



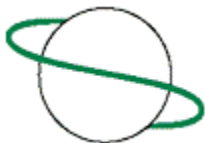
# MESOAMERICAN BARRIER REEF SYSTEMS PROJECT (MBRS)



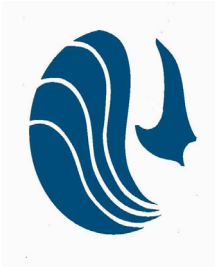
## PROGRESS REPORT No. 2



**Reporting Period: January 1 – June 30, 2002**  
*(Revised for Web Publishing)*



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COMISION  
CENTROAMERICANA  
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Y-DESARROLLO

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## **COVER MEMORANDUM FROM THE REGIONAL COORDINATOR**

**TO:** Executive Secretary and Director General for the Environment, CCAD-SICA  
Project Task Manager of the 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

**Ref:** Conservation and Sustainable Use of the Mesoamerican Barrier Reef Systems  
(MBRS) in Belize, Guatemala, Honduras and Mexico  
**Project no.: GE-P053349** **TF: 027739**  
Second Technical and Financial Report: 1 January to 30 June 2002

**DATE:** 30 July 2002

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Please find attached hereto the Second Technical and Financial Progress Report of the MBRS Project for the period 1 January through 30 June 2002. This report recounts progress made in implementing the Annual Work Plan (AWP) and the Budget approved for the period 1 July 2001 through 30 June 2002.

In the six months of this reporting period, the MBRS Project has moved ahead at a very rapid pace, as required to keep up with the Disbursement Schedule for the MBRS Project. It is important to reiterate that project implementation began six months behind schedule, and as a result, several activities for this period are still on-going.

Plans for the current implementation period call for completing all activities still pending without hindering implementation of activities slated for this time.

### List of Acronyms

AWP	Annual Work Plan
BEMAMCCOR	Belize-Mexico Alliance for the Management of Coastal Resources
CCAD	<i>Comisión Centroamericana de Ambiente y Desarrollo</i>
CICESE	<i>Centro de Investigación Científica y de Estudios Superiores de Ensenada</i>
CINVESTAV	<i>Centro de Investigación y de Estudios Avanzados del IPN</i>
CZMA/I	Coastal Zone Management Authority and Institute
GEF	Global Environmental Facility
ICRI	International Coral Reef Initiative
INWEH	International Network for Water, Environment and Health
IUCN	International Union for the Conservation of Nature
MBCP	Mesoamerican Biological Corridors Project
MBRS	Mesoamerican Barrier Reef Systems Project
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NCORE	National Center for Coral Reef Research
PCU	Project Coordinating Unit
PDF	Project Development Fund
PROARCA	<i>Proyecto Ambiental Regional para Centroamérica</i>
PY	Project Year
REIS	Regional Environmental Information System
RSC	Regional Steering Committee
SEMARNAT	<i>Secretaría de Medio Ambiente y Recursos Naturales</i>
SMP	Synoptic Monitoring Program
TNC	The Nature Conservancy
TORs	Terms of Reference
TRIGOH	Tri-national Alliance of the Gulf of Honduras
TWGs	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 for Nature, Central America Office

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## 1.0. Executive Summary

After receiving the first disbursement of funds in December 2001, the Project Coordinating Unit (PCU) launched an aggressive campaign to select and contract out ten of the technical activities identified in the 2001-2002 Annual Work Plan (AWP). Many of the technical activities were initiated, including the establishment of a baseline for monitoring the effectiveness of management in Marine Protected Areas (MPAs), preparing a methodological manual for the Synoptic Monitoring Program (SMP) of the MBRS, preliminary design of the network and database for the Regional Environmental Information System (REIS), critical analysis and recommendations for management of spawning aggregations, design of a regional forum on sustainable tourism, and design of a regional campaign to raise environmental awareness.

Several regional meetings were held during this reporting period, including two meetings of the Trans-boundary Park Commissions, meetings of experts on MPAs, SMP and REIS, the regional consultation on Certification of Sustainable Tourism (CST), the meeting of the Technical Working Groups (TWG), and two regular and two special meetings of the Regional Steering Committee (RSC). Furthermore, a training course was held on income generation for MPAs, so that financial strategies could be drawn up for parks in the region.

Multiple efforts were made to build alliances with other stakeholders in the MBRS region. Contacts have been made with the National Caribbean Coral Reef Research Center (NCORE), the University of the California at Santa Cruz, the Regional Coordinating Unit in Jamaica of the United Nations Environment Programme, the University of Mississippi, the *Colegio de la Frontera Sur* (ECOSUR), and sister projects including PROARCA/APM, the Mesoamerican Biological Corridors Project (MBCP), and the Ecoregion Program of the World Wildlife Fund (WWF). These contacts have not yet produced the anticipated cooperation, but the MBRS Project will continue to pursue them and will seek new partners.

Over the past six months, the fast pace of activities and their many challenges have clearly revealed the highly complex nature of the MBRS Project. The constant need to fine-tune implementation mechanisms has led to the use of a flexible, adaptable approach to Project management. With this new approach, investments can be more easily redirected from one budget item to another, so long as the change does not interfere with established objectives. It is expected that this approach will maximize Project benefits in the MBRS zone of influence. Admittedly, such an approach may produce delays in implementation of some activities.

In general, progress made during this reporting period represents the highest success possible, especially considering the conditions under which the MBRS Project first began to implement technical activities. Even so, the Project now faces the need to define more effective mechanisms of implementation if it is to attain all the outcomes planned for its duration. This is due to three main factors: 1) Project implementation began six months behind schedule; 2) some anticipated outcomes are too ambitious to be achieved in the time available to the Project; and 3) the management approach for this Project needs to be flexible and adaptable.

