally teaching a reef conservation curriculum, while building solid reef conservation awareness among both children and adults. The Project has placed reef management issues at the forefront of the political agenda at the highest possible level in the region, and has achieved a significant milestone by getting three of the four countries to sign off on a first set of harmonized policies and norms for the sustainable management of MBRS resources. The MBRS Project has placed the region on the global map and has played a major catalytic role in attracting world attention to the region, especially as it relates to the large number of international actors now having a major presence in the region.

Several lessons were learned relating to project design. The most significant include the importance of the definition of scale and added value in the regional approach, to avoid investments in regional projects being perceived as substitutes or disincentives for national investments. The need for broad stakeholder consultations and an impartial institutional identity is crucial for the credibility of the project preparation process. The need to comprehensively assess proposed activities beyond the Performance Indicators was very evident in the alternative livelihood activities. The lack of true private sector involvement in the tourism activities of the project clearly demonstrated that the design for this component was weak in its approach, especially when the proposed outcomes require voluntary investments and adoption by the tourism sector. In addition, limited participation by the regulatory agencies of tourism in the decisionmaking structures of the project also contributed to poor delivery of that component of the project.

The dynamic and complex nature of regional projects such as the MBRS require tailor-made institutional arrangements for their successful execution. Administrative guidelines developed initially for national projects do not necessarily address the needs of regional projects. Future projects such as this one require special attention in the development of operational manuals and other administrative guidelines, which truly capture their regional nature and provide the flexibility needed for effective project implementation.

The sustainability of many of the processes initiated under the MBRS is dependent upon the provision of external financial support. Beyond a second phase of the MBRS, a permanent institution is needed to absorb, expand, and continue the initiatives of the project to ensure the long-term achievement of the intended objectives: the conservation and sustainable use of MBRS resources.

1. Project Evaluation (Scope and Approach)

This Implementation Completion Report (ICR) for the Conservation and Sustainable Use of the Mesoamerican Barrier Reef System Project (MBRS) is based primarily on the final report of the "Terminal Evaluation of the Mesoamerican Barrier Reef Systems Project," published in March 2007. The Project's Extension Period concluded on June 30, 2007; therefore, this ICR includes additional aspects that the Terminal Evaluation may not have addressed, and other opinions of the Central American Commission on Environment and Development (CCAD), the Executing Agency of the MBRS.

The MBRS was evaluated by a team of three highly qualified independent consultants, in accordance with terms of reference developed and approved specifically for that purpose. The team evaluated Project components according to the descriptions and stipulations in the Project Appraisal Document (PAD), Annual Work Plans, Technical and Financial Progress Reports, World Bank Supervision Reports, Independent Auditors Reports, and with particular attention to compliance with Performance and Outcome Indicators as presented in the Project's Logical Framework Matrix in Annex 1 of the PAD, and as amended in response to recommendations of the Mid-Term Evaluation of the MBRS.

2. Achievement of Project's Development Objective

The Development Objective of the MBRS Project was to assist the countries of Belize, Guatemala, Honduras, and Mexico to manage the MBRS as a shared regional ecosystem, safeguard its biodiversity values and functional integrity, and create a framework for its sustainable use. The Project's achievement of this development objective is rated as **Satisfactory to Highly Satisfactory**.

Working across the borders of four countries in multiple sectors and across multiple disciplines is a monumental task. Stakeholders and managers are not used to thinking beyond their borders and thus have major difficulties differentiating between national and regional priorities, especially as they relate to prioritization of investments on the ground. Numerous stakeholder consultations across multiple levels during project design proved to be challenging but crucial for reaching agreement on a regional approach to the management of transboundary resources. The availability of an MBRS Action Plan with national and regional priorities facilitated this task to some extent, but also proved to be a double-edged sword.

Nevertheless, the four countries participating in the MBRS showed great ownership of the regional approach, despite total acceptance that it was innovative in many aspects and essentially represented "uncharted territory" in maritime transboundary cooperation in this part of the world. Six years later, countries now fully embrace the regional approach to managing the Mesoamerican Barrier Reef as the only viable approach, and have demonstrated this via the adoption of various harmonized policy and management tools developed specifically by the MBRS. Countries have gone further to recognize and formally agree that the approach should be more integrated to include root causes of

threats to the Mesoamerican Barrier Reef, expanding the approach to address land-based sources of pollution via watershed management interventions. The political support of the MBRS at the highest levels, and broad stakeholder participation, coupled to tangible results, were all key elements for the achievement of the MBRS's Development Objective.

3. Achievement of the Project's Results (Components)

The achievement of Project's results by component is presented below. Performance ratings were assessed using the following symbols:

HS = Highly Satisfactory	S = Satisfactory
MS = Moderately Satisfactory	MU = Moderately Unsatisfactory
U = Unsatisfactory	HU = Highly Unsatisfactory

Overall Project Rating/Outcome:	S-HS
Quality at Entry:	HS
Assessment of Project Results by Component	
Component 1. Marine Protected Areas	S-HS
Component 2. Regional Environmental Information System	S-HS
Component 3. Promoting Sustainable Use of the MBRS	MS
Component 4. Public Awareness & Environmental Education	HS
Component 5. Project Management	HS

4. Project Impact and Sustainability

a. Impacts

In general, the Project's impact can be rated as **Satisfactory to Highly Satisfactory**. The project achieved an unprecedented level of regional cooperation and coordination among the four participating countries in the sustainable management of this globally significant ecosystem. The regional focus, broad participation, and ownership engendered in the project have demonstrated the possibility of intergovernmental cooperation and agreement for transboundary natural resource management. The Synoptic Monitoring Program has created an initial regional baseline and database that provides a foundation for the establishment of a comprehensive regional database to inform policy decisions and guide future conservation agendas for the region. The institutional strengthening of existing Marine Protected Areas (MPAs) and capacity building for managing those areas have significantly improved the possibility of meaningful conservation throughout the MBRS region. In a number of cases, the Project turned MPAs from marginally functioning, well-intentioned efforts into functional MPAs that were able to leverage funding elsewhere and undertake meaningful management. The Project established an important cadre of trained technicians and managers in environmental monitoring and

MPA planning and management, developing a series of training tools that are now used in different parts of the world, demonstrating a clear extraregional impact. Another notable impact is the high level of awareness regarding reef health that now exists in the region compared to six years ago. Schools in the region are now engaged in the formal teaching of reef conservation themes, as a result of curriculums developed by the Project. Numerous opportunities for dialogue among fishers were created, included the first-ever Mesoamerican Fishermen's Congress, in which all presenters were the fishers themselves.

The Project placed reef conservation and management on the agenda at the highest levels of government across the four MBRS countries, and achieved the harmonization of transboundary policies in MPAs, fisheries, and tourism. Finally, the Project played an important catalytic role in attracting global attention to the region, resulting in a large number of conservation and academic actors now investing and researching in the Mesoamerican Barrier Reef System.

b. Sustainability

Sustainability of a significant portion of the Project's outcomes is likely. These include: adoption of a common policy framework for sustainable management of resources in the areas of fisheries, tourism, and MPAs; benefits derived by MPAs from having adequate infrastructure and management tools; methodologies developed for measuring MPA management effectiveness; increased local capacity to manage MPAs; methodologies for synoptic monitoring of the reef system; a framework for a regionwide database for storing and analyzing data; an extensive body of new conservation literature including policy documents, training manuals, and technical papers; and an institutionalized environmental education curriculum.

