



SAM / MBRS



# CONSERVATION AND SUSTAINABLE USE OF THE MESOAMERICAN BARRIER REEF SYSTEMS PROJECT (MBRS)

## TECHNICAL AND FINANCIAL PROGRESS REPORT

**REPORT No. 4**  
**Reporting Period: January – June 2003**  
*(Revised for Web Publishing)*

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CENTROAMERICANA  
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Y-DESARROLLO

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## MEMORANDUM OF TRANSMISSION FROM THE REGIONAL COORDINATOR

**FOR:** Executive Secretary and Director General of the Environment, CCAD-SICA  
Manager of World Bank Project  
National MBRS Coordinator in Belize  
National MBRS Coordinator in Guatemala  
National MBRS Coordinator in Honduras  
National MBRS Coordinator in Mexico

**FROM:** Noel D. Jacobs  
Regional Project Coordinator

**REFERENCE:** Conservation and Sustainable Use of the Mesoamerican Barrier Reef System (MBRS) in  
Belize, Guatemala, Honduras and Mexico  
**Project Number: GE-P053349**                      **TF: 027739**  
Fourth Technical and Financial Report: January 1 to June 30 2003

**DATE:** July 31 2003

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Annexed to this is the translated version of the Fourth Technical and Financial Report of the MBRS Project for the period from January 1 to June 30, 2003. This Report reflects progress in the implementation of the Annual Work Plan and the Budget approved for the period from July 1, 2002 to June 30, 2003.

It will be a pleasure to answer your questions and / or respond to your comments on the content of this Fourth Technical and Financial Progress Report of the MBRS Project.

## List of Acronyms

AWP	Annual Work Plan
BEMAMCCOR	Belize Mexico Alliance for the Management of the Common Coastal Resource
MBC	Mesoamerican Biological Corridor
CCAD	Central American Commission for Environment and Development
CICESE	Centro de Investigación Científica y de Estudios Superiores de Ensenada
CINVESTAV	IPN Research and Advanced Studies Center
CZMA/I	Coastal Zone Management Authority and Institute
GEF	Global Environment Facility
ICRI	International Coral Reef Initiative
INWEH	International Network for Water, Environment and Health
IUCN	International Union for Conservation of Nature
MBRS	Mesomeric Barrier Reef System
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NCORE	National Center for Caribbean Coral Reef Research
PCU	Project Coordinating Unit
PDF	Project Development Fund
PROARCA	Regional Environment Project for Central America
PY	Project Year
RSC	Regional Steering Committee
REIS	Regional Environmental Information System
SEMARNAT	Environment and Natural Resources Secretariat – Mexico
SMP	Synoptic Monitoring Program
TNC	The Nature Conservancy
ToRs	Terms of Reference
TRIGOH	Tri-national Alliance of the Gulf of Honduras
TWG	Technical Working Groups
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WRI	World Resources Institute
WWF	World Wildlife Fund
WWF-CA	World Wildlife Fund – Central America

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## 1.0. Executive Summary

The implementation of the MBRS Project from January to June 2003 was marked by intense procurement activities. This was quite demanding in terms of time and effort, both by the PCU and by the countries. It was possible to purchase most of the equipment, although some important equipment still needs to be bought. This is a key element for beginning field activities, especially for monitoring reefs and fish aggregation sites.

Several courses were given during this six-month period with over 240 people being trained. The courses included training in Fisheries Co-management Techniques at the national level, training in Community Relations, training in the Design of Management Plans for Marine Protected Areas (MPA) and Principles Selected for the Management of Marine Protected Areas, and training in Environmental Auditing in Tourism Development. Building of a Multiple Use Center has begun and a contract has been signed for building another. The process is underway for selecting the contractors for three more centers.

The final design of the Regional Environmental Information System has been completed and the physical system is in the process of being installed. The final version of the Manual of Methods for Synoptic Monitoring in the MBRS Zone has been completed and is available on the Project's website in English and Spanish. Recommendations have been made for monitoring fish aggregation and the final version of a regional map on aggregation sites has been produced, as well as a data base on the sites in the region. New documents have been placed on the web page, including Progress Reports, Auditing Reports, and technical documents. New t-shirts, posters and stickers have been produced and distributed. These have been given out at all MBRS events over the last six months.

The Project administration, as always, has experienced important challenges during this reporting period. Delay in procurement processes has resulted in delay in the disbursement of funds, which has led to questions about the Project's level of execution. This situation is due to the fact that a large amount of funds has been committed, but has not been disbursed because contracts are still being processed, and so the corresponding payments will not be made until the final product is received, whether it is a document, equipment or construction work. It is clear that the lack of disbursements is not synonymous with a lack of activities under execution. At the end of June 2003, the Project had disbursed over 2.7 million dollars, but with over US\$600,000 more committed in contracts being processed. For the end of December 2003, it is estimated that the amount of funds disbursed will be 3.6 million dollars, with five centers built and all the equipment purchased and delivered.

## 2.0 Implementation of Project Components

### 2.1. Component I: Marine Protected Areas

2.1.1. *Planning, Management and Monitoring.*

2.1.2. *Institutional Strengthening.*

Component No. 1: Marine Protected Areas: Budget Analysis

Budget Approved for the period from July 2002 to June 2003: US\$940,299

Budget Executed up to June 30 2003: US\$483,067

Percentage of Budget Executed up to June 30 2003: 51.38%

### Component Summary

During the two years of the Project, this component has focused on the 15 priority MPAs, integrating actions aimed at improving the processes of planning, the implementation of effective management, monitoring, the drafting of regional policies, training, and the provision of equipment and infrastructure in these areas.

This is why this component has the fundamental objective of directly strengthening the effectiveness of management of the Marine Protected Areas (MPAs), thus promoting sustainability of conservation actions. Likewise, support is provided to strengthen the existing capacity of government and non government organizations involved in managing the MPAs, through training personnel in workshops and training courses linked to the above topic.

