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GUATEMALA

**IMPROVEMENT OF MANAGEMENT EFFECTIVENESS OF THE MAYA
BIOSPHERE RESERVE**

GU-X1001

PROJECT DOCUMENT

NON-REIMBURSABLE OPERATION FINANCED WITH GEF RESOURCES

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ABBREVIATIONS

ACOFOP	Asociación de Comunidades Forestales de Petén
AOP	Annual Operating Plan
BZ	Buffer Zone
CECON	Center for Conservation Studies of the USAC
CIDSP	Inter-Institutional Commission for the Sustainable Development of Petén
COCODES	Community Development Council
COMUDES	Municipal Development Council
CONAP	National Council on Protected Areas
CONTIERRA	Presidential Office for the Resolution of Land Conflicts
CZ	Core Zone
GEF	Global Environment Facility
FONTIERRA	Fondo de Tierra
IDAEH	Institute for Anthropology and History
INAB	National Forest Institute
INGUAT	Guatemalan Tourism Institute
MAGA	Ministry of Agriculture, Livestock and Food
MARN	Ministry of Environment and Natural Resources
MBR	Maya Biosphere Reserve
MICUDE	Ministry of Culture and Sports
MUZ	Multiple Use Zone
PDPRBM	Petén Development Program for the Conservation of the Maya Biosphere Reserve
PNLT	Laguna del Tigre National Park
PNSL	Sierra del Lacandón National Park
PNT	Tikal National Park
ROP	Operating Regulations of the Program
SCEP	Secretariat for Execution Coordination of the Presidency
SIGAP	Guatemalan Protected Areas System
UP	Program Unit
USEC	Monitoring and Evaluation Unit

PROJECT SUMMARY
IMPROVEMENT OF MANAGEMENT EFFECTIVENESS OF THE MAYA BIOSPHERE RESERVE
(GU-X1001)

Financial Terms and Conditions		
Beneficiary: Republic of Guatemala		
Executing Agency: The Ministry of Environment and Natural Resources and the National Council of Protected Areas		
Disbursement Period:	60 months	
Currency:	US\$	
Source:	Amount	%
IDB (grant from the Global Environment Facility - GEF)	3,660,000	25
Sub-total	3,660,000	25
Co-financing from IDB-funded Program ¹	10,940,000	75
Total:	14,600,000	100
Associated financing (USAID and Conservation International)	2,600,000	
Project at a Glance		
Project objective:		
The objective of the Project is the conservation and sustainable use of the biodiversity of the Maya Biosphere Reserve, with an emphasis on the areas of high biological importance, as a result of strengthening of institutional capacity and effective participation of different interest groups so as to optimize its management.		
Special contractual clauses:		
Prior to first disbursement: (i) the first disbursement of the resources of the financing under Loan Contract 1820/OC-GU (¶4.1); (ii) evidence that the agreement between MARN and CONAP has been signed (4.1); (iii) evidence that the Operating Regulations previously agreed by the Bank are in effect (¶4.2); (iv) selection of the Technical Director by MARN (¶4.4).		
Exceptions to Bank policies:		
There are no exceptions to Bank policies.		
Project consistent with Country Strategy: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Project qualifies for: SEQ <input type="checkbox"/> PTI <input type="checkbox"/> Sector <input type="checkbox"/> Geographic <input type="checkbox"/> Headcount <input type="checkbox"/>		
Procurement: The procurement of works, goods and consulting services shall be carried out in accordance with the Procurement Policies and Procedures of the Bank pursuant to documents GN-2349-7 and GN-2350-7.		
Verified by CESI on: February 14, 2005		

¹ Petén Development Program for the Conservation of the Maya Biosphere Reserve (1820/OC-GU)

I. FRAME OF REFERENCE

A. Location and Background

- 1.1 Created by Legislative Decree 05-90, the Maya Biosphere Reserve (MBR) is situated in the far north of the department of Petén, Guatemala. It covers 59% of the territory of the Petén region and 20% of the territory of Guatemala. As illustrated in Annex I (Figure 1), the western, northern, and eastern sectors of the MBR border on Mexico and Belize. The size and location of the protected area shape many of the circumstances that affect its management, including its environmental, social, economic, and security conditions. Since the MBR was established 16 years ago, the successive governments of Guatemala have made major efforts to conserve its natural and cultural heritage but, with very few exceptions such as community-based forestry concessions, these have had limited success in engaging the local population in conservation and management.
- 1.2 Recognizing these circumstances, the Government of Guatemala (GOGU), through the Secretariat for Executive Coordination of the Presidency (SCEP) and the High-level Inter-ministerial Committee created for this purpose, reached agreement with the Inter-American Development Bank (IDB) on a *Strategy for Participatory and Inclusive Conservation of the MBR*. This Strategy will be implemented in part through the *Petén Development Program for the Conservation of the Maya Biosphere Reserve* (PDPRBM) financed by an IDB loan of US\$30 million approved in 2006 (1820/OC-GU). The GEF Project presented here would complement the PDPRBM, which addresses governance and poverty reduction issues, through conservation actions.
- 1.3 Geographically, the actions of the GEF Project are concentrated in the western part of the Reserve (west of the 90° meridian) while the PDPRBM also encompasses the southern part of the Department of the Petén. Yet, both operations will have an impact on all the zones of the MBR, in terms of institutional strengthening, policies, regulations, procedures, and monitoring and evaluation for adaptive management.
- 1.4 The emphasis of the GEF Project in the **zone to the west of the 90° meridian** reflects considerations such as: (i) its biological and ecological importance, including ecosystem and species diversity; (ii) the concentration of protected areas, including the two most extensive national parks within the Reserve (Laguna del Tigre and Sierra de Lacandon National Parks), one of which is a declared Ramsar site; and (iii) the level of threat faced in this portion of the Reserve. These considerations are further detailed in the following sections.