The sustainability of other outcomes such as reef monitoring is moderately unlikely in the absence of continued external support or a more assertive ownership by national institutions. Likewise, the long-term sustainability of the SMP is moderately unlikely without a large contribution from either a follow-on project or another donor, especially since continued monitoring is an expensive but necessary activity, but outside the budgetary capabilities of national institutions. Without it, monitoring of all reef variables is at risk of being decreased or discontinued in all sites. Most important, the monitoring of water pollution and water quality, components that require a large amount of funding and analysis, will most likely be seriously threatened.

The sustainability of MPA management is only moderately likely if long-term partners are not forthcoming in the near future to assist the ministries in charge of MPAs with additional financing and personnel. The sustainability of the alternative livelihoods component is unlikely without a more comprehensive approach, broader partnerships with NGOs and other organizations, a substantial increase in financing of these activities, and the establishment of an institutional mechanism to provide necessary follow-on and technical assistance beyond the life of the Project.

The funding gap between the Project's end and the proposed second phase threatens the capacity developed under the first phase of the project. This is particularly true for the PCU, because one of the strongest assets of the MBRS Project is its highly experienced staff. This threat also extends to some of the partnerships established by the Project, including those conducting analyses (for example, water quality, contamination, and GIS data processing) and based at universities or other research-based institutions.

The leaders of the four countries have reaffirmed their commitment to the protection of the reef, and are actively seeking financing for the second phase of the MBRS 15-year Action Plan. In the case of Mexico, additional difficulties are posed by the overlap of natural resource management jurisdiction between federal- and state-level entities. The involvement of CCAD elevated the profile of the MBRS as a system of regional importance at the ministerial level, which should produce continued institutional interest.

There are serious environmental threats to the MBRS, intrinsic to developing countries—pervasive poverty and population pressures that are beyond the scope of any single project.

Threats to the MBRS will not be addressed without a significant commitment from the international community to assist the four countries to tackle some of these issues. These threats will not be negated by a single project, and continued support will have to be sought from a variety of sources to systematically address these threats. The strong foundation set by this project, however, provides a sound framework for future investments. It is clear that a regional Mesoamerican Barrier Reef institution that can provide continuity to the processes and outcomes of the MBRS Project(s), and ensure the necessary sustainability and further development of sound transboundary management, is in order.

5. Lessons Learned

a. Project Design

The design of a transboundary project that is multidisciplinary in nature requires careful analysis of the outputs and outcomes being proposed, the inputs and processes required for their delivery, the challenges posed by legal circumstances across borders, the imminent apparent competition among national and regional interests, and their resulting impacts on resource mobilization, distribution, and investments. The design of the MBRS Project captured most of these considerations, but proved to be weak in other aspects that were overlooked, but which were not obvious at the time of project design.

The fact that in 1998 the transboundary approach was a relatively new concept with not many successfully demonstrated examples around the world meant that this approach was a "concept in evolution" and that there was a lot to be learned as the concept matured. The first lessons to be appreciated from the design of the MBRS are the fact that: (a) regional priorities do not compete with national priorities if issues of scale and value added are properly articulated, and (b) the sum of "nationally" prioritized interventions across countries is not equivalent to a regional approach. The regional design of the

MBRS Project allowed for the strengthening of national priorities, providing the enabling environment for additional resources to be leveraged elsewhere to finance national activities, while MBRS resources were strictly concentrated on providing incremental value. A project design that allows for the funding of nationally identified priorities "disguised" under a regional approach essentially ignores the very incremental value the regional approach is supposed to provide and may be easily interpreted as both a substitute and a disincentive for national investments.

An important lesson in the design of the MBRS Project was the importance of broad stakeholder participation. The multisector and multidisciplinary nature of the issues addressed demanded exhaustive consultations at all levels. Four primary sectors and six different disciplines across four countries were consulted. One invaluable lesson learned is the fact that there is no direct relationship between consultations held with the upper levels of decisionmaking and the degree of success achieved at the lower levels of execution. Every key stakeholder at every level in institutions across the countries, both governmental and nongovernmental, required their own convincing until ownership of the Project's concept and proposed objectives was achieved. This lesson challenges the common belief in Latin American governance culture that approval by superiors is synonymous with subordination below. This multilevel consultation gave the project an unprecedented degree of ownership by hundreds of stakeholders throughout the region that participated in the preparation process, creating a favorable environment for successful project implementation. This approach to project design is ideal but very expensive. Project principals, however, must be convinced of this need and be desirous of making the necessary investments in project design to maximize delivery of the project's proposed outputs and outcomes. Too often compromises in project design end up sacrificing key project outputs and reducing project impact.

In addition to the need for broad consultations, project design needs to be sensitive to the asymmetries in institutional capacity that exist among countries and among sectors within a given country. Understanding these differences in a country may sometimes mean understanding where the relative decisionmaking power lies, and thus how project preparation needs to adjust to best benefit from these asymmetries. Understanding where the economic, social, and political strength of targeted sectors lies may mean the difference between a successful or a failed project preparation process. The most influential sector in a country may not carry over to a neighboring country that is also in the project, demanding a cross-border multisector balance between the key players of the project.

The institutional arrangements included in the project design played a key role in ensuring participation and securing the required political leadership. Beyond reaching agreement on the technical design of the project, a neutral supranational body was indispensable for providing impartial credibility to the project preparation process. The CCAD, through a Project Preparation Coordinator, played this role, leading up to the successful negotiations of the Project with the GEF and the World Bank, and in ensuring the establishment of the Project Coordinating Unit in Belize.

b. Project Execution

There were many lessons learned in Project execution, most of which have been addressed in the Terminal Evaluation and others in the body of the ICR Report itself. This section will attempt to provide additional information or a different perspective on those issues already raised, and will also include some other lessons that might not have been mentioned before.

Shortcomings in Conceptual Design: There were several challenges experienced during project execution that were mainly a result of issues that were overlooked during project design. The best example of this is the alternative livelihood component of the project, which focused at the training of fishers in alternative income-generating activities. Substantial sums of money were invested in training fishers in tour guiding, kayaking, sport-fishing, and as recreational dive guides, and the project exceeded the anticipated number of trained people. From a Performance Indicator perspective the Project did well; from an impact perspective, the same cannot be said. When this subcomponent was designed, no consideration was given to the magnitude of the challenges involved in introducing a new alternative to a fisher. Many of the fishers in the region have absolutely no interest in becoming tour guides, yet all investments were focused on tour-guiding. Taking on this new alternative assumed that there is enough market demand to absorb these services, but underestimated the start-up financial capital required to get the alternative moving. Newly trained fishers had no knowledge of market dynamics and structure, and had no idea how to access and compete in the tour-guiding marketplace. The project effectively executed the activity as designed, but it was not designed to be effective.

Another example of complications in Project execution refers to the tourism subcomponent of the project. The activities were designed to impact the tourism sector, but they were not designed with the private sector in mind. All of the proposed measures to be introduced required the ownership and leadership of the private sector, not the regulatory agencies. The codes of conduct and certification processes that were contemplated require both financial investments and voluntary adoption by the private sector, yet they played a minor role in the execution of the tourism subcomponent of the Project. In addition, the governance structure of the Project did not include the Tourism Ministries as part of the primary decisionmaking body of the Project. The leading government tourism agencies felt “sidelined” and showed no true commitment in trying to engage the sector in long-term tourism best practices under the MBRS initiative.