## **2.0 Implementation of Project Components**

### **2.1. Component 1: Marine Protected Areas**

#### *2.1.1. Planning, Management and Monitoring*

#### *2.1.2. Institutional Strengthening*

#### Component 1. Marine Protected Areas

Budget approved for period July 2001 - June 2002: US\$142,725.00

Budget executed at 30 June 2002: US\$86,885.55

Percent budget execution at 30 June 2002: 60.88%

### **Component Summary**

Marine Protected Areas (MPAs) are created to protect marine coastal resources and to ensure that they are used sustainably. If these resources are managed effectively, they will be protected, their biological diversity will increase, and in the process, they will produce economic benefit through tourism and higher-quality fishing.

The main objective of this component is to provide immediate support for improving the management and protection of 15 high-priority MPAs in the MBRS region. The focus will be on making conservation efforts more sustainable and bolstering the institutional capacity of government agencies and nongovernmental organizations responsible for managing these MPAs; for this purpose, the Project will offer staff training through courses and workshops.

This report outlines activities designed to meet these objectives and to follow up on the work initiated in Year One of the Project.

#### **Achievements to date:**

##### ***2.1.1 Planning, Management and Monitoring***

The most significant achievements under this sub-component during the first six months of 2002 can be summarized as follows:

1. The first progress report was prepared, covering the period from July to December, 2001.

2. Project staff attended a regular meeting of the Belize-Mexico Alliance for the Management of Coastal Resources (BEMAMCCOR), held in Corozal, Belize, to introduce the Project and explore possibilities for this Alliance to serve as the Trans-boundary Park Commission for the northern region of the MBRS.
3. The Project attended a meeting of the Coral Reef Committee of Guatemala to examine the status of the Trans-boundary Park Commission for the southern region of the MBRS.
4. A coordination meeting was held with the Director of SIGMA (Environmental Management System) Project, Component 4 of the PROARCA Program, to exchange information on issues of shared interest to both projects.
5. The Project was represented at a meeting for the introduction of Phase Two of the Watershed-Reef Interconnectivity Scientific Study (WRIScS) in Belize City. Relevant documentation was collected and transferred to the offices of the PCU.
6. Planning and coordination began for the Workshop to Update the Sapodilla Cayes Marine Reserve Management Plan and the First Consultation for upgrading the plan to a 10-year Master Plan. Terms of reference had to be drafted for the workshop, and numerous coordination meetings were held. The workshop took place from 23 to 25 April in Punta Gorda, Belize, and the third revision of the final workshop report is nearly ready for publication and dissemination.
7. The Meeting of Experts on MPAs was held from 13 to 14 May; participants discussed details of the methodology and made concrete recommendations of steps to be taken, especially in the fields of monitoring, criteria for evaluation, selected indicators, and frequency and methods of monitoring.
8. Terms of reference were prepared in English and Spanish for the two Trans-boundary Park Commissions (northern and southern), and were sent to the National Coordinators for comment.
9. The Project attended the regular meeting of the Belize Barrier Reef Committee and presented detailed reports of activities by this sub-component, emphasizing the terms of reference of the



Trans-boundary Park Commissions. The meeting discussed the participation of the TRIGOH and the BEMAMCCOR.

10. National Coordinators were asked to draw up lists of infrastructure and equipment needs in the Transboundary Protected Areas scheduled to receive support during the second year of the Project: Xcalak, Bacalar Chico, Sarstún and Utila Turtle Harbor (15 March). The Technical Working Groups, meeting from 6 to 7 June in Petén, Guatemala, received and reworked the lists, making them more specific.
11. A meeting for coordination was held with the Secretary General of BEMAMCCOR to discuss this organization's readiness to assume the role of Trans-boundary Park Commission for the northern zone of the MBRS; the response was affirmative, and following preparations, the first meeting was held on 27 and 28 June. The final report is now being drawn up with specific regional policy recommendations on the subjects of tourism, fisheries and marine protected areas.
12. A coordination meeting was held to explore similar issues with the Secretariat of TRIGOH on whether this agency could serve as Trans-boundary Park Commission for the southern zone of the MBRS; the reply was affirmative, and the first meeting was organized and conducted from 27 to 29 May. The second revision of the final report is now being prepared, with concrete regional policy recommendations on the same topics.
13. National Coordinators were asked to appoint government representatives to the northern and southern Trans-boundary Park Commissions.
14. The Project coordinated with expert Dr. Pater Sale from the INWEH/CZMA/CINVESTAV consortium to establish a baseline, prepare a plan of action and identify contacts to begin assigned tasks in each country. An executive progress report has now been submitted. Contacts were made with the Directors of the 15 MPAs in the MBRS, and questionnaires were designed and sent out to collect information on the level of management in these areas. Methodologies described in the questionnaire responses will be analyzed so that a standard model can be designed to fit the specific characteristics of all 15 MPAs.
15. A draft Plan of Action and budget for Year Two of the Project (July 2002 - June 2003) was presented and discussed at the Technical Working Groups meeting in Petén, Guatemala on 6

and 7 June. The Groups' comments and recommendations were incorporated into the final version, submitted on 26 June.

### **2.1.2 Institutional Strengthening**

The most significant achievements for this sub-component in the first six months of 2002 are summarized below. Several of the activities and achievements listed under the previous sub-component also relate to this one, such as general and coordination meetings; to avoid repetition, they will not be listed here.

1. The first progress report was prepared, covering July to December 2001.
2. A training workshop was held on income generation for protected areas, originally scheduled for Year Two of the Project. This marked the beginning of a process of coordination to join efforts of the MBRS Project, MBCP, PROARCA/APM, TNC and WWF Central America. Countless meetings were held to discuss and exchange proposals for methodology, participants, anticipated outcome, facilitators and speakers. After the logistical, methodological and financial details had been worked out, the workshop took place from 18 to 22 June in Puerto Barrios, Guatemala, with 35 participants from Mesoamerica, 15 of them from the MBRS region and supported by the Project, as well as seven facilitators, a rapporteur, one logistical assistant and five organizers. The meeting produced financial strategy proposals for five MPAs from the MBRS region: Utila Turtle Harbor, Manabique, Sarstún, Bacalar Chico and Costa Occidental de Isla Mujeres, Punta Cancún and Punta Nizuc. The proposals are currently under revision for publication and dissemination, and the workshop proceedings are being prepared.
3. A draft Plan of Action and budget were prepared for Year Two of the Project (July 2002 - June 2003) and were presented and examined in the meeting of the Technical Working Groups held in Petén, Guatemala from 6 to 7 June. The comments and recommendations produced by the meeting were later incorporated into the text, and the final version was scheduled for release on 26 June.