### Activities and Achievements during this Period

#### Sub-component A: MPA Planning, Management and Monitoring

The most outstanding achievements in this sub-component during the second semester of the second year of the Project are summarized below:

1. The third progress report for the period from June to December 2002 was produced, thus permitting the verification of progress in the Annual Work Plan and the strengthening of those activities which require improved implementation.
2. To guarantee effective management of the MPAs, a process initiated during the first year has been continued, with the design of a methodology to establish the base line for programs to monitor management effectiveness. The final report, containing observations made by the PCU, was received at the end of April 2003 and described the current situation of the 15 priority MPAs of the MBRS, giving indicators and recommendations for initiating the Management Effectiveness Monitoring Program.

The next step will be to implement the Monitoring Program in the 15 priority MPAs after a meeting of MPA managers establishes which of the indicators being used at present at the national level can be applied regionally. In this meeting doubts will also be cleared up on the inclusion of administrative indicators.

3. Furthermore, an effort is being made to strengthen the existing capacities in relation to planning and management of the MPAs with the production of 10 year Master Management Plans in four transboundary MPAs. Recently a regional expert was hired to conduct this activity, after having prepared the Terms of Reference and evaluating the candidates. The product of this activity will allow the visualization of trends and projections on issues such as protection strategies for the most vulnerable resources, sustainable management of visitors, income generation, education and community relations programs, all fundamental elements which will allow policy definition for site management.
4. Along the same lines, the operation of the Management Plans has been promoted, and at present we have proposals for carrying out the second phase, which will complete the Management Plan of the Omoa Barracoa Marine Reserve in Honduras and the production of 14 copies of the final version of the Management Plan for the Rio Sarstun Multiple Use Reserve in Guatemala.

Furthermore, there are proposals for facilitating participatory workshops for the revision and updating of the Management Plan for the Sian Ka'aan Biosphere Reserve in Mexico, and the production of an executive version of the Management Plan for the Punta de Manabique Special Protection Reserve in Guatemala, with dissemination materials. For Belize, a Training Program was implemented in the Florida Keys Marine Sanctuary, for Park Guards of six Marine Reserves in Belize.

5. The effective management and planning of the MPAs requires adequate infrastructure to implement the actions set forth in the Management Plans. During this period an architect was hired to design the Multiple Use Centers for four transboundary MPAs. Before the design was made, the Architect and the person responsible for procurement in the Project visited Bacalar Chico in Belize and Xcalak Reefs in Mexico to evaluate the conditions of the site identified for the construction. Visits to Sarstun and Utila Turtle Harbor were also coordinated and organized.

Builders for Belize and Guatemala were also contracted and construction has already begun in Bacalar Chico, Belize. Construction will begin in July in Sarstun, Guatemala and we are in the process of hiring builders for Mexico and Honduras.

6. The process of purchasing the equipment and materials essential for efficiently implementing the Management Plans for the Project's priority MPAs has begun, equipment having been delivered in Belize and Mexico. At present the purchase of equipment in Guatemala is about to be completed and will be delivered in August of this year.
7. An extremely important achievement in this sub-component has been the process of consolidating regional policies in MPA management and planning and the management of sustainable fisheries and tourism through recommendations from the Transboundary Park Commissions.

The Commission for the northern region, BEMAMCCOR, held its second meeting last May, producing the final set of recommendations on these three issues, under the guidance and supervision of the PCU. With input from these meetings, the Policy Working Group (PWG) met, including Legal Advisors from the Ministries and Secretariats of the Environment and Natural Resources of the four countries. Furthermore, an expert on Environmental Policies was hired from the Mesoamerican regional office of the IUCN, and she guided the process for producing the proposal for regional policies, together with the PWG. In this context the PWG, the IUCN expert and PCU officials met on two occasions, first in April to discuss the recommendations from both Transboundary Parks Commissions, this leading to the initial version of the policy proposal. The second meeting took place in May when the second version of the regional policy proposal was discussed with key actors. Key actors included representatives of government offices responsible for the MPAs, tourism and fisheries, as well as representatives from the two Transboundary Parks Commissions and the MBRS National Coordinators from Belize, Guatemala, Honduras and Mexico.

As a product of the second consultation meeting, a third version of the policy proposal was produced, and this will be presented to the CCAD Council of Ministers for their approval. Subsequently national mechanisms will be defined for its implementation.

### **Sub-component B: Institutional Strengthening**

To support the existing capacity of government and non government organizations involved in the management of MPAs. In this sub-component, training has been given to personnel in workshops and courses on the topics below.



During this fourth quarter, over 40 officials were trained from the four project countries in the following:

1. 20 officials from MPAs and NGOs of the countries on Selected Management Principles for MPAs. At present we are preparing the final edition for publishing the manual produced in these training sessions in both languages.
2. 26 representatives of MPAs, NGOs, community leaders and local authorities from the four countries, in Community Relations for the Effective Management of MPAs. At present, the first version of the manual, incorporating input from the participants, has been revised, and the second version is expected with observations from the PCU.

In both training workshops the process has involved the preparation of the Terms of Reference, which guarantee the professional quality of the facilitator and serve as guidance for the structure and content of the manual. Subsequently candidates are evaluated, and activities are selected and coordinated.

3. The revision process of the Manual on the Design and Formulation of MPA Management Plans was completed and the final edition was finished, including the Preface, and both versions (English and Spanish) are ready for publication.
4. The Project was presented on the Organizing Committee of the First Mesoamerican Congress of Protected Areas, organized together with the Biological Corridor and the Symposium on Regional Cooperation and Corridors. A paper on the Mesoamerican Barrier Reef Systems Project was prepared and presented during the Congress.
5. A process was initiated for supporting the participation of a delegate from each MBRS country in the World Parks Congress and nominations are being requested from the National Coordinators. The nominees have filled in a Score Card designed by the World Bank for a practical measure of the management effectiveness of the area they represent.