Institutional Arrangements: The fact that the Project’s overall performance was rated as Satisfactory to Highly Satisfactory suggests that institutional arrangements were appropriate enough to ensure efficient operations and maximize performance. This suggestion is generally true; however, there are a few issues worth mentioning, because these would be useful considerations for a second phase of the MBRS and for other similar projects that may be developed in the future.

The necessary follow-up of numerous activities across four countries requires an intense and persistent presence of the Project staff and carries a high transaction cost. The MBRS

Project worked with four ministries in each of four countries, more than 30 NGOs, and over 200 people on a continuous basis. The scale of operations and the necessary delivery of the Project's Performance Indicators, while ensuring broad participation, is a monumental task when being implemented simultaneously in multiple countries. The amount of in-house paperwork, communications, supervision, and personal follow-up is several degrees of magnitude greater than what is usually required for national projects. In addition, it is inappropriate to apply conventional budgetary restrictions on administrative expenses to a project like this; such a project requires budgetary flexibility to address ever-changing and unexpected needs. It is a fact that regional projects carry a high transaction cost, and project principals have to be convinced that the proposed outputs and outcomes of regional projects are worth the higher levels of investments in administration. Complex transnational deliverables cannot be achieved with administration investments designed for national projects. Such an approach restricts proper delivery of project outputs and creates a high level of risk for successful project implementation.

Consistent with the above is the fact that more activities simply mean more transactions and processes. This demands a complicated administrative system, and clear and complete administrative procedures, with rigorous internal controls. A proper system of internal controls requires clear separation of functions and thus the need for more administrative personnel, meaning higher administrative costs. In addition, established international procurement procedures were designed to address national projects, and they introduced an additional layer of complexity in a regional project where investment thresholds per procurement procedure vary among the countries participating in the regional project. Depending on the size of the contract to be procured, these thresholds may mean eliminating bidders from one or more of the project's countries from the bidding process, creating unrest and expressions of dissatisfaction among the participating countries. On a similar note, because thresholds placed on investment categories during project design are simply estimates, necessary adjustments to these categories should be via simple administrative request. The need to have the legal agreement amended every time the project needed to make adjustments to investment categories imposed unnecessary delays and frustrations on project execution.

Other issues relating to Project Execution are better described under Coordination and are thus presented below.

c. Coordination

A project such as the MBRS is all about coordination. It is impossible to get anything done in this type of project without the synchronized coordination of many people, at various levels, in varying roles, in numerous disciplines, across four countries, and including many institutional partners that are outside the geographic scope of the project. This kind of undertaking requires creative and labor-intensive approaches to coordination. The formal coordinating structures defined in the governance framework of the Project are in no way enough to achieve the objectives proposed in the MBRS Project. No single academic training can prepare a person for the profile needed to achieve effective coordination of a multicountry, multisector, and multidisciplinary

project. The nature of the project demands a coordination approach that is characterized by continuous and effective negotiation techniques, adaptive management skills, institutional leadership, and political sensitivity. The frequent occurrence of conflicts among stakeholders is inherent in this type of project, and the coordination traits described above are the key ingredients for consensus building and effective conflict resolution.

Coordination with key project principals proved to be very effective throughout project execution. The same cannot be said for some players in the region, in particular certain international NGOs. The MBRS Project established a high level of transparency and access to Work Plans, Technical and Financial Reports, and Technical documents. The same was requested by the MBRS of certain actors and potential partners in the region, who, six years later, are yet to disclose information to the level done by the MBRS. This lack of reciprocal consideration and transparency made effective coordination with certain actors extremely difficult. In addition, every potential partner had their own convenient definition of what coordination means, which was rarely ever compatible with a genuine interest to do joint investments on the ground. Nevertheless, the MBRS established an unmatched coordination record with over 40 local NGOs and universities in Belize, Guatemala, Honduras, Mexico, and with others outside the geographic scope of the Project.

The continuous level of consultation and coordination required by the MBRS Project Coordinator makes the position seem like it is an itinerant job. Frequent travel is required, which takes a heavy toll on the physical health of the Project Coordinator, but is indispensable for Project success. The dynamism of the project challenges conventional administrative guidelines established for travel, and requires that, for the future, specific guidelines are developed that appropriately capture the nature of the travel and the circumstances that are outside conventional procedures.

6. Recommendations

1. Project Design

a. Project design must be sensitive to all asymmetries within and among countries participating in the Project.
b. Ensure that issues of scale and the added value provided by the regional approach are properly articulated. Activities to be funded by regional projects should not be perceived as substitutes for or disincentives to national investments.
c. Do not compromise proper project design simply in response to cost limitations imposed by artificial budget ceilings. The costs of poor delivery of project outputs and outcomes will be far more expensive than the additional investments made during project preparation.
d. The outcomes of proposed investments must comprehensively address all factors that determine the impact of project activities, including but not limited to: secondary costs, cultural adaptations, political viability, and capital and market

requirements. Efforts must be made to ensure that the definition of Performance Indicators is comprehensive enough to secure delivery of project outcomes.

e. The technical outputs achieved in phase 1 of the MBRS Project are exemplary and must be applauded; however, from an ecosystem perspective, only if a comprehensive watershed approach is adopted will the threats to the Reef be properly addressed. This is the focus of a proposed second phase.
f. All technical outcomes and indicators at the regional level must lead to the formulation, adoption, and implementation of policies and norms at the national level. Policy adopted at the regional level is ineffective unless incorporated into the national regulatory framework. This national incorporation will be a primary focus of the second phase of the MBRS Project.

2. Project Execution

a. Proper project execution requires tailor-made institutional arrangements. While conventional guidelines provide an effective means of ensuring proper administrative procedures, their lack of flexibility creates administrative hurdles to effective project execution, at the expense of timely output delivery.
b. Ceilings for administrative expenses for regional projects should not be determined based on percentages used for national projects.
c. Adaptive management requires greater flexibility in reallocating budgets to project activities based on shifting country needs, without having to resort to project amendments, which incur high transaction costs. Delivery of Performance Indicators should be the driving force behind project investments, not the thresholds estimated for investment categories.
d. The dynamic nature of regional projects demands a high level of movement of project staff among countries and partners. This unusual amount of travel, under varying circumstances, will many times pose challenges to the guidelines that were developed for national projects. Specific guidelines must be developed to appropriately address the needs of regional projects. This is especially required to establish clear and unmistakable guidelines for representation costs and travel under unusual circumstances, and should not be left to discretion.
e. Project execution must ensure maximum ownership by principals at all levels, while ensuring that every investment contributes to the predefined list of outputs and outcomes.

3. Coordination

a. Another phase of the MBRS needs to broaden its governance structure to better represent all key sectors on the Steering Committee. This is crucial for true ownership by the tourism sector, and for creating the necessary participation opportunity for the agriculture and forest sectors, consistent with the ridge-to-reef approach.
b. The Technical Working Groups must be strengthened and broadened to include participation of international NGOs, with a clear understanding of reciprocity.

c. Opportunities for strategic collaboration must be created with all partners in the region, especially in light of the magnitude of the threats existing in the MBRS and the fact that a joint collaborative effort is required to effect the desired change.
d. Meaningful and effective regional coordination is expensive. Future initiatives in the region must consider the cost of coordination as a required expense.