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

### 2.2.1: Creating and Implementing a Regional Environmental Information System (RIES)

Component II. A Regional Environmental Information System

Budget approved for period July 2001 - June 2002: US\$327,840.00

Budget executed at 30 June 2002: US\$192,796.93

Percent budget execution at 30 June 2002: 58.81%

### Component Summary

The primary tasks under this component are to design and implement an environmental information system with nodes in Belize, Guatemala, Honduras and Mexico, and set up a virtual information center that will provide the general public with information on the Project and the reefs. Both information systems will be available over the World Wide Web.

Activities for the first year focused on establishing a presence for the Project on the WWW, beginning to design the Regional Environmental Information System (REIS) and the Regional Data Communication Network, and selecting agencies to host system nodes. The work of this sub-component is to equip the other components with tools for managing and disseminating environmental and socio-economic information.

### Achievements to date

From January to April 2000, work focused on contracting consultants to help design the REIS and the regional network. Activities in May and June revolved around preparing and holding two events that are critically important for the Project – the Expert Meetings and the meetings of the Technical Working Groups (TWGs). Also, the bilingual Website was frequently updated with new Project information, an ongoing task that absorbs at least one week every month.

The following specific activities and achievements can be reported for these six months:

1. Two regional networks are now in place: the Mesoamerican Environmental Information System (SIAM, formerly SIMEBIO) and the Inter-American Biodiversity Information Network (IABIN). Their purpose is to facilitate the exchange and dissemination of environmental information in the Americas. To make sure the REIS is compatible with these networks, the

Project invited the SIAM design expert to Belize to discuss technical requirements for linking the systems.

As a result of this discussion, a clause was added to the Terms of Reference (TORs) for a consultancy entitled Design and Installation of a Data Communication Network, stipulating that the regional network should be inter-operable with the SIAM and the IABIN.

2. Research Planning, Inc., a consulting firm in South Carolina, USA, was contracted to prepare a consultancy entitled Design and Implementation of a Regional Environmental Information System. This consultancy was announced in early February and the contract process was completed by late April. Implementation began in May 2002.
3. ESG International, a Canadian firm, was contracted for the consultancy Design and Installation of a Data Communication Network. The consultancy was announced in early February and contracting was completed by late April. Implementation began in May 2002.
4. A first round of Expert Meetings was convened for Cancún, Mexico from 13 to 18 May 2002, and a meeting to discuss the Regional Environmental Information System took place from 16 to 18 May. The 15 regional and international experts present provided the sub-component with specific recommendations for hardware, software and network technologies, long-term sustainability, and resources and levels of telecommunications services available in the four countries of the MBRS. The meetings also offered a good opportunity to begin the design of the REIS. The recently hired consultants made good use of the meetings to discuss synoptic monitoring and marine protected areas, and met with consultants and staff of the other components.
5. A draft AWP was prepared for 2002-2003. Members of the TWGs endorsed the technical content of the draft plan and helped fine-tune the user profile of the MBRS Project information system, finalize the table of criteria to be used in for selecting node agencies for the regional network, and define the functions of node agencies. After the meetings, Project staff completed the Plan of Action incorporating changes and comments received from the TWGs. The final Plan of Action was submitted to the Regional Steering committee on 26 June for validation and approval.

## **2.2 Component II. Regional Environmental Information and Synoptic Monitoring Program**

### **2.2.2 Synoptic Monitoring Program (SMP)**

Component II. B Synoptic Monitoring Program (SMP)

Budget approved for period July 2001 - June 2002: US\$131,100.00

Budget executed at 30 June 2002: US\$35,710.64

Percent budget execution at 30 June 2002: 27.24%

### **Sub-component Summary**

The main objective of this sub-component is to establish a regional program that will give a synoptic view of the health of the MBRS, generating reliable information on three key areas of concern to the MBRS region: a) the ecology of the coral reefs and associated ecosystems; b) point and nonpoint sources of pollution; and c) the pattern of currents.

To obtain information on the major areas targeted by the SMP, three international consultancies were undertaken with the support of national consulting firms in each country of the MBRS on: a) coral reef ecology; b) marine pollution; and c) physical oceanography / modeling. Several SMP node agencies in participating countries have already confirmed their participation in the Project, and a number of strategic alliances have been established or soon will be.

### **Achievements to date**

The main activities in this period were contracting international consultants, the MBRS Meeting of Experts, the Meeting of the Technical Working Group, and participation in national and international meetings of interest to the SMP.

1. The Project paid a visit to the National Caribbean Coral Reef Research Center (NCORE) to discuss details of a Memorandum of Understanding between NCORE and the MBRS Project. Meeting together were the Director of NCORE, representative of the World Bank, MBRS Director, and the MBRS Environmental Monitoring Specialist (EMS). The MOU was discussed and approved by the RSC-MBRS, and the format was approved for use in other cooperative arrangements. This MOU will soon be finalized and has already been reviewed by the University of Miami Legal Department. The Project is currently pursuing cooperation between Mexico's CICESE and the University of California at Santa Cruz, USA.