During the Congress, the representatives of the countries will make a presentation of the management status of the corresponding area, including the results of the use of the Score Card.

6. Constant communication has also been established with the PROARCA technical team, for the purpose of seeking synergies on training issues for park guards and on monitoring the management effectiveness of MPAs, both topics forming part of the work plans of PROARCA and of the MBRS.

## 2.2 Component II. Regional Environmental Information System and Synoptic Monitoring

2.2.1: Creation and Implementation of the Regional Environmental Information System (REIS)

2.2.2: Synoptic Monitoring Program (SMP)

Component II: Regional Environmental Information System

Budget Approved for the period from July 2002 to June 2003: US\$732,254

Budget Executed up to June 30 2003: US\$375,956

Percentage of Budget Executed up to June 30 2003: 51.35%

### Sub-Component Summary

The primary tasks in this component are to design and implement an environmental information system with nodes in Belize, Guatemala, Honduras, and Mexico, and to establish a virtual information center which will provide the general public with information on the Project and the barrier reefs, all accessible through the World Wide Web (WWW). The products of this sub-component will serve as tools for supporting the other components in the management and dissemination of environmental and socio-economic information.

The second year's activities were concentrated on establishing the Regional Environmental Information System (REIS) and the Regional Data Communications Network. In the first six months, from July 2002 to December 2002, the Project completed the selection of agencies where the system's nodes will be established.

The design of the regional network was completed and technical specifications for the computer equipment were prepared. In the last six months, from January 2003 to June 2003, the Project managed to acquire the telecommunications equipment and services necessary for implementing the network. Meanwhile, the design of the REIS was continued, based on the Synoptic Monitoring Programs and Management Effectiveness Monitoring of the Marine Protected Areas, which were fine tuned during this period and which describe the data collection and storage requirements for the REIS.

### Activities and Achievements during this Period

The main activities and achievements between January and June 2003 are described below:

1. The project continued with consultancies for The Design and Implementation of a Regional Data Communications Network and The Design and Implementation of a Regional Environmental Information System begun in May 2002.

2. Using the computer equipment design and technical specifications prepared in the report “The Design and Implementation of the Regional Data Communications Network for the Mesoamerican Barrier Reef System Project”, the Project bought the computer equipment necessary for installing the regional network. Specifically the Project bought 2 servers, 2 routers, 3 central switches and 1 Uninterrupted Power System (UPS).

This equipment will be installed in the first quarter of PY3.

3. The Project took steps to install an Asymmetrical Digital Subscriber Line (ADSL) of 256 Kbps at countercurrent and 512 Kbps with the current at the end of June 2003, and to obtain server housing services in the office of the Internet Service Supplier, this being the infrastructure necessary for installing the regional network.
4. Furthermore, the Project started buying computer equipment for the Sustainable Development Network of Honduras and the Del Valle University of Guatemala, which are the link agencies for the corresponding countries. Each of these agencies will receive a work station specialized in using Geographic Information Systems applications. It is expected that this purchasing process will be completed at the beginning of the third year of the Project.
5. The Project’s web page, launched in July 2001, is seen as an electronic information exchange center related to the Mesoamerican barrier reef system and marine-coastal conservation. In this context, the Project established an electronic library of scientific and administrative documents based on the web site. During the last six months, several administrative and technical reports have been added to this electronic library, to globally disseminate scientific and administrative information produced by the Project to the greatest number of interested parties.
6. In May 2003, the Project’s Technical Team concentrated on preparations for the third round of TWG meetings. The team prepared a draft of the Annual Work Plan, accompanied by Power Point presentations to be used in TWG meetings. These meetings were held in Chetumal, Quintana Roo, Mexico, on June 5 and 6.
7. This year representatives of the node agencies of Mexico, Guatemala and Honduras were included as members of the TWG. Their attendance at the meetings provided the opportunity of reaching a final agreement on the responsibilities of each agency in network performance and maintenance. They also helped to plan the national training courses in the use of REIS which will be held after the monitoring programs are launched for the other components of the Project. In this discussion, it was

agreed that logistical support for these workshops will be provided by the node agencies, including the use of computer laboratories. It was also agreed that two people from each node agency would be trained in a regional workshop together with two people from each of the support agency countries.

8. The IT Specialist kept the web page up to date with news and information on the Project's efforts. Through this global channel the Project has managed to disseminate information on its activities and extensively announce the consultancies and training workshops available with the Project.

## **Sub-Component II B: Synoptic Monitoring Program (SMP)**

### **Sub-component Summary**

The main objective of this sub-component is the establishment of a long term regional program which provides a synoptic vision of the health of the MBRS, generating reliable information on three main topics: a) coral reef ecology and associated ecosystems; b) pattern of currents in the MBRS region, and; c) specific and non specific sources of pollution in the region.

To consolidate the information on central SMP issues, the development of the regional consultancy on physical oceanography / models was continued with the support of national consultancies. The search was continued for key Support Agencies to participate in the SMP; a synoptic monitoring manual was published and projects of common interest in the region were collaborated with. Below are more details of these activities.

### **Activities and Achievements during this Period**

Among the main achievements during this period the following can be mentioned: continuation of the regional and national consultancy on physical oceanography / models; the final editing of the *Manual of Methods for the MBRS Synoptic Monitoring Program*; the purchase of equipment and instruments for the SMP; and follow-up to the many coordination activities of the SMP, including technical exchange with projects and activities relevant to the MBRS Project or to the SMP.