4. Sustainability

a. Investments made by MBRS phase 1 require the support of immediate follow-on investments to be able to consolidate most of the processes and results initiated.
b. The region by itself cannot meet all of the required expenses at this time, and external funding is indispensable.
c. The long-term sustainability of all investments made by both the first and second phases of the MBRS will require establishment of a permanent institution to absorb, expand, and carry through the initiatives to their ultimate objectives.

Annex 8. Comments of Co-financiers and other Partners/Stakeholders

These have been incorporated into the main text, where relevant.

Annex 9. List of Supporting Documents[4]

Alderman, C., L. Lechner, and K. Richardson. 2007. "Terminal Evaluation – Conservation and Sustainable Use of the Mesoamerican Barrier Reef System (MBRS) Project." World Bank, Washington, D.C.

M. Garcia-Salgado, T. Camarena L., G. Gold B., M. Vasquez, G. Galland, G. Nava, G. Alarcon D., and V. Ceja M. 2006. "Baseline of the Status of the Mesoamerican Barrier Reef Systems: Results of Synoptic Monitoring from 2004 and 2005." MBRS Technical Document No. 18.

MBRS (Mesoamerican Barrier Reef System). 2003. "Recommendations for Monitoring Management Effectiveness in Marine Protected Areas." Technical Document No. 5.

_____. 2007. "Propuesta de Política para Turismo sostenible de Cruceros en la Región del Sistema Arrecifal Mesoamericano/Policy Proposal for Sustainable Cruise Toursim in the Mesoamerican Barrier Reef System Region." Technical Report No. 27.

_____. 2007. "Rapid Assessment of Anthropogenic Impacts on Select Transboundary Watersheds of the Mesoamerican Barrier Reef Systems (MBRS) Region."

_____. Virtual Information Center. http://www.mbrs.org.bz/english/InfoCenter.htm.

World Bank. 2001. "The Conservation and Sustainable Use of the Meso-American Barrier Reef System (MBSR)." Project Document. Washington, D.C.

_____. 2004. "MBRS Mid-Term Review Report March 9–21, 2004." Washington, D.C.

_____. 2006. "Measuring Coral Reef Ecosystem Health: Integrating Societal Dimensions." http://www.worldbank.org/icm. Washington, D.C.

_____. 2006. "Scaling-up Marine Management – The Role of Marine Protected Areas." http://www.worldbank.org/icm. Washington, D.C.

[4] A full list of products/reports prepared by the Project is available on the Project website at http://www.mbrs.org.bz and in the Independent Terminal Evaluation.

Annex 10. Amendment to Grant Agreement TF027739

Central America Commission on Environment and Development
Conservation and Sustainable Use of the Mesoamerican Barrier Reef System
Project Design Summary

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
a. *Sector-related CAS Goal*: Reduced rural poverty and improved environmental security through sustainable management of natural resources.	***Sector Indicators:*** More rational use of coastal and marine resources to balance economic development and conservation needs. Increased human and institutional capacity for environmental management.	***Sector/Country Reports*** National surveys, sector work in environment and social policy.	***(Goal to Bank Mission)*** • Other externalities do not undermine social and economic benefits from integrated management of the coastal zone.
b. *GEF Operational Program*: To enhance protection of ecologically unique and vulnerable marine ecosystems through introduction of an ecosystem approach to conservation and sustainable use.	Maintenance of ecological integrity, resilience to natural disturbance, and continued productivity of MBRS.	Regional Monitoring and EIS reports, MBRS Atlas, and targeted research reports.	• Climate-change-related phenomena do not swamp natural resilience of coastal and marine ecosystems to moderate levels of stress and periodic disturbance nor generate unanticipated social response.
Global Objective	***Outcome/Impact Indicators***	***Project Reports***	***(Objective to Goal)***
To assist the countries of Belize, Guatemala, Honduras, and Mexico to manage the MBRS as a shared, regional ecosystem; safeguard its biodiversity values and functional integrity; and create a framework for its sustainable use. ***Global Objectives*** To enhance protection of the ecologically unique and vulnerable marine ecosystems comprising the MBRS by assisting riparian nations to strengthen and coordinate national policies, regulations, and institutional arrangements for the conservation and sustainable use of this	• Biological representation and ecological interconnectivity maintained in coastal and marine ecosystems throughout MBRS. • Ecoregional approach to MBRS management incorporated into conservation planning at local, national, and regional levels. • Steps toward harmonization of relevant policies and legislation regarding MPA management in transboundary areas, sustainable fisheries management, sustainable tourism development, and protection of coastal water quality agreed and initiated in all four countries. • Forums for regional cooperation at technical and	(a) Annual reports of CCAD, SEMERNAP (MX), CZMA-I (BZ), CONAMA/ Secretariat on the Environment (GT), and SERNA (HN). (b) Changes in policies or operating guidelines in relevant sectors (or in standards and regulations, e.g., use of EIA and land use planning governing resource use). (c) Surveys of donors, multilateral projects, and academia. (d) Investment trends in tourism sector. (e) Regional coastal	• National interests do not undermine incentives for regional approaches to management of transboundary systems/resources. • CCAD is successful in raising awareness of MBRS policy issues and in prioritizing harmonization of policies and legislation on SICA agenda. • Lack of precedents for regional cooperation at the technical level do not act as a barrier to creation of new institutional arrangements for such collaboration on the ground. • Appropriate measures are being implemented at local and national levels to mitigate land-based sources of pollution.

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
global public good.	policy levels operational.	development plans (in Belize, Honduras, and Mexico).	
Outputs from each Component:	***Output Indicators***	***Project Reports***	***(Outputs to Objective)***
Regional network of MPAs ensuring geographic and ecosystem representation established and/or strengthened throughout the MBRS.	• MPA data baseline established and monitoring programs implemented by PY4. • 10-year management plans developed for 4 MPAs by PY3. • 2-year operational plans/updates developed for 15 MPAs by PY4. • 160 people trained in MPA management by PY5. • Infrastructure and equipment provided to two regional MPA complexes by EOP. • Basic equipment provided to 11 MPAs by EOP.	(a) Review of completed management plans. (b) Project biannual reviews and supervision reports. (c) Technical reports of monitoring activities. (d) Course evaluations completed by trainees.	• There is sustained political and budgetary commitment to management of MPAs.
Increased knowledge and dissemination of information relating to coastal and marine ecosystem health in the MBRS.	• Synoptic Monitoring Program designed and under implementation by PY2. • Web-based, distributed regional EIS established and operational by PY3. • 15 baseline reports on MBRS ecosystem health produced and disseminated by PY5. • 32 people trained in operation and management of EIS by PY5. • Basic equipment and infrastructure provided to four national nodes of EIS by PY2. • Basic field-monitoring equipment provided to implementing organizations by PY2.	(a) Monitoring reports and technical papers incorporated into EIS. (b) Project biannual reviews and supervision reports. (c) International access to knowledge generated regarding MBRS via web-based EIS.	• Sufficient supply of technical assistance specialized in sustainable management of coastal and marine resources are available. • MBRS stakeholders are willing to harmonize data access agreements for use of information in EIS. • Required counterpart funding is available on a timely basis to support participation of technical working groups and maintaining EIS nodes.