2. The Project Coordinating Unit, together with the Natural Resources Management Specialist, was represented at the meeting of the MBRS National Barrier Reef Committee in Belize on 2 February 2002. The meeting discussed activities that should be changed or retained in the 2001-2002 Project Plan of Action, and proposed that the Belize National Meteorological Service (NMS) be included in the SMP as a node agency. This was later confirmed by the NMS in the TWG meeting at Flores, Petén.
3. The Project received a visit from members of a new USAID project in the region (PROARCA/APM) interested in discussing possible areas of cooperation between the two. One possibility they discussed for the SMP was that PROARCA/APM might donate staff time as a form of cooperation with the SMP. PROARCA/APM is active in the Gulf of Honduras, Fonseca Gulf, La Amistad, the Mosquitia region of Nicaragua, Río Plátano and La Posta.
4. The Central American representative of the IUCN paid a visit to discuss the possibility of cooperating with the MBRS as cofinancer of a pollution mitigation project in Belize's Hol Chan Marine Reserve and San Pedro town on Ambergris Caye. Fifty percent of the US \$380,000 needed by the project has been promised by the Oak Foundation. The rest will be raised through cofinanced programs and projects. In response to this proposal, the MBRS asked for information to evaluate before making a decision. To date, there has been no further action by IUCN.
5. The Project gave a presentation to the Belize meeting on the Mesoamerican Biological Corridor (March 2002). There were several presentations; in one of them, the MBRS Project was included as an example of a regional monitoring program. Numerous monitoring methodologies and indicators were discussed for different groups. The Belize Biodiversity Monitoring Working Group was set up and asked to proceed with developing the MBCP monitoring program for Belize. The MBRS was asked to sit on the Working Group because of its role as a sister program of the MBCP in the region.
6. In March, prior to the First Meeting of the Countries of CARICOM and the CCAD, the EMS met with the Coordinator of the United Nations Environment Programme in Jamaica (UNEP-Jamaica) to discuss mechanisms for cooperation between the MBRS and UNEP-Jamaica. Also under discussion was a proposal for the MBRS to serve as a node in the Global Coral Reef Monitoring Network (GCRMN). The coordinator of UNEP-Jamaica extended full support to the Project, offering the use of Programme library facilities and databases that contain

detailed information about people working with coral reefs in the region and in the world. The MBRS was invited to attend the UNEP Intergovernmental Meeting in Montego Bay in May 2002, but UNEP did not follow up on this invitation.

7. Representatives of the University of Mississippi paid a visit to the PCU. This group is working on a number of activities in Belize, including ocean pollution. They offered the Project the use of a University oceanographic vessel and discussed the possibility of using this boat for the SMP oceanography program.
8. The Director of the MBRS Project attended the First Meeting of the Countries of the Caribbean and Central America on Environment and Sustainable Development, held in Belize from 13 to 15 March 2002. He gave a presentation of the Project and its components as an example of regional cooperation for the conservation of coastal marine resources. This precedent-setting meeting proposed that the MBRS Project be replicated in the environmental framework of the Caribbean. Representatives of Nicaragua asked that their country be included in the MBRS. Working groups were set up to discuss high-priority problems in the countries of CARICOM and the CCAD, and settled on the following: a) land-based sources of pollution; b) sources of ocean pollution; c) tourism; and d) fisheries.
9. Numerous meetings were held with members of a full spectrum of organizations and individuals in Belize, including: the University of Belize (Director, School of Biology); Coastal Zone Management Authority and Institute; TNC; Texas A&M International University; RARE - Center for Tropical Conservation, which requested advice on how to develop a monitoring program; CaMMP and the International Marinelifelife Alliance of Conservation International (CI), who explained that CI will soon be opening an office in Belize.
10. The consultant contract on Coral Reef Ecology was granted to the UNU-INWEH-CZMA/I-CINVESTAV Consortium, and the contract on Ocean Contamination went to the University of South Carolina Group. Negotiations to firm up the latter required major efforts by the Procurement Specialist and the EMS.
11. The Project attended the Mexican Workshop on Monitoring held in Isla Contoy, Mexico in preparation for the MBRS Meeting of Experts. The results of the Mexican workshop were then presented in the Meeting of Experts as that country's contribution to the SMP. The workshop

- discussed methodologies, groups to be monitored, and monitoring indicators. All pertinent Mexican institutions attended.
12. The SMP held its Meeting of Experts in Cancún, Mexico from 13 to 18 May 2002. This critically important event, the only expert meeting the program will have, was attended by international and regional experts in the fields of physical oceanography, coral reef ecology, biological monitoring, fisheries, aquatic mammals, coral, protected areas, marine pollution, models, and the use of remote sensing for coral reef research. The program presented its plans of action for the different consultant contracts; the documents were greatly enriched by the useful, prolific discussions that ensued. Also under discussion were methodologies, possible indicators, and the locations and frequency of monitoring. Several agencies confirmed that they would participate as System nodes. The recommendations of the Meeting of Experts were set forth in the minutes and in the plans of action.
  13. The Second Meeting of the Technical Working Group of the MBRS in Flores, Petén, Guatemala required considerable preparation. A draft Annual Work Plan was written for submission in plenary. The TWG discussions on monitoring were very open, and many participants expressed their opinions. Interpretation was available during discussions at the table. Following the TWG meetings, the AWP was finalized, incorporating the Group's suggestions.
  14. Consultants working on Marine Pollution and Oceanographic Modeling paid separate visits to the PCU to discuss details of their plans of action, locations for monitoring, and TORs for the national consultants. The Project has elicited participation in the SMP by Mexican naval oceanographers. Its overtures have received a very favorable verbal response, and detailed follow-up is now needed to formalize cooperation with the MBRS Project.
  15. Terms of reference were drawn up for national consultants in each MBRS country to backstop the international consultancies.
  16. The Project obtained five complimentary copies of the *World Atlas of Coral Reefs* published by UNEP-WCMC in Cambridge, keeping one for the PCU. During the meeting of the RSC in Belize on 26 June 2002, the other copies were given to the National Coordinators of each MBRS National Coordinating Office. Talks that culminated in the receipt of these atlases had



begun in October 2001. In May 2002, the CCAD initiated requests for the digital maps of the Atlas for the MBRS region.