The set of activities and recommendations arising from the several reports which were a result of the regional and national consultancies (the majority of these were completed during the previous semester), permitted the selection and standardization of those methodologies considered to be most appropriate for immediate SMP objectives. Moreover, at present the necessary efforts are being made for all reports generated by the SMP to be available for the public through the Project's web page.

**Main achievements:**

1. **Manual of Synoptic Monitoring Methods:** Based on the activities described above, and with considerable national and international follow-up from the PCU, the final editing of the draft version of the *Manual of Methods for the MBRS Synoptic Monitoring Program* was completed, this being the revision and standardization of methodologies, including many discussions and exchanges between colleagues inside and outside the Mesoamerican region.

The Manual of Methods also presents a detailed design by subject for the SMP, including a table of monitoring procedures; it describes the Monitoring Categories (3) and the time windows for monitoring each topic; it identifies priority locations for monitoring; it provides examples of field records and species identification sheets; and appendices on the calibration of methodologies, responsible monitoring and emergency contacts for each country.

The ideal time window or period identified for annual monitoring is June-July. However, this first year of monitoring will be flexible in order to facilitate the national training of staff and to receive equipment and instruments. The results of this first regional monitoring will serve as a base line.

The *Manual of Methods for the MBRS Synoptic Monitoring Program* is available in Spanish and English in a printed version and on the Project's web page: <http://www.mbrs.org.bz>

2. **Central SMP Topics and Priority Localities:**
  - a. **Coral reef ecology and associated ecosystems:** For the purpose of SMP, this topic was initially divided into: a) coral communities; b) seaweed communities; c) mangrove communities; which together with d) marine pollution and water quality; and e) physical oceanography / models, complete the five topics in the SMP.
  - b. **Marine Pollution:** The final report for the national consultancy for Honduras was received. The corresponding section was prepared for the monitoring manual on water quality; the section for pollution had already been incorporated.
  - c. **Physical Oceanography:** After evaluating the national reports of Belize and Mexico, it was decided that the quality of the reports presented to the PCU meant they could be accepted without any important changes. The national report for Guatemala is being completed. Steps taken in relation to the consultancy for Honduras resulted in the hiring of a consultant who began working recently. With regard to **regional** activities, which include the development of oceanographic models for the MBRS region, progress has included two models which are completely functional, one for the Western Caribbean and the other for the reef lagoon area.

Work is being continued on the validation of models and on collecting the greatest number of data possible, both from national and from foreign sources. The corresponding section was also prepared for the monitoring manual.

- d. **Priority Localities for the SMP:** At present Monitoring Localities include those identified initially (23) in past meetings with the Technical Monitoring Working Group and the other two MBRS transboundary areas: the Bay of Chetumal (Belize-Mexico) and the Gulf of Honduras (Belize-Guatemala-Honduras), including the Bay of Amatique (Table 1), and it is considered necessary to mention these in the updating of the manual. Furthermore, during the Training Workshop on Monitoring, held in Belize in November 2002, 20 more Localities were recognized for their possible future incorporation into the SMP, to increase geographical representation and the representation of ecosystems which are shown in Table 2.

**Table 1. Priority Monitoring Localities Identified by the MBRS Synoptic Monitoring Program in 2001-2002**

<b>Country</b>	<b>Monitoring Location</b>	<b>Status</b>
Belize	Bacalar Chico	MPA
Belize	Corozal Bay	MPA
Belize	South Water Caye	MPA
Belize	Glover's Reef	MPA
Belize	Gladden Spit	MPA
Belize	Sapodilla Caye	MPA
Belize	Port Honduras	MPA
Belize	Belize River	SS
Belize	Hol Chan	MPA
Belize	Caye Caulker	MPA
Belize	Sarstoon-Temash	MPA
Guatemala	Río Sarstún	MPA
Guatemala	Punta de Manabique	MPA
Guatemala	Río Dulce	SS
Guatemala	Santo Tomás Bay	SS
Honduras	Puerto Cortés	SS
Honduras	Omoa-Baracoa	MPA
Honduras	Turtle Harbor	MPA
Honduras	Tela	SS
Honduras	La Ceiba	SS
Mexico	Manatee Sanctuary	MPA
Mexico	Banco Chinchorro	MPA
Mexico	Xcalak Reef	MPA
Mexico-Belize	Bay of Chetumal	TS
Belize-Guatemala-Honduras	Gulf of Honduras	TS

SS = Strategic Site; MPA = Marine Protected Area; TS = Transboundary Site

The above mentioned training workshop is part of the long term process of the SMP. During this workshop, 27 scientists from the four MBRS countries met to present the methodologies selected and begin training at the regional level.

**Table 2. List of the 20 Monitoring Localities Recommended During the November 2002 Workshop to be Included in the SMP**

Country	Location Recommended	Status
Belize	Gallows Point	SS
Belize	Goffs Caye	SS
Belize	Caye Chapel	SS
Belize	Ragged Caye	MPA
Belize	Lighthouse Reef	MPA
Belize	Turneffe Atoll	MPA
Belize	Laughing Bird Caye	MPA
Honduras	Cayos Cochinos	MPA
Honduras	Roatán	MPA
Honduras	Guanaja	MPA
Honduras	Río Aguán	SS
Honduras	Río Platano Biosphere	PA
Honduras	Laguna de Caratasca	PA
Mexico	Convoy Island	MPA
Mexico	Cancun	MPA
Mexico	Puerto Morelos	MPA
Mexico	Cozumel	MPA
Mexico	Sian Ka'an	MPA
Mexico	Akumal	SS
Mexico	Mahahual	SS

SS = Strategic Site; MPA = Marine Protected Area; PA = Protected Area

For achieving more space, ecosystem and socio economic representation, it will be necessary to continue considering new localities as the SMP continues to become stronger in the selected localities. This selection should be based on biological, ecological, oceanographic and socio economic processes present in the region.