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
Increased opportunities for sustainable use of coastal and marine resources developed.	• Formulation of draft regional strategy for management of spawning aggregation sites completed by PY5. • 168 people trained in sustainable fisheries management and alternative income-generating activities by PY5. • Catalogue of exemplary practices for coastal and marine tourism industry developed by PY2. • Regional environmental certification program designed and implemented by PY5. • Marine tourism exemplary practices study tour designed and executed for "emerging" marine tour operators by PY2. • Analysis of tools for voluntary compliance with harmonized policies related to use of MBRS resources. • 236 people trained in sustainable tourism-related activities by PY5. • **At least 35% of fishers trained in alternative livelihoods generating 50% of their income from the new alternative by June 2006.**	(a) Technical reports of fisheries monitoring activities. (b) Review of draft regional strategy. (c) Project biannual reviews and supervision reports. (d) Course evaluations completed by trainees. (e) Review of technical reports relating to sustainable tourism, including catalogue of exemplary practices and regional certification program.	• Political will exist on the part of national-level authorities to adopt a regional strategy for sustainable fisheries management.
Increased public awareness of the importance of and demand for the conservation of the MBRS at regional and international levels.	• 160 schoolteachers, community leaders, and business leaders trained in MBRS concepts by PY5. • 10,000 copies of training materials distributed by community leaders throughout MBRS by PY5. • **At least 200 people being able to say that they can appreciate the benefits of rationally using MBRS resources by June 2006.** • **At least 6 beaches with a reduced volume and**	(a) Project biannual reviews and supervision reports. (b) Course evaluations completed by trainees. (c) Stakeholder surveys.	• Public sector and civil society are committed to incorporating project lessons into broader initiatives for coastal resources management. • Management staff of regional and national environmental authorities and nongovernmental stakeholders within civil society adopt good practice and lessons learned through training.

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
	types of solid waste produced by the coastal community by June 2006. • **4 new spaces created in major communications media for the promotion of MBRS principles and objectives by June 2006.**		
Increased regional coordination and sustained collaboration among MBRS countries in management of a shared transboundary ecosystem.	• 1 MBRS Regional Steering Committee, 1 Technical Advisory Committee, and 5 Technical Working Groups established and operational by PY2. • **130 schools in the MBRS region using the MBRS Teacher's Guide as part of the curriculum by June 2006.** • **120 school children having participated in Radio Programs on the conservation of MBRS resources by June 2006.** • **A set of norms in the areas of fisheries, tourism, and protected areas prepared and ready for adoption by the countries in the MBRS region by June 2006.**	(a) Project biannual reviews and supervision reports. (b) Minutes of meetings of Steering Committee and technical committees. (c) Review of annual work program. (a) Project annual reviews. (b) Public records of laws and regulations in concerned ministries.	• There is sustained political commitment to MBRS principles. • MBRS Regional Steering Committee reaches consensus on annual work program design and implementation. • Appropriate expertise and political authority is represented on MBRS Regional Steering Committee and Technical Working Groups. • Other donors and partners agree to cooperate in design and implementation of activities within long-term programmatic framework.
CCAD effectively integrates regional environmental concerns into SICA economic agenda.	• Analysis of economic development scenarios in the region to inform Program development and guide design of subsequent phases PY 2. • Subset of policies in at least three critical areas of shared MBRS resources management (e.g., fisheries, tourism, MPA enforcement, water quality standards, EIA protocols, etc.) harmonized by EOP.	(a) CCAD and SICA annual reports.	•

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
	• CCAD regularly engages finance and other sectoral ministries represented under SICA in development dialogue. • Regional environmental concerns are reflected in SICA's economic agenda.		

Project Components/Sub-components: (see Annex 2 for project description)	***Inputs: (budget for each component)***	***Project Reports***	***(Components to Outputs)***
1. Marine Protected Areas	US$5.0 million	(a) Annual and quarterly reports. (b) Procurement records. (c) Evaluation reports. (d) Copies of contracts. (e) Bank supervision reports. (f) Field management reports.	• Required counterpart funding is available on a timely basis. • There is continued political support for regional cooperation and national-level implementation. • Civil society supports the principles behind and implementation of specific project activities. • Competent staff is appointed and maintained to coordinate project activities on a timely basis. • PCU has sufficient autonomy and authority to implement project activities.
2. Regional Environmental Information System (EIS)	US$4.4 million		
3. Promotion of Sustainable Use of the MBRS	US$1.9 million		
4. Public Awareness and Environmental Education	US$1.5 million US$2.4 million		

Annex 11. Performance Indicators

Conservation and Sustainable Use of the Mesoamerican Barrier Ref. Systems Project (MBRS)
Project ID: GE-P053349; GEF Trust Fund No. TF027739
(Project Life: November 30, 2001 to June 30, 2007)
Monitoring and Evaluation of Project Implementation

Project Component/Activity	Performance Indicators at End of Project (December 2006)	Performance Indicators as of June 30, 2007		Observations/Comments
		Progress to Date	%	
1. Marine Protected Areas				
A. Planning, Management, and Monitoring.	1. 8 MPA data baseline established and monitoring programs implemented by PY4.	The design of the baseline and monitoring, publication and distribution of the completed document. 20 MPA with a baseline, the presentation of the final regional report with management effectiveness in MPAs.	100%	The baseline has been generated with the Directors of the MPAs. It has been completed for 20 MPAs; 4 in Honduras (Utila, Cayos Cochinos, Cuero y Salado, and Laguna Guaimoreto), 3 in Guatemala (Manabique, Sarstun, and Chocon Machacas), 6 in Belize (Port Honduras, Sapodilla Cayes, Bacalar Chico, Hol Chan, South Water Cye, and Glovers Reef), 7 in Mexico (Xcalak, Banco Chinchorro, Sanctuario del Manati, Punta Cancún, Sian Ka'an, Isla Convoy, and Yum Balam). The report has been presented in two regional meetings and in a regional training course.
	2. 10- year Management Plans developed for 4 MPAs by PY3.	Management Plans for 3 MPAs have been completed and two public consultations have been developed for PY4. The third consultation is being planned to conclude by PY4.	90%	There has been no advancement for the final consultation in Xcalak; however, the documents for the Public Use and Financial Plan have been revised, and, pending approval of the *Parque Nacional de Arrecifes de Xcalak* (PNAX), will result in the third consultation. There was no success in reaching an agreement between the expert and the authorities of the park in reference to the third consultation, because it was not possible to conclude.
	3. 2-year operational plans developed for 15 MPAs by PY4.	Support for the development of the Management Plan for Omoa Protected Area was completed. Training of MPA Rangers in Belize has been completed. Support for the Management Plan for Sian Ka'an has been completed, as has Support for Manabique.	100%	The activity was changed to a Ranger Exchange Program and support to implementation of Management Plans. The executive version of the Management Plan of Manabique was distributed, the support for the Santuario del Manati is pending so as not to depend on CONANP, the coordination and communication is not effective. What had been solicited has been executed.
	4. 160 people trained in MPA management by PY5 (EOP).	All 169 people were trained. In January 2006, 17 people were trained in environmental interpretation of MPAs.	100%	This activity is being implemented in accordance with what was planned. The manuals have been distributed.