17. At the ICRI meeting in Cancún, Mexico from 12 to 14 June, a general presentation of the Project was received very enthusiastically. Among numerous contacts made for the different components of the MBRS were the Coordinator of the GCRMN (Global Coral Reef Monitoring Network) and the Coordinator of REEFCHECK, a world program for monitoring coral reefs. Project representatives also talked with people from the World Resources Institute (WRI) in charge of the Caribbean edition of *Reefs at Risk*, who visited the PCU to discuss more extensively the possibility of formal cooperation between the two projects. Project staff met with personnel of the Summit Foundation, who are extremely interested in becoming involved with the MBRS Project. On the occasion of this meeting, the Project presented them with a poster prepared in cooperation with WWF-Central America, displaying the areas of action of the two organizations along with areas of overlap and shared interest.
18. The meeting of the ICRI Coordinating and Planning Committee in Cancún from 15 to 16 June received a summarized introduction to the Project to clear up concerns about its intentions. Contact with the director of the ICRAN resulted in several exchanges including visits to establish forms of cooperation between the MBRS and the ICRAN. At the ICRI meeting, cooperation was established with the National Coordinator of the MBRS for Mexico and the directors of the SEMARNAT in Quintana Roo through the CONANP Regional Coordinator for the Yucatan Peninsula in Mexico. A meeting of REEFCHECK, SEMARNAT and the MBRS was useful for exchanging opinions and experiences with monitoring activities in Mexico and the region.
19. The MBRS Director sent a representative to the GPA meeting organized by the UNEP Regional Office for Latin America, who gave a presentation on threats to the MBRS region based on the Project document *Threats and Root Cause Analysis*, prepared in 2000. The following topics were discussed: land-based sources of pollution in the region and in particular zones; key principles for the Global Plan of Action; beach erosion, with examples from Cuba; socio-economic problems in the region; uncontrolled development of coastal zones in Central America with examples from the coast of Quintana Roo, Mexico; environmental education; and interaction and cooperation among projects in the region. When the GPA meets next in Africa, the region should present a project proposal on a high-priority topic. Participants discussed the possibilities and agreed that a study should be conducted on beach erosion. The

representative of Cuba presented a project that will be evaluated by the participants and the offices of UNEP.

20. The MBRS Director sent representatives to the meeting on Mainstream Adaptation to Climate Change (MACC) in Belize, organized by the Belize National Meteorological Service, to report on progress and achievements of the CPACC Project, the precursor of the MACC. They made contact with the people responsible for monitoring coral reefs and obtained a copy of the final document.

## 2.3 Component III: Sustainable use of the MBRS

### 2.3.1 Sustainable Fisheries

### 2.3.2 Sustainable Tourism

Component III. Sustainable Use of the MBRS

Budget approved for period July 2001 – June 2002: US\$176,970.00

Budget executed at 30 June 2002: US\$77,238.59

Percent budget execution at 30 June 2002: 43.65%

### Component Summary:

Within the MBRS region, fishing and tourism have been identified as the most important economic activities. Nevertheless, overfishing and the lack of regulations on spawning sites and nurseries may lead to severe declines or even total collapse of the commercial catch.

Similarly, tourism can have a negative impact on ecosystems and human communities located near the Marine Protected Areas (MPAs) in the absence of policies that favor adoption of practices and principles of sustainable tourism within the MBRS zone through regional cooperation.

The objective of this component is to help the countries introduce new policy structures and management tools to boost institutional capacity, disseminate critical information and create incentives for users and interest groups, seeking patterns of sustainable use for MBRS resources.

The activities described in this report are designed to bring about these objectives and follow through on work begun in the first phase of Year One of the Project. Note that component No. 1 is related to component No. 3, because achievement of the two objectives is interdependent and because the same specialist is responsible for both.

In order to avoid repetitiveness, this list does not include activities already described under component 1, even though they may contribute to the achievement of these objectives.

**Achievements to date:****2.3.1 Sustainable fishing**

The main accomplishments under this sub-component in the first six months of 2002 are summarized below.

1. The first progress report was prepared for the period July to December 2001.
2. A coordination meeting was held with the Fisheries Department to discuss spawning aggregations. The Project provided the Department with a copy of the Plan of Action and with the TORs of the relevant consultancy.
3. RPI Inc. was contracted to perform the consultancy on spawning aggregations and was asked to draft the Terms of Reference for national consultants. The first draft was to be received for amendment so that the resulting final version could go out to National Coordinators, who would then nominate at least three candidates to work in this field (14 May). The process proved to be too slow. National Coordinators failed to respond on time, and the National Consultants are yet to be hired.
4. The Plan of Action, accompanied by a budget, was prepared for Year Two of the Project (July 2002- June 2003) and submitted and discussed in the meeting of Technical Working Groups held in Petén, Guatemala from 6 to 7 June. Comments and recommendations from the meeting were then incorporated into the text for the final version, which was approved on 26 June.

**2.3.2 Sustainable Tourism**

1. The first progress report was prepared for July to December 2001.
2. Candidates for the consultant contract Certification and Regional Tourism Forum were invited to submit their Curricula vitae. Evaluation of the applications (February) resulted in a short list of three candidates who then presented technical and financial proposals for evaluation. Because of changing conditions with certification programs in the region, the process needed to be rethought. New terms of reference were prepared for the regional forum, pending a

consultation on certification, so that work in this area could proceed. The contract under the new terms was granted in May 2002.

3. The sub-component coordinated a consultative meeting that brought together the four MBRS countries, tourism authorities, representatives of Certification for Sustainable Tourism (CST), PROARCA and representatives of the CCAD, to explore mechanisms for adapting the CST to marine coastal tourism. The meeting took place from 30 to 31 May in Belize City following numerous changes of date and a lengthy process of convening participants and speakers.

The meeting concluded that the CST is currently applicable only to hotel operations, for which purpose it is perfectly suited. However, commitments acquired by the countries of the region to institute this program (September 2001) remain unfulfilled. The Commission created at that time needs to be reactivated.