3. **Synergies and Collaboration:** The effort was continued to establish synergies and strategic collaboration with other institutions which are working or have similar interests to ours in the MBRS region and the Caribbean.



## **2.3. Component No III: Promotion of Sustainable Use of the MBRS Resources**

### *2.3.1. Promotion of Sustainable Fisheries Management*

### *2.3.2. Facilitation of Sustainable Coastal Marine Tourism*

Component No. III: Promotion of the Sustainable Use of MBRS Resources  
 Budget Approved for the period from July 2002 to June 2003: US\$627,067  
 Budget Executed up to June 30 2003: US\$255,256  
 Percentage of Budget Executed up to June 30 2003: 40.71%

### **Component Summary**

This component has the objective of promoting the introduction of new regional management policies and tools which will strengthen existing institutional capacity, the dissemination of key information and the creation of incentives necessary for users and interest groups in the search for patterns of sustainable use for the MBRS resources. It concentrates mainly on the activities of knowledge, use and regulation of fisheries resources, promoting the participation of coastal communities of people in the management and conservation of these resources.

Also important in the promotion and development of environmentally sustainable tourism is the participation of communities of human beings seeking economic benefits from their participation, the generation of income for the MPAs and the maintenance and improvement of ecological and environmental conditions of the sites.

### **Activities and Achievements during this Period**

#### **Sub-Component A: Promotion of Sustainable Fisheries Management**

In the process of concentrating on some of the main causes that have reduced fisheries in the region and in the search for a sustainable use of the fisheries resource, this sub-component, in this fourth semester, has concentrated on follow-up to the final reports on Aggregation Sites for reef fish and on national training in the co-management of fisheries.

1. The first draft document on Aggregation Sites was given to us in January, and observations were made about it which have not yet been presented in a new version. We are evaluating the data base and the maps which have just arrived.
2. The Belize Fisheries Department is about to officially present us with the Protocol for Monitoring Aggregation Sites of Multiple Species, which will be published and disseminated for the Regional Monitoring Program for these sites.

3. The MBRS National Coordination in Belize, Guatemala and Mexico were coordinated and given support for holding the national training workshops in Co-Management Techniques of fisheries resources.

The manuals were given out, together with an instructor's guide and Power Point presentations, to the three National Coordinators, in English and Spanish, and together with the delegates trained in the region, they trained another 240 fishermen, officials from the fisheries offices and local authorities.

4. The first batch of equipment has been obtained to support the Fisheries Departments in the process of monitoring reef fish, the first delivery being made to the MBRS National Coordination in Belize and Mexico. Furthermore, contracts have been signed with suppliers in Guatemala, and it is expected that the equipment will be delivered in August. The majority of the equipment is for sustainable forms of life, and there will be a tendering process started for organizations in the transboundary zones of the MBRS region.

#### **Sub-component B: Facilitation of Sustainable Coastal Marine Tourism:**

In the process of disseminating examples of how to minimize adverse impacts of tourism and reinforce those effects that benefit coastal marine resources and ecosystems, as well as the communities of people located near tourist destinations, the following actions were taken during the fourth semester of the project:

1. A series of drafts of the Operational Manual of the Regional Tourism Forum was revised, until the final version was achieved, and a product of this is a document containing two sections, a Forum Operation Manual, which describes procedures for how to promote the Forum in the long term, and a second section, which is a Forum Report, with topics discussed, recommendations and an initial approximation to exemplary coastal marine tourism practices which are being implemented.

The document is pending improvement of the section containing the Honduran national report, due to concerns expressed by the MBRS National Coordination in Honduras about the fact that it fails to reflect the reality of that country's progress in tourism. Once this is available, the editing stage will begin for publication in both languages, and it is expected that publication will be ready for Forum II to be held at the end of August 2003.

2. With regard to the analysis of tourism operations which could potentially be certified and the mechanisms which have to be implemented for accreditation and certification, consultative meetings were held with initiatives in the region, these concluding that the investment in time and money goes

beyond the scope and purposes of the Project. In this context, it was decided to redirect the activity to the establishment of Codes of Conduct for coastal marine tourism operations.

3. Furthermore, 20 people were trained, including delegates from the four countries, representatives of government tourism offices, persons responsible for authorizing coastal marine tourism operations and infrastructure, as well as MPA personnel, in Environmental Impact Studies for Coastal Marine Tourism Operations and Infrastructure.

## 2.4. Component IV. Education and Environmental Awareness

### 2.4.1 Environmental Awareness Campaign

### 2.4.2 Formal and Informal Education

Component IV. Public Awareness and Environmental Education

Budget for the period from July 2002 to June 2003: US\$410,924

Budget executed up to June 30 2003: US\$116,088

Percentage of budget executed up to June 30 2002: 28.25%

### Component Summary

The Component of Environmental Awareness and Education is in the process of significantly contributing to guaranteeing the sustainable use of marine coastal resources in Mesoamerica, through the establishment of pedagogical instruments which will lead to knowledge of the values related to the conservation and use of resources. These values will help us to differentiate between those uses protected by common law or traditional practices, which are essentially for self consumption or basic subsistence, and those uses which have a closer link to the market.

The pedagogical instruments referred to above are processes which range from an infusion of MBRS concepts and topics in the public syllabuses of the region, systematic documentation of management experiences and community conflicts, to the establishment of induction instruments and the measurement of specific MBRS information.

Sustainability has to do mainly with the concept of sustainable performance and measures ecological sustainability, on the basis of the regeneration or repopulation capacities of the ecosystem. To this can be added socio cultural, technical, political and legal factors which underlie the final use of these resources.

These factors reinforce the capacity to comply with the MBRS Indigenous Plan, since it allows an analysis of the situation of the less favored populations and their involvement in the programmatic activities of the MBRS. At the same time it permits the bases to be created for laying the foundations in future populations for compliance with positive parameters on the use of marine coastal resources.