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Monitoring and Evaluation of Project Implementation

Project Component/Activity	Performance Indicators at End of Project (December 2006)	Performance Indicators as of June 30, 2007		Observations/Comments
		Progress to Date	%	
	5. Transbounadary Park Commissions established and recommendations for transboundary policy made by EOP.	4 Meetings of the Transboundary Commissions held and 2 PWG.	100%	First sets of recommendations for transboundary policy received and with the assistance of the IUCN Law Center, the policy proposals were developed and adapted in Belize, Guatemala, and Honduras. The adaptation in Mexico has progressed more slowly than was anticipated.
B. Institutional Strengthening	6. Infrastructure and equipment provided to two regional MPA complexes by EOP.	A multipurpose visitors center has been handed over to Bacalar Chico, Utila, Xcalak, Sapodilla Caye, and Río Sarstún. Equipment has been given to, Belize, Guatemala, Honduras, and Mexico. The repairs for Sarstún were delivered satisfactorily in January 2006.	100%	The road to Bacalar Chico was initiated and the proposal to complete the road for Sarstun has been finalized. Due to lack of completed quotations the support to Sarstun was not completed.
	7. Basic equipment provided to 11 MPAs by EOP.	Equipment has been delivered to Belize, Guatemala, Honduras, and Mexico; in addition, a boat engine was delivered to Chocon Machacas and computer equipment was delivered to three areas in Honduras.	100%	It will be necessary for the Project to invest in additional equipment to provide some critical articles that have been recently identified and which were not considered in initial purchases.
2. Regional Environmental Monitoring and Information System	To increase the knowledge and the dissemination of information related to the health of the marine and coastal ecosystems in the MBRS and the watersheds that are being impacted to achieve putting into focus an integrated management.			
A. Creation and Implementation of Distributed REIS				
1.Training of trainers to increase the national capacity and the supervision of the users.	1. Consolidated the national capacity in the use of the REIS.	1. There is at least one person in every country capable of training new users and who is capable of supervising the data being collected.	100%	There is 1 person in Honduras, 1 person in Guatemala, 1 person in Belize, and 2 people in Mexico who are able to train and supervise the upload of information into the system.
2. Regional Environmental Monitoring and Information System				
2. Supervision of the information gathered.	2. To ensure the continuous actualization of the database with the information of the monitoring in the REIS.	2. All the data collected up to December 2006 have been entered into the REIS.	90%	A strong effort has been made to ensure that the users are aware of the data that are being uploaded into the REIS. We offer support to the organizations that request it. We depend on goodwill and availability of the users to comply with our goal. In rare cases some organizations have not complied with our request of entering the information.

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Project Component/Activity	Performance Indicators at End of Project (December 2006)	Performance Indicators as of June 30, 2007		Observations/Comments
		Progress to Date	%	
3. Maintenance of the REIS and of the MBRS website.		3. The website has been maintained current and offers all the publications that the MBRS Project has published up to June 2007.	100%	20 new documents were added between July 2006 and June 2007.
		4. The REIS functions appropriately and was accessible by all users up to June 2007.	100%	The REIS has been functioning and is accessible during the project's transition period.
4. Initiate the design module of watersheds that will be incorporated into the REIS.	3. Integrate activities of the Monitoring of Watersheds in the baseline data.	5. A Concept Document and Terms of Reference for the Monitoring of Watersheds Module will be incorporated into the REIS.	80%	A meeting took place to define the monitoring indicators in Watershed Monitoring. Several consultations will be needed to finalize the design of the Monitoring Program.
5. Meeting of Experts to define the necessities of processing geographic data.	4. Increase the processing and spatial analysis of information in the REIS.	6. Recommendations in the use of geographic information and GIS tools to support the REIS.	100%	A Meeting of Experts took place in May 2007.
6. Design and incorporate a socioeconomic module in the REIS.	5. Implement the socioeconomic monitoring in the REIS.	7. A socioeconomic module will be incorporated into the REIS.	40%	It was not possible to design a socioeconomic module. The monitoring socioeconomic program is in continuous evolution, limiting the design with the corresponding module. Advances were made in a Meeting of Experts Reunion in May 2007 to define the indicators that are to be monitored.
7. Train Monitoring personnel in the use of the socioeconomic module.		8. 8 people trained in the use of the socioeconomic module.	0%	Training was not possible until the socioeconomic module is completed.
8. Generate maps and other analytical products related to the activities of the MBRS.	6. Support activities of the MBRS with geographic products.	9. Technical Equipment to obtain maps of watersheds, protected areas, and the well-being of the reef to support their work.	100%	Maps have been produced and added to the technical equipment as are appended.

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Project Component/Activity	Performance Indicators at End of Project (December 2006)	Performance Indicators as of June 30, 2007		Observations/Comments
		Progress to Date	%	
	7. Disseminate geographic information to the public to add a spatial dimension to the understanding of the MBRS.	10. At least 5 maps have been distributed to the public through the MBRS website related to the health of the reef, watershed, and protected areas.	100%	21 maps have been published on the website and are accessible through the Internet.
9. Coordinate with the Environmental Monitoring Specialists to produce an analysis of time and of the region of all the data compiled under the Synoptic Monitoring Progam (SMP).	8. To increase the understanding of the health of the MBRS through analysis of temporary tendencies and spatial models noted in the consecutive rise of the monitoring.	11. GIS products prepared for the inclusion of a Comprehensive Analysis Report that was to be available June 2007 based on all the data gathered and entered into the REIS until December 2006.	40%	A detailed analysis of the data presented more challenges than expected. Considerable effort was invested in completing the baseline, which serves as a point of reference for a following analysis with temporary and spatial dimensions.
B. Establishment of a Synoptic Monitoring Program (SMP).	1. SMP designed and under implementation by PY2.	The Synoptic Monitoring Manual was produced. 150 people have been trained in the implementation of the different components of the manual during the training programs of the four different countries.	100%	The SMP Manual was finalized in January 2007, based on the experience gained during the implementation and with the actualization of some techniques and protocols.
	2. Upon completion of phase I of the Project, the Line Base Reports on the MBRS ecosystem health were disseminated.	The collection of data was carried out in accordance with the proposed scheme to establish the line base to commence in May 2004. To date, it has been established: Reefs: 13 locations with 65 sites. Marine: 7 locations with 32 sites. Mangroves: 8 locations with 12 sites. Pollution: 15 Locations with 18 sites.	100%	In December 2006 the Spanish version of the Line Base Report was finalized and in January 2007 the English version of the Report was finalized. Once the report is translated and revised it will be published digitally on the MBRS website. The report was printed in English and Spanish and hard copies were distributed in March and April 2007.
	3. During PY2 of the Project, basic equipment will be delivered to implementing organizations.	The purchasing of goods was concluded for Belize, Guatemala, Honduras, and Mexico.	100%	The minor equipment that was not identified previously was purchased.
<u>3. Promotion of Sustainable Use of MBRS</u>				
A. Promoting Sustainable Fisheries Management.	1. Formulation of draft regional strategy for management of spawning aggregation sites completed by PY5 (EOP).	Completion of technical document of Spawning Aggregation Sites. Completion of monitoring protocols and one regional training. Completed Monitoring in Belize and Mexico. Delivered equipment to Belize, Guatemala, Honduras and	90%	Additional Training was given to Guatemala and Honduras. Initiated the Monitoring of "Manijua," UNIPESCA in Guatemala gathered funding and guarantees to present the expected products. Funds were identified to conclude the 12-month monitoring