On another front, the MBRS Project calls for certification of other tourism operations as well, including scuba diving, kayaking, marina management, and dockage of vessels and cruise ships, that could have a negative impact on the ecosystem unless regulations are established.

4. National Coordinators were requested to nominate at least three candidates as national consultants for the regional tourism forum after the international specialist sent them the Terms of Reference in Spanish and English, approved by the PCU. Once again, the procedure was too cumbersome, and national experts are yet to be hired, causing delays in completion of tasks.
5. The Plan of Action and budget was prepared for Year Two of the Project (July 2002- June 2003) and submitted and discussed in the meeting of the Technical Working Groups in Petén, Guatemala from 6 to 7 June. Comments and recommendations from the meeting were incorporated into the text, and the final version was approved on 26 June.

## 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 approved for period July 2001 – June 2002: US\$104,750.00

Budget executed at 30 June 2002: US\$62,247.52

Percent budget execution at 30 June 2002 : 59.42%

### Component Summary

Through the component on Public Awareness and Environmental Education, the MBRS is supporting initiatives of governments in this region and throughout the Americas. The overriding purpose is to help citizens become informed, trained, sensitive, aware, and willing to take a more active and meaningful part in issues of environmentally sustainable development. The basic agreements for this work arose from multiple global, hemispheric and regional meetings, including: the Rio Declaration, Program 21 of the United Nations Conference on Environment and Development, the Summit of the Americas, the Barbados Declaration, the Central American Alliance for Sustainable Development and the Tulum Declaration.

The Mesoamerican Region, with its coastal fishing activities, is recognized as a major contributor to the world's total annual catch. But the world's catch is declining. Sedimentation has destroyed 32% of all coral reefs, taking with them around 100,000 jobs affected either directly or indirectly. Programs for education and public awareness already existed; but they are combining efforts to address problems that have grown increasingly complex and interrelated.

This component has combined efforts with the Project's other three components to expand the database and develop relations with outside organizations and mechanisms. As a result, the Project has been able to: exchange information, raise public awareness for MBRS conservation, and set up the networks, information contacts and discussion groups needed to introduce decision-makers to concepts of environmental and social sustainability for these associated ecosystems.

## **Achievements to date**

### **2.4.1 Environmental Awareness Campaign**

This sub-component will develop an environmental awareness campaign to promote the importance of conservation and sustainable use of the MBRS. It has sought dialogue with key stakeholders while preparing the Regional Strategy for Public Awareness and in meetings of experts, extracurricular activities, and training events held by the fishing and tourism sub-components.

Using the same mechanism as the last report, a summarized analysis is given below of basic scheduled activities, and products obtained.

1. The sub-component maintained close communication with the Technical Working Group and with regional and national organizations.
2. By means of this communication, it was able to exchange experiences with participation and sustainable management more broadly with such institutions as Universidad de Quintana Roo, Friends of the Manatee Sanctuary, ECOSUR and Banco Chinchorro in Mexico; Hol Chan, Wildtracks and the University of Belize in Belize; REHDES and ENLACE in Honduras; and UNEP, WWF, MBCP and the CCAD.
3. This relationship led to preparation and presentation of oversized posters demonstrating synergies between MBRS and the WWF (meeting of the ICRI in Cancún, Mexico).
4. The sub-component obtained valuable support documents for the Regional Public Awareness Strategy (CD Integrated Development of Quintana Roo), as well as management plans and promotional materials used successfully in similar campaigns.
5. Earth Day was planned and celebrated to promote a campaign for healthy marine ecosystems.
6. The sub-component prepared and distributed more than 550 “Environmental Eco-tips” containing practical advice for preventing pollution of coastal marine ecosystems. At least 1000 posters and 1200 brochures on cultures in the MBRS were distributed in English, Spanish and Garifuna.

7. One of the most significant achievements of this sub-component was the production of the Regional Strategy for Environmental Awareness and the Manual of Graphic Standards for the institutional logo. Both documents propose actions that will serve as natural follow-up to activities planned within the framework of the MBRS Project.

## **Achievements to date**

### ***2.4.2 Formal and Informal Education***

This sub-component is combining its efforts with other components to train and disseminate information to key audiences using specific publications of the MBRS. With the participation of the Technical Working Groups (which met most recently in Petén, Guatemala), the sub-component has established mechanisms for improving a primary and secondary school curriculum on the coastal environmental to be put to use during the first and second terms of Year Two of the Project.

1. Because of its close relationship with the CCAD, the Project was able to arrange for a delegation of representatives from protected areas in Spain to take a field visit through several protected areas of Belize. The result was an agreement to support publications and regional meetings.
2. Through its communication program, the Project published articles in at least eight newspapers of Quintana Roo, the UNEP press bulletin, an environmental newsletter in Guatemala and numerous radio broadcasts in Belize, as well as several television interviews in the region.
3. The sub-component maintains a collection of photographs of the region which were used to prepare cover pages for several important MBRS documents.
4. Finally, as one of its most critical achievements, the sub-component injected socio-economic parameters and indicators into the other Project components and monitored them closely. The purpose is protect endogenous roots and native styles of modernization when introducing the concept of sustainable development into solutions relevant to local cultures and specific ecosystems such as the MBRS.



## **2.5 Component V. Project Management**

### **2.5.1 Disbursements**

The Annual Work Plan and budget for the period July 2001 to June 2002 totaled US\$1,497,685. Of this budgeted amount, US\$1,091,824 was requested and received from the World Bank, for 73% of the budget. World Bank disbursements were received promptly and undergirded the implementation of Project activities during the current period.

At the beginning of January of this year, the Project had a balance of US\$540,954, with US\$487,491 in the UNDP cash fund, and US\$53,463 in the special account of the PCU. The special account of the PCU received a deposit of US\$34,304 on 22 April 2002, the first reimbursement from the special account for the term ending on 31 March of this year. This gave the Project a total of US\$575,258 for its activities. Expenditures for the period totaled US\$465,938, and the closing balance on 30 June was US\$109,483.

By the end of the period, the Project had spent US\$982,341, or 66% of its first- year budget and 90% of funds received.