The dynamics of the component have been characterized by promotion of the MBRS as an ecological system, generation and exchange of data, and coordination of activities with the other Project components and other organizations of the region.

**Activities and Achievements during this Period****Sub-component A: Public Awareness**

1. Over 1,500 rulers were distributed on the MBRS charismatic species, during events such as Earth Day, the Handing Over Ceremonies for equipment donation to Belize and during training courses developed by the Marine Protected Areas and Sustainable Use components.
2. The planning and development of International Earth Day, celebrated in Belize, in coordination with embassies of the MBRS countries, especially the Mexican Embassy which lent the premises of the Mexico-Belize Cultural Institute where the commemorative meeting was held together with an exhibition of amplified photographs of the region.
3. Planning of the Handing Over Ceremonies for the donation of equipment to Belize, which consisted of the preparation of the agenda, invitations and special needs such as an invitation to the media and the preparation of the cover for the MBRS Synoptic Monitoring Manual, a document which was presented on this occasion.
4. Production and distribution of 500 fliers on the importance of Earth Day, the summarized information consisting of an explanation of the objectives of this commemorative day and the relation between the MBRS Project objectives and activities and the most important precepts related to Earth Day.
5. Maintenance of the Project Photograph Bank taking them directly and at the request of the MBRS counterpart organizations; this has allowed us to hold an exhibition of amplified photographs of the MBRS and to prepare several covers for technical documents.
6. Obtaining the draft document for the script of the MBRS institutional video, through coordination with the education specialist and AS consultants, a group contracted to produce the regional MBRS video.
7. Design, production and distribution of over 3,000 stickers (in two different styles) for the general public, for the purpose of promoting the MBRS Project and the manatee as a charismatic marine species in the region.
8. Production of over 100 new MBRS promotional t-shirts, which were distributed in training events and during the meeting with technical working groups. Distribution of over 1,000 binders during the different events promoted by the Project.
9. Obtention of the final document on the Regional Awareness Campaign in Spanish.

**Sub-component B: Environmental Education**

1. To contribute to the positive implementation of the project, through the incorporation of a social dimension in the activities (TOR's), workshop plans and technical documents, such as the ones on Community Policies and Relations for the Effective Management of Marine Protected Areas.
2. Supervision of the process of producing the Teacher's Guides (primary and secondary) for the infusion of MBRS topics in the Education Plans of the region. This activity included the analysis, direction and approval of the progress reports and of the drafts of the Guides sent by the consultant. Another important aspect was that a series of documents from the Ministries of Education of the MBRS countries and other information which was sent to the consultant responsible for preparing the Guides was channeled into this component for the purpose of enriching them.
3. Obtaining the official endorsement document for the Infusion of MBRS Topics. This document contains a general vision of the topics, concepts and principles of the MBRS, explaining why there is a need for infusion in the education syllabus and how to achieve this. It is also a preamble for the lessons dealt with in the Teacher's Guides.
4. Preparation was started for the Regional Workshop for primary and secondary teachers on the use of MBRS Concepts and Topics Infusion Guide, and activities have varied from requesting the names of participants, quotations for the premises where the event is to be held and revision of documentation to be used.

**Inter-institutional Coordination:**

1. Participation in the meeting and follow-up for the production of the report on the situation of the institutional community conflict case at Paynes Creek and Port Honduras National Park in Belize, and after analyzing the scenarios and existing documentation specific recommendations and suggestions were made as initial steps for reaching reasonable agreements of benefit to all the sectors involved.
2. Coordination with the Indigenous and Peasant Community Agroforestry Coordination, in planning the regional tour for training in the management of community assets. Here rural and urban groups and organizations with productive potential were identified, so both fisheries cooperatives and NGOs were included, specifically from Belize. Furthermore, our participation included preparing the schedule.

3. Participation in the production of the Socioeconomic Monitoring Guide for marine coastal management of the MBRS and the Caribbean (SOCMON C), an initial meeting held in Cancun for the establishment of parameters and social indicators and the analysis of two base documents. This activity was in cooperation with the Caribbean Advisory Group, NOAA, University of the West Indies and the Global Coral Reef Monitoring Network. The manual will be published soon.

## **2.5. Component V. Project Administration**

### **2.5.1. Disbursements**

The Annual Work Plan and Budget for the period from July 2002 to June 2003 was US\$3,438,825. Of the budgeted amount a total of US\$1,643,538 was requested and received from the World Bank, which is the equivalent of 48% of the budget. Disbursements were received from the World Bank without delay and have contributed to the implementation of Project activities during the current period.

At the beginning of January this year, the Project had a balance of US\$102,166, consisting of US\$101,235 from the UNDP cash fund and US\$931 in the special PCU account. Deposits for US\$87,771 were received in the special PCU account and US\$1,031,614 in the UNDP account during the period which ended on June 30 of this year. Therefore, the project had a total of US\$1,221,551 for its activities during this period (January-June 2003). Total expenses for the period are US\$1,176,815, and the final balance up to June 30 of this year is US\$44,736.

At the end of this period, the Project had spent US\$1,708,285, or 50% of its PY2 budget, and 98% of the cumulative funds received for the two years (2001/2002 & 2002/2003).

Again consultancies represented the category of highest disbursements (41% for this year or 47% of the cumulative total). The second highest disbursement category is equipment, with a total of US\$504,818 which represents 30% of the disbursements for this year or 22% of the cumulative total. This was due to the purchase of equipment for Belize, Guatemala and Mexico during the last six months of PY2.

It is expected that the Project's activities will accelerate for the next period, with a total amount of disbursements estimated at US\$1,898,101 for Project implementation for the period ending on December 31 of this year. This includes amounts estimated at \$439,787 for consultancies, US\$347,424 for equipment, US\$426,738 for training, US\$300,000 for construction work and US\$384,152 for recurrent costs.