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Project Component/Activity	Performance Indicators at End of Project (December 2006)	Performance Indicators as of June 30, 2007		Observations/Comments
		Progress to Date	%	
		Mexico. Belize and Mexico delivered their final report in reference to the monitoring aggregations. There are 3 reports in reference to the Monitoring of Manjua.		in Manjua.
	2. 168 people trained in sustainable fisheries management and alternative income-generating activities by PY5 (EOP).	Training on the monitoring of Spawning Aggregation Sites and fisheries co-management both regional and national was conducted. 377 people were trained.	100%	In addition, a Regional Fishermen's Congress was held, which included participation of 80 delegates who had received alternative livelihood training; they reviewed and updated training materials, resulting in publication and distribution of 4 new manuals on sustainable livelihoods.
B. Facilitation of Sustainable Coastal and Marine Tourism.	3. Catalogue of exemplary practices for coastal and marine tourism industry was proposed in the Forum and to be developed by PY2.	Best practices were discussed during the Tourism Forum and are being compiled and will be published in a Manual of Exemplary Practices. There is a final version of the manual and a second relative to exemplary practices in Cruise Tourism.	90%	The manual of exemplary practices was supposed to be a document in continuous evolution; however, it was decided that the forum should not continue due to the fact that there was not enough value found to support the amount of money that was being invested in the activity. The exemplary practices recommended will be continued. To date we have the manual of best practices for Cruise Tourism.
	4. Regional Environmental Certification Program designed and implemented by PY5 (EOP).	Regional Consultation on Certification conducted with the *Consejo Centroamericano de Turismo* (CCT), the tourism authorities of the MBRS Region, and the social partners of the Project. The project was informed of the adaptation by all the Central American countries of the Certification of Sustainable Tourism. The consultation in reference to the codes of Conduct will be in March.	90%	Given that the Certification of Sustainable Tourism is specific for hotels and infrastructure, the project can make investments in certificates in other tourism activities that have a direct impact on the reefs. However, due to the cost and institutional requirements that a certification program requires, it was recommended during the consultation that the Projects should consider promoting and developing the codes of conduct instead of the certification. This option has been partially undertaken in the development of the Transboundary Policies with the collaboration of Coral Reef Alliance. The Codes of Conduct are being formulated. The codes of Conduct for Cruise Tourism have been completed.
B. Facilitation of Sustainable Coastal and Marine Tourism.	5. Marine Tourism exemplary practices study tour designed and executed for emerging marine tour operators by PY2.	This activity is intimately related with the exemplary practices manual, given that the defined exemplary practices in the manual should be focused in the tour; for example, the intention is to expose the new tour operators to the exemplary practices within the region and confirm the practices that are highlighted in the manual. Four sites have been identified to accomplish the community tourism pilot program.	70%	At this level, the activity depends on completing the exemplary practice manual. However, it will explore other ways of implementing the tour without having to wait for the manual. This implies the identification of 4 to 6 exemplary practices in the region that can be used as demonstration sites for the emerging tourism tour operators. This activity will be carried by the end of 2006, as a sustainable community tourism pilot program.

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Project Component/Activity	Performance Indicators at End of Project (December 2006)	Performance Indicators as of June 30, 2007		Observations/Comments
		Progress to Date	%	
	6. Analysis of tools for voluntary compliance with harmonized policies related to MBRS resources by PY5 (EOP).	The transboundary policies developed and the exemplary practices manual that are in process will provide the initial steps in defining the codes of conduct that are to be adapted. However, this will require the assistance of experts to determine the voluntary adaptation and mechanisms of implementation.	75%	Codes of conduct will be included in the manual of Exemplary Practices, given that two separate documents makes no sense. The Project is receptive to the idea. The transboundary politics provide the structure within the codes of conduct and the exemplary practices can be adopted. Mechanisms for compliance and implementation should be identified. Depending on the progress made by the Coral Reef Alliance, this activity should be revised. However, the codes of conduct for volunteers in cruise tourism can proceed.
	7. Development of a Regional Tourism Strategy by Project end.	TORs have been formulated for the elaboration of the Regional Tourism Strategy and presented for its approval.	0%	The activity depends on the validation of the tourism strategy formulated by CCT-SICA, which depends on a regional-level strategy. In contrast, the four countries have their own strategies already formulated or in process of being validated.
	8. 236 people trained in sustainable tourism activities including forms of alternative livelihoods for PY5 (EOP).	Training in auditing and environmental impact studies for coastal tourism activities was concluded. For the purposes of this indicator, the forums were considered training activities. The first group in alternative livelihoods training was carried out. A total of 259 people have been trained to date.	100%	During 2006 the tour of exemplary practices study will be carried out for the emerging tourism operators, which will be classified as training. In addition, all the training in forms of alternative livelihood training will be registered under this indicator.
	9. Proposal of a regional cruise policy.	4 working groups in every country and 4 public consultations in the four countries were carried out. The final report has been presented and the Project Coordinating Unit has made its comments and is awaiting other comments. The comments were incorporated and Spanish and English versions have been approved.	100%	The final report has been approved and is in the process of publication and distribution, and a presentation is being planned for the four authorities of the four countries.

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Project Component/Activity	Performance Indicators at End of Project (December 2006)	Performance Indicators as of June 30, 2007		Observations/Comments
		Progress to Date	%	
4. Public Awareness and Environmental Education				
(a) Development of an Environmental Awareness Campaign. (i) Implementation and monitoring of programs of clearing up beaches. (b) Monitoring and Coordination with the media to promote the MBRS SAM.	1. Environmental Awareness Campaign Strategy Developed and under implementation by PY2. (a) 6 beach spaces show the reduction in the volume of waste produced by the coastal communities. (b) 4 new spaces of communication promote the theme of the MBRS permanently. (c) 10 key actors were involved in the elaboration and implementation of the Communication Strategy and appropriation of the MBRS.	(a) 7 kilometers of beach benefited from the activity of cleaning up the beach and monitoring for the reduction of solid waste. (b) 5 media outlets maintain interest in the activities of the MBRS (San Pedro Sun, Flora and Fauna, Canal 7 Mas, Channel 5, and Love FM).	100%	The massive campaign of cleaning up the beach in La Ceiba, Honduras was carried out with the participation of all the sectors of La Ceiba and the presence of the authorities including the Minister of Natural Resources of SERNA, Honduras. The training of the media in the subject of coastal and marine issues of the MBRS was not carried out due to the politics between the reporters and the national coordination in Mexico. The planning in another country did not coincide with the time for the disbursement of resources by the project.
(c) Lobby negotiation started between local and regional stakeholders for the construction and implementation of a new communication strategy of the MBRS.			100%	The contract for the implementation of a new communication strategy arranged and adapted in reference to the MBRS did not obtain the no objection because of delays in administration. 150 green guides were distributed to the newly trained teachers in Mexico and 2,000 to the hotels and tour operators as an awareness element for the conservation of resources in Quintana Roo. Two newspaper ads were written and a television posting was carried out in the local channels during the award ceremony of the TIDE freshwater cup soccer tournament in Punta Gorda, Belize. A second children's radio show that was to be carried out in the Garifuna language has yet not been established due to delayed payment by administration.
(d) Consolidation and monitoring of children's radio shows.	(d) Two children's radio show programs consolidated in the region.			