Ten international consultancies were contracted, and the consultants received initial payments of 20% of their honoraria. Disbursements for these consultancies totaled US\$289,180, making it the category with the highest expenditures (62% for the period or 57% of the cumulative total). The second largest category of disbursements was training, with a total of US\$105,424 or 23% of disbursements for the period and 17% of the cumulative total. These outlays were made to organize various workshops and meetings during the final quarter: the first meetings of experts in Cancún, Mexico, the second meetings of the TWGs in Flores, Petén, Guatemala, three meetings of the RSC during the year, and several workshops by the MPAs component.

Project activities are expected to gather speed during the next period, absorbing an estimated US\$1,379,106 in the term ending 31 December of this year.

This includes an estimated US\$459,962 for consultancies, US\$372,622 for miscellaneous purchases, US\$237,920 for training, US\$123,200 for structural projects, and US\$185,402 for recurrent costs.

Reimbursements are being prepared for UNDP and the special account of the PCU, and will be held to ensure implementation of Project activities through 31 December 2002.

### **2.5.2 Procurement**

Most procurement activities in this reporting period entailed hiring international consultants and auditors for 2001-2003, and acquiring minor supplies such as audiovisual equipment for use in training courses and workshops. Also during this period, the server set up during the planning stage was upgraded for the installation of a network with simultaneous Internet access.

International consultants were hired according to the Quality and Cost Based Selection (QCBS) method. Auditors were hired as individual consultants. Goods were acquired through purchase.

For this second half of the year, national consultants will be hired to support the work of international consultants. Equipment purchases are also scheduled (computers, boats, motorcycles, buoys and research equipment) for the Marine Protected Areas (MPAs), and visitor centers will be constructed in four of the MPAs.

### **2.5.3 Regional Coordination**

A number of important activities for implementation of the MBRS Project took place from January to June of 2002. The auditing firm “Deloitte & Touche” successfully completed the first Independent Project Report, offering words of congratulations for the PCU. This audit covered the period from 1 March through 31 December 2001. The complete report is available on the CCAD Website. A World Bank supervisory mission in February 2002 was completed to great satisfaction. The assessment focused mainly on the establishment of the Project Coordinating Unit (PCU), installation and operation of the financial management system, and procurement processes consistent with World Bank guidelines.

The Second Regular Meeting of the RSC took place on 12 March 2002 in Cancún, Mexico. This meeting recommended major changes in the Project’s implementation schedule. Several activities set for PY3 and PY4 were moved up to PY2, especially highly visible activities such as construction of multi-use buildings for the Transboundary Parks. The meeting also approved investments for translating technical products into draft regional policies, letting existing cross-border organizations

serve as Transboundary Commissions for the MBRS Project, and creating a budget item for translating major documents from Spanish to English. The First Extraordinary Meeting of the RSC was held on 16 May 2002 in Cancún. Guest speakers from the World Bank stressed the need to keep up the pace of Project implementation and highlighted the constraints and consequences involved in modifying Project investment categories. The Second Extraordinary Meeting of the RSC, on 5 June 2002 in Flores, Guatemala, agreed to redirect investments to maximize their yield. These changes particularly apply to parks that already have a Master Plan or to countries that need no input from national consultancies. Another significant result of this special meeting was the decision to hold only one annual meeting of the TWGs instead of two.

Much determination and coordination went into development of the AWP and budget for Year Two of the Project. The team faced major challenges to identify specific activities, costs and implementation periods consistent with the objectives of the Project and decisions of the RSC. The Second Meeting of the TWGs took place from 6 to 7 June 2002 in Flores, Guatemala, and the draft AWP for 2002-2003 was presented at that time. Members of the TWG recommended several changes in implementation of the AWP, which were incorporated into the final version. The AWP and budget for 2002-2003 were approved by the RSC at the Third Ordinary Meeting held in Belize City, Belize on 27 June 2002.

The activities described above all had to be completed alongside the everyday work of Project coordination, both at the PCU and in the countries and cooperating institutions through out region, since this Project is being executed by the CCAD on behalf of the four countries, the AWP requires close coordination on a daily basis among the National Coordinators in each country, the Director General, and other CCAD staff. The restructuring of the CCAD into three central themes posed major challenges for the PCU and the Regional Coordinator of the MBRS Project. Together with five other CCAD projects, the MBRS is placed strategically under the central theme “Forest and Biodiversity.” The projects assigned to this central theme must invest considerable time and financial resources to ensure that they are not duplicating one another’s activities and to identify joint investment opportunities. The Regional Coordinator of the MBRS is also responsible for coordinating the Forest and Biodiversity theme group for the CCAD. This assignment entails obvious implications of time and cost, but also holds out potential advantages for the MBRS Project and the region.

Although the determination to consolidate cooperation with other initiatives in the MBRS region is a top priority for the Project, it has proved to be more difficult than expected. The Project has held several meetings with organizations and institutions pursuing diverse interests in the MBRS region, with the intent of formalizing a working relationship. Nevertheless, to date no Memorandum of

Understanding has been signed with other stakeholders in the region for a variety of reasons including legal concerns, incompatible implementation periods, budget constraints, and other unknown factors. Nevertheless, the MBRS has participated in three cases of successful regional cooperation: the Training Course on Income Generation for Protected Areas involving the MBRS Project, TNC, WWF and the MBCP; broad participation by numerous institutions in the MBRS Meeting of Experts in May 2002 in Cancún; and the joint presentation given by the MBRS Project and WWF in Cancún at the ICRI meeting in June 2002. The MBRS Project will continue to seek opportunities for broader cooperation with other partners in the region.

### 3.0 Constraints on Project Implementation

Two types of constraints were experienced during this report period: technical and administrative.

Although each Project component operates under technical constraints different from those affecting the other components, those experiencing the most visible limitations were the REIS and the SMP. The REIS requires dedicated-line telecommunication services to implement a regional data network, which are very costly. Many of the potential nodes are still using “dial-up” connections which are not well suited to the desired network. Also, these services are distributed unevenly among urban and rural areas in the four countries, which could limit the options for location of nodes and design of the network.