Reimbursements are being prepared for the UNDP and the special PCU account for the period that is ending. These will be maintained to ensure implementation of the Project activities programmed.



## **2.5.2 Procurement**

### Consultancies

During this reporting period, January to June 2003, six new consultancies were granted. An architect was hired to design the Multiple Use Centers to be built in five marine protected areas. The Architect who won the contract was also hired to supervise construction work for the Centers. Up to now, the architect/supervisor of the construction work and the procurement specialist have visited four of the five areas where these Centers will be built (Ixcalak in México, Bacalar Chico in Belize, Sarstún in Guatemala and Utila Turtle Harbour in Honduras).

During this period three consultancies were also approved which had been started during the previous period.

### Construction Work

During this reporting period a contractor was hired for building the Center in Bacalar Chico, Belize. This Center is programmed to be completed in September 2003. The contract for the construction in the Sarstun Area was signed at the end of June 2003. This Center is also due to be completed in September of this year.

### Equipment

In November 2002 the negotiation process with the Bank to eliminate Competitive International Bidding, this ending on February 20, 2003 with the signing of the amendment to the Grant Agreement so that the procurement process for the four MBRS Project member countries can be placed under "Shopping".

Since then, the procurement process has progressed for Belize, Guatemala and Mexico, as can be appreciated in the corresponding tables of the procurement monitoring process for these countries. For reasons beyond the control of the Project Coordinating Unit, the procurement process for the Republic of Honduras began very late in this reporting period.

## **2.5.3. Regional Coordination**

Project activities for this period from January to June 2003 were dominated by an aggressive procurement campaign, taking advantage of the option of direct Shopping in the countries. In the meeting of the Regional Steering Committee, held in Guatemala City in January 2003, the countries demanded more direct participation in local purchases. Complying with this principle, each country was given the responsibility of securing the quotations for the procurement of equipment in that country. This responsibility has demonstrated that it is quite demanding in terms of time and effort, and the quotations have not been received quickly enough to be able to maximize the purchase and delivery of all the equipment to the countries before June 30,

2003. However, it is necessary to clarify that very often delay is not due to a delay in the presentation of quotations, but rather to delay in the delivery of the equipment by the supplier. This situation can easily be appreciated in the procurement of boats which have to be built, since they are not available ready made. There are also cases when the equipment has to be imported from outside the region, this resulting in delay due to transport time and payment processes abroad.

As was indicated in the last reporting period, for the rest of the life of the Project there will be a need to produce highly visible short term outputs, guaranteeing at the same time the continuation of activities which will produce long term goals. For this purpose, the Project continued with the development and implementation of multiple training courses in a variety of subject areas and the supervision of consultancies begun during the previous period. One of the courses with high social and political visibility was on national Fisheries Co management, and the MBRS Project was thanked on different occasions by the fishermen and political authorities of the four MBRS countries. Also highly visible was the delivery of equipment and the beginning of the construction of infrastructure in support of the MPAs in MBRS countries and the MBRS activities in commemoration of Earth Day.

With regard to long term activities, it was first of all the conclusion and distribution of the Synoptic Monitoring Manual which defined the monitoring processes to be used by the four countries to measure the health of barrier reefs and associated systems in the medium and long term. As a high profile technical tool, this manual has also been identified as a highly visible product. Secondly, the Policy on Protected Areas, Fisheries and Tourism Resources in the MBRS Transboundary Areas produced at the end of May 2003, has defined the conceptual and political framework within which management measures for coastal resources will be developed in the short, medium and long term.

Coordination with other projects and agencies continues. Coordination with Project partners such as the World Bank, the CCAD and the UNDP has progressed without delay and without any event worth mentioning during this reporting period. Perhaps the only situation worthwhile mentioning is the formal request from the Government of Honduras to include the protected area 'Cayos Cochinos' as a priority area for the MBRS Project. The Regional Coordination is coordinating with the other three countries to determine how to deal with this request. The presence of several other actors in the MBRS zone is noteworthy, and efforts have been made to coordinate with these new actors. As was reported before, this coordination has not been easy and has had very few tangible results.

The MBRS Project has convened a meeting of donors/partners of the Mesoamerican Barrier Reef System for the first week of October 2003, for the purpose of achieving more consolidation in the region's coordination efforts.

In general, the execution of the MBRS Project is progressing at a very satisfactory rhythm. There are always new challenges in a regional Project such as this, with multiple sectors, countries and interest groups. It is obvious that the focus of the MBRS Project execution has to be one of continuous adaptation to the region's realities, with implementation mechanisms in a process of persistent evolution. What is definitely true is that the beginning and the success of field activities, and therefore their inclusion in the next progress report, will depend on the level of commitment and ownership shown by the MBRS countries in the execution of these field activities. This demonstration of commitment will determine our future as a Mesoamerican Barrier Reef System Program, beyond this first phase of the MBRS Project.

### **3.0. Limitations in Project Implementation**

The limitations observed during this reporting period are set forth below and are mainly technical and administrative in nature.

1. The conclusion of the REIS design depended a great deal on information from consultancies in other components of the Project, especially the products of the following consultancies: Coral Reef Ecology, Critical Analysis of Information on Fish Aggregation Sites for Spawning and Methodology design for establishing the base line for monitoring programs in Marine Protected Areas. Progress in the REIS data base design has been delayed because of a delay in other consultancies. Even though it was possible to begin with the data base design, it has been necessary to wait for the final products on monitoring methodologies in order to continue with the REIS design. Since the Project already has these products available, it will be possible to complete REIS design and implementation in the first quarter of the new year of the Project.
2. In some cases, the procurement process does not end up with a good proposal. In these cases it is necessary to begin the process again, which results in loss of time. In the last six months, it has been necessary to ask for quotations again because a technically adequate proposal from the suppliers has been lacking.
3. At the time when the Project was ready to conclude the consultancy "Design and Implementation of the Regional Data Communications Network for the Mesoamerican Barrier Reef System Project", the company contracted was bought by another company, an event which interrupted the flow of communication with them and the work, and which resulted in a delay of some weeks in the implementation of the regional network and the conclusion of that consultancy.