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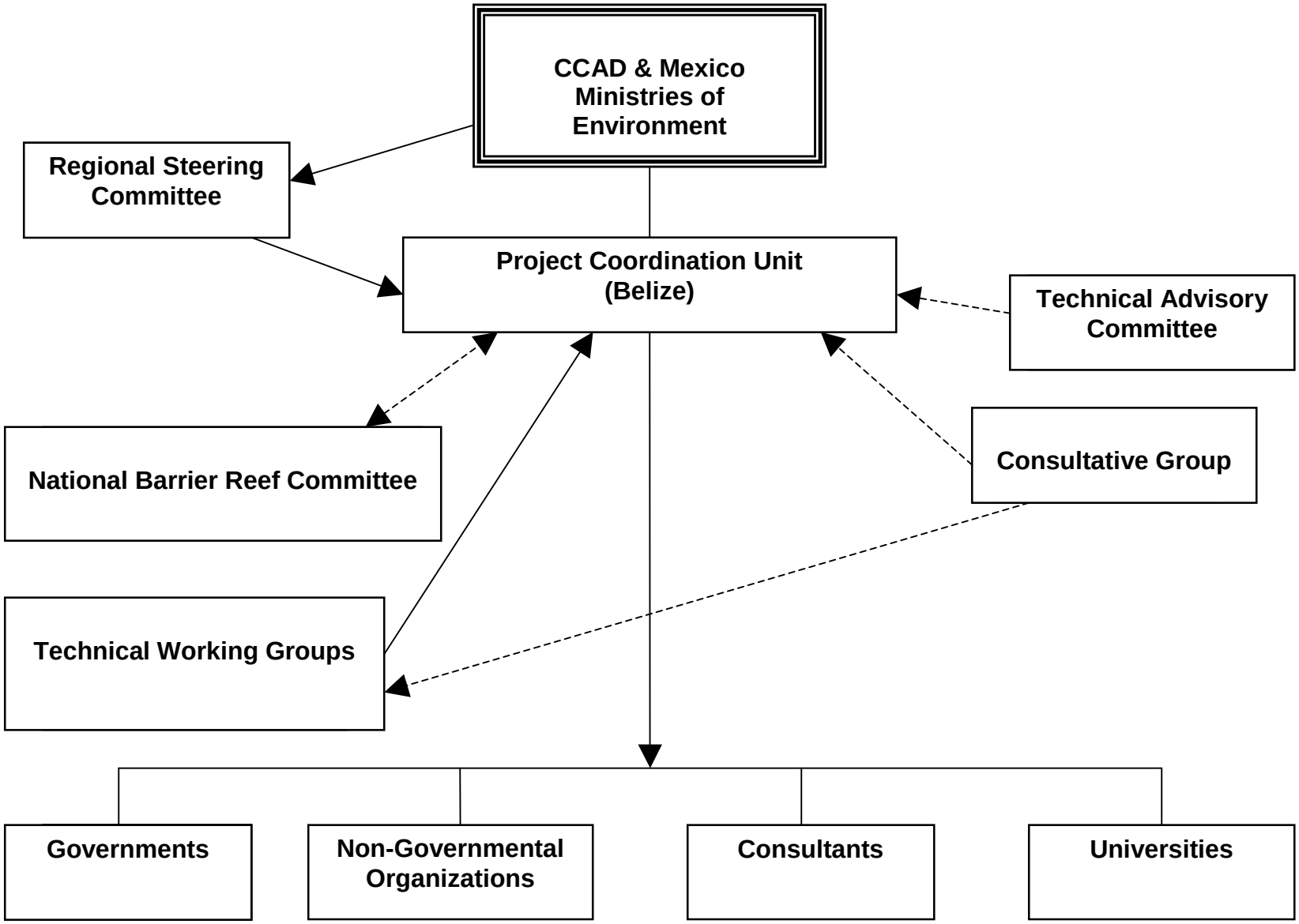
4. Public Awareness and Environmental Education	(e) 200 people knowing the work of the MBRS and the impact of the local issues.			
B. Formal and Informal Education (a) Promote a continuous analysis of the challenges in the use of the guide and the generation of knowledge in the alumni.	2 160 school teachers, community leaders, and business leaders trained in MBRS concepts by PY5 (EOP).	1,607 primary and secondary school teachers were trained in the concepts of the MBRS.	100%	Mexico accomplished training 102 new teachers at the secondary level in the north zone and in the central state of Quintana Roo.
	3. 10,000 copies of training materials, brochures, posters, stickers, etc. distributed throughout the MBRS by PY5 (EOP).	Recently informed by the terminal evaluation of the Projects, the listing of distribution of materials confirmed that around 21,000 copies of bulletins, manuals, folders, rulers, stickers, and pamphlets have been distributed in the MBRS region. In addition, a campaign has been developed to promote the health of the marine ecosystems through the distribution of 10 T-shirts with cogent messages.	100%	Positive reactions were obtained by teachers, directors, and others.
C. Implementation of the Development Plan and the participation of indigenous communities to elaborate an integral plan to follow the activities of the MBRS during the first phase to include a permanent communication channel among those stakeholders.	4. Ensure the participation of indigenous people and women in the activities of the MBRS. 10 fruitful experiences are identified and a strategic plan is generated for the continuous activities to be developed at a local level, especially for the activities developed by those involved in the MBRS Development Plan.	To date, 523 of the 1,909 people involved with the activities of the MBRS are indigenous people and 746 are women. 4 local organizations will be monitored with the goal to document and strengthen their management capacity through the participation of the activities of the MBRS or in other national or regional programs that have relevance to local development.	27.3 % indigenous 38.5% women	Possible candidates were identified but no plan was generated due to the cutting of the budget. The numbers represent the participation in the national reef committees, technical working groups, and transboundary commissions and training groups. (Ministry of Education has only provided total number of teachers trained by data and not by listings. A request is in with the Ministry for listings data).

AWP = Annual Work Plan; CCAD = *Comisión Centroamericana de Ambiente y Desarrollo*; CONANP = *Comisión Nacional de Areas Naturales Protegidas*; EOP = End of Project; IUCN = World Conservation Union; MPA = Marine Protected Area; PARCA = *Programa Ambiental de Centroamérica*; PY = Project Year; REIS = Regional Environmental Information System; SAM = *Sistema Arrecifal Mesoamericano*; SICA = *Sistema de la Integración Centroamericana*; TORs = Terms of Reference; UNIPESCA = Guatemalan Fisheries Organization.

Annex 12. Project Institutional Arrangements

The key elements for the project were as follows: (a) the Executing Agency for the project was the Central American Commission on Environment and Development (CCAD); (b) a Project Coordinating Unit (PCU), based in Belize City, was responsible for day-to-day management of the project; (c) a National Coordinator (NC), in each country was responsible for facilitating the activities within their respective country; (d) four National Barrier Reef Committees (NBRC), which comprised representatives from both the public and private sectors in each country, were created as mechanisms to promote communication and coordination across sectors on a broad set of issues dealing with the MBRS as a whole, not only those directly related to the MBRS Project; (e) the Regional Steering Committee (RSC), which comprised the four National Coordinators, and was chaired by the Executive Secretary of CCAD. The role of the RSC was to provide policy guidance, approve the annual work plans prepared by the PCU and the NBRCs, and oversee overall program implementation; (f) Technical Working Groups (TWGs), one for each thematic area of the project, provided technical support to the project; and (g) a Consultative Group, which comprised representatives from donor organizations and partner institutions working in the region, was established as a mechanism to facilitate coordination between the project and other activities in the region, to identify synergies for program development, and to attract long-term co-financing.

Figure A12.1. Project Institutional Arrangements



Map: IBRD 35846