The regional network was conceptualized as a collective effort among participating countries. Therefore, MBRS countries are expected to maintain their nodes over the long term and share data as their counterpart contributions. Project success depends on whether the counterparts are willing to take ownership of the REIS. Systems will be sustainable only if they remain faithful in cooperating and contributing to the Project. Overall goal achievement remains somewhat vulnerable because it depends so heavily on external organizations and participants. The possibility of establishing an ideal system may also face budgetary restrictions, as found in cost studies for connectivity, equipment and software.

The Project has recognized these real and potential constraints and will make every effort to ensure that they do not compromise the success of its endeavors. In view of these challenges, it will design an environmental information system that can be maintained with minimum resources.

The most significant administrative constraint on all Project components has been inconsistent attendance in TWG meetings. This came to light clearly in the Second Meeting of the Working Groups, where discussions progressed far too slowly because some of the participants lacked relevant experience and others were making their first appearance in the TWG. This was particularly evident in the discussions on Environmental Monitoring.

This constraint can be attributed directly to the inconsistent process of selecting candidates to represent the countries in the TWG. All Project components have also found that the countries have been very slow to offer names of national consultants. This greatly delays the processes of selection, evaluation and contracting, which in turn has seriously slowed the implementation of at least six of the

technical activities that began during this report period. Five final products have run as much as three months behind schedule because the countries have been so slow to respond.

Even when they are finally proposed, national candidates may turn out to be unsatisfactory, failing to meet requirements for consideration by the PCU. The countries have also been very slow in their communication with Project technical staff, with the noteworthy exception of Guatemala, thus holding back Project progress. These situations should be corrected as quickly as possible to prevent future frustration and greater delays in implementing activities. The support of the RSC will be extremely important in normalizing this situation.

#### 4.0 Technical Activities for the Next Six Months

During the next six months, the Project will continue work initiated in the first half of the year and proceed with other activities as described below.

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

1. Publish and distribute the Baseline for Monitoring Management Effectiveness.
2. Enhance four transboundary parks with better infrastructure.
3. Support the five top-priority MBRS parks with office equipment.
4. Begin to draft Master Plans for Corozal Bay, Gladden Spit, Arrecifes de Xcalak and Omoa-Baracoa.
5. Hold training courses on designing management plans (September) and management principles (November).
6. Hold two meetings of the Transboundary Park Commissions.

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

###### A. Environmental Information System

1. The Project will continue with consultancies for Design and Implementation of a Regional Network of Data Communication and Design and Implementation of a Regional System of Environmental Information, that began in May 2002. Working systems should be ready by the end of 2002.
2. Before it can implement the regional network, the Project must select an agency in each MBRS country to host the node. Candidates, which have already been identified, will be invited to submit proposals describing how they will meet the Project standards. These agencies must be willing and able to abide by contractual obligations. In the next quarter, the Information Technology Specialist will work together with the National Barrier Reef Committees to select appropriate sites in each country.

3. The Project will provide any necessary training support to teach staff members from the node agencies to use and manage the database and regional network. This activity will begin following installation of the systems.
4. The Information Technology Specialist will proceed to develop the Website, turning the Project into a virtual information center. Website development will necessarily involve the other components, because it is a tool for disseminating information on the Project and on marine-coastal ecosystems. This information will be drawn from the work of the monitoring, environmental education and public awareness programs.

#### B. Synoptic Monitoring Program

1. Continue with the international consultancies to finalize the sections on the SMP. Also, continue to evaluate and select national supporting consultants.
2. Harmonize monitoring methods and prepare a Regional Monitoring Manual. Continue to select monitoring staff and train them in the areas of methodology and data collection and evaluation.
3. Continue to seek node agencies and obtain commitments from them, one of the greatest challenges in developing the SMP.
4. Continue to develop synergy and strategic cooperation among relevant projects and organizations. In particular, the Project will pursue possibilities for cooperation with the Mexican Navy, CICESE, the University of California at Santa Cruz and the World Resources Institute.
5. Make final decisions and selection of equipment for the SMP and proceed to acquire materials and equipment.
6. Consolidate the results and suggestions of the Meetings of Experts and the TWGs, especially as regards node agencies and national training and equipment needs.
7. Continue to seek digital maps of the region as well as oceanographic equipment (current meters) and other types of apparatus for the SMP.



### *Component III. Sustainable Use of the MBRS*

1. The meetings of the Technical Working Groups (TWGs) recommended that the Project redirect its work to monitor spawning aggregations, focusing on the development of a Fisheries Site Management Plan in the MBRS region. Following the recommendations of the TWGs, a theoretical/practical training course will be held in Belize City in August on methods for monitoring spawning aggregations in coral reefs. The course will train 16 people responsible for monitoring in the four MBRS countries.
2. Regional and national training will be offered to improve management of sustainable fishing, with a focus on techniques of co-management of marine coastal resources. The target audience will include fishermen, government officials and members of nongovernmental organizations. The Project will prepare terms of reference, recruit and evaluate curricula, and select trainers.
3. The Regional Tourism Forum will receive training and hold its first meeting.
4. The Project will begin to purchase equipment for monitoring fisheries and promoting sustainable forms of livelihood.

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

1. The regional strategy document on environmental awareness will be published, under cooperation agreements with the Protected Areas of Spain.
2. A campaign for sustainable fishing will be developed.
3. A video on the MBRS will be prepared.
4. A poster and brochure on appropriate fishing will be printed.
5. The Project will pay visits to several ministries of education in the region to establish primary accords for improving the coastal marine environmental curriculum for primary and secondary school.

6. Promotional radio and television spots will be prepared to support the fishing campaign.
7. Press officers from the ministries of the environment in the MBRS region will receive training.
8. The Project will draft terms of reference and hire a specialist in improving the environmental curriculum in the schools.