4. The delivery of final products by the consultants has taken too long, and even longer when it has been necessary to improve the reports or manuals, in spite of the constant requests from the PCU.
5. The process of building the Multiple Use Centers (identification of the building sites, design, tenders, contracting of constructors, etc.) has been slow and at different rhythms in the four countries, and is therefore behind schedule.
6. The tenders and suppliers contracts for the purchase of equipment in the four countries have also taken longer than planned. This has affected activities such as starting the Monitoring Programs or reprogramming training such as the training on Forms of Sustainable Livelihood.
7. Again the response time to the request for delegates' to attend meetings and training is not ideal and some activities have had to be re-programmed.
8. In some cases delegates proposed do not attend and the total number of people programmed for training has not been met, which has eliminated opportunities for other people and furthermore it has had repercussions on the Project's performance indicators.

#### **4.0. Technical Activities for the Next Semester**

Apart from following up to activities begun during the last semester, other activities to be implemented during the next semester are detailed below:

##### *Component I. Marine Protected Areas*

1. Consolidation and launching of the Program to Monitor the Management Effectiveness of the Project's priority MPAs for the MBRS.
2. Presentation of the 10 year Master Management Plans for 4 priority MPAs of the Project for the MBRS.
3. Support for Omoa Barracoa and Sarstun, to conclude the final phase of the corresponding Management Plans.
4. Support for Punta de Manabique, to prepare an executive version of the Management Plan and dissemination material for informing the community.
5. Support for the Sian Ka'an Biosphere Reserve, for conducting public consultations in updating the Management Plan.

6. At least two Multiple Use Centers finished, equipment delivered in Guatemala and purchased in Honduras.
7. A meeting of the Transboundary Park Commissions on the implementation of regional policies adopted.
8. Exchange of personnel and training of MPA park guards.
9. Publication of Manuals on preparing Management Plans and on Management Principles for the MPAs in the MBRS region.

*Component II. Environmental Information System and Synoptic Monitoring Program*

*A. Environmental Information System*

Actions in the next two quarters will concentrate especially on completing the design and implementation of the REIS and putting the regional network into practice. The specific actions provided for are the following:

1. The Project will conclude execution of consultancies for The Design and Implementation of a Regional Data Communications Network and The Design and Implementation of a Regional Environmental Information System. The next step will be to install the servers to establish the network and implementation of the REIS data base.
2. The Project will provide necessary training for personnel from the node agencies to enable them to use and manage the data base and regional network. This activity is programmed to take place after the monitoring programs are launched.
3. The regional network nodes will be launched in an event which will require the delivery of the MBRS Project computer equipment and telecommunications services to the nodes and the signing of memorandums of understanding, which will define the terms of operation of the nodes.
4. With the installation of the regional network, the web page will be transferred to a server within the network managed by the Project. As the REIS will be based in the World Wide Web, located on the Project's web page, the architecture of the site will have to evolve to fit into the data base, an event which will represent a transition from a static page to a dynamic one. This will involve a new design and the re-programming of already existing pages. This task will be done simultaneously with the implementation of the REIS.

5. The electronic library of scientific and administrative documents on the web site will grow throughout the life of the Project for the purpose of establishing a permanent information register related to these important topics for the region.
6. The IT Specialist will keep the web page updated with news of the Project's efforts and other relevant information.

*B. Synoptic Monitoring Program*

1. Four additional national workshops are being organized for monitoring personnel for the SMP. These workshops are part of the training process begun in November 2002 with the regional course in SMP, and its main objective is to train the greatest number of people in each country on the three central topics of the SMP.

Training will begin with a) the ecology of coral, mangrove and sea weed communities; and b) marine pollution. The topic of physical oceanography / models is considerably different from the rest because measurements will be taken automatically and instruments installed in several key points in the MBRS region will be used. The training of personnel on this topic will therefore be done a little later, when some of the instruments (current profilers) and the oceanographic models are available, these already being completely functional. These national workshops will be held in August 2003.

The Synoptic Monitoring Program will be launched in September 2003.

*Component III. Sustainable Use of the MBRS*

*A. Sustainable Fisheries*

1. Consolidation and launching of the Monitoring Program for Reef Fish Aggregation Sites.
2. Training on Sustainable Livelihoods.
3. Exchange of fishing professionals.
4. Beginning of the study on Conflict Determination.
5. Delivery of equipment in Guatemala and purchase of equipment for Honduras.
6. Publication of Monitoring Protocol for Reef Fish Aggregation Sites in the MBRS Region.

7. Publication of the Manual on Co management Techniques for Fisheries Resources in the MBRS Region.

#### **B. Sustainable Tourism**

1. Second Regional Forum on Sustainable Tourism.
2. Beginning of the study of Codes of Conduct and Catalogue of Best Practices in coastal marine tourism.
3. Publication of Operational Manual and Document of the First Regional Forum of Sustainable Coastal Marine Tourism.

#### ***Component IV. Environmental Education and Public Awareness***

1. Development of a marine coastal ecological calendar
2. Preparation of two stickers on the region's flag species.
3. Preparation of a regional booklet on the manatee.
4. Dissemination of the MBRS video and of radio spots.
5. Publication and distribution of teaching guides for primary and secondary schools.
6. Preparing and attending an MBRS Project stand in the Central American Environment Fair in Panama in November 2003.