B. Description of the Maya Biosphere Reserve

- 1.5 Extending 2,112,940 hectares, the MBR is the largest protected area of Central America. Along with neighboring parks in southern Petén, Belize, and the Mexican states of Chiapas, Campeche, and Quintana Roo, it constitutes the Selva Maya -- the most extensive tropical broadleaf forest of Mesoamerica. Three types of zones have been established to manage the MBR: (i) core zones (CZ) (National Parks and

Protected Biotopes; 767,000 ha; 36% of the RBM); (ii) multiple use zones (MUZ) (848,440 ha; 40% of the MBR); and (iii) the buffer zone (BZ) (497,500 ha; 24% of the MBR). The location of each of these zones is presented in Annex I (Figure 2)

- 1.6 The **CZs** are at the heart of the MBR (see Table I-1). They protect wilderness and archeological areas in which natural processes are to continue undisturbed and where, for ecological, scientific, and cultural reasons, there should not be year-round human settlements or agricultural development. They protect genetic pools that are important for restoring species in other areas and contain places of exceptional scientific interest for the conservation of wildlife and ecological processes. Two of these core zones (PNSL and PNLT) have their own internal zoning, which reflects the need to reconcile the presence of human settlements that predate the establishment of the MBR with its conservation objectives.

Table I-1. Core zones of the Maya Biosphere Reserve

Core zone	Area (ha)
Laguna del Tigre - Río Escondido Protected Biotope	45,168
Naachtún - Dos Lagunas Protected Biotope	30,719
San Miguel - La Palotada (El Zotz) Protected Biotope	34,934
Cerro Cahuí Protected Biotope	650
Mirador - Río Azul National Park	116,911
Laguna del Tigre (PNLT) National Park	289,912
Sierra del Lacandon (PNSL) National Park	202,865
Tikal (PNT) National Park	55,005
Yaxhá - Nakúm - Naranjo National Park	37,160
El Pilar Natural Monument	1,000

- 1.7 The **MUZ** is an area set aside for sustainable use, in keeping with the potential of its resources and abiding by the Reserve’s conservation objectives. The MUZ is, in turn, divided into the following: (i) *Sustainable Management Units*: This category includes the area where forestry concessions have been granted on the basis of contracts that comply with management plans authorized by the National Council on Protected Areas (CONAP); (ii) *Biological corridors*: In order to maintain the connectivity of the genetic flow of biodiversity among the CZs, the National Council on Protected Areas (CONAP) established three biological corridors – the first connects the PNLT to the El Mirador National Park, the second connects the PNY to the Río Azul National Park, and a third corridor connects the PNSL to the PNLT; and (iii) *Special Use Zone*: The northern and eastern part of the PNLT includes wetlands and other natural ecosystems which, based on their unique biological characteristics, should be kept under a strict protection regime. Given the difficulty changing the boundaries of the PNLT, CONAP set aside this part of the MUZ as a “Special Use Zone,” which in practice corresponds to an expansion of the PNLT and is recognized as an area of influence of the park. The **BZ** has as its objective relieving the pressure on the MBR by promoting appropriate uses of the land and natural resources in the area adjacent to the CZs and the MUZ, and in light of conservation considerations.

C. Ecological importance of the Maya Biosphere Reserve

- 1.8 The MBR safeguards a diversity of natural ecosystems, many of which are unique and significant regionally due to their uninterrupted extension. It also protects a high

diversity of plant and animal species, with over 40 species of mammals, 256 species of resident or migratory birds, 97 species of reptiles, 32 species of amphibians and 55 species of fish. As the heart of the Selva Maya, which itself is reported to contain 8-12% of the world's biodiversity, the MBR performs an important function of connectivity with neighboring natural areas in Mexico, Belize, and southern Petén. As such, it supports ecological processes upon which species that require large territories, such as the jaguar and the scarlet macaw, depend for their survival. The MBR encompasses 19 ecosystems, 17 of which are considered natural ecosystems while the other two are considered anthropic ecosystems, i.e. highly modified by man. Lowland dense humid broadleaf forest covers approximately 53.6% of the protected area (11,240 km²) and although this vegetation type occurs outside the MBR, it is only within the MBR's boundaries that such a large extent of it is protected. Seven of the 17 natural ecosystems are protected exclusively in the Reserve. This includes relict mangroves (the most inland occurrences of mangroves in the Yucatán Peninsula), rare mollusk-based reefs harboring unique assemblages of invertebrates, caves, 'cenotes' and the greatest concentration of freshwater wetlands in Mesoamerica. Two sites have been recognized as wetlands of international significance pursuant to the Ramsar Convention – Laguna del Tigre and Yaxhá-Nakum-Naranja National Parks.

- 1.9 With respect to biological endemism, the species endemic to the Selva Maya show three clear patterns of distribution: (i) the Yucatán Peninsula (xerophytes species adapted to dry climates); (ii) the humid forest of Tehuantepec (endemic species associated with lowland tropical forest; the MBR represents the most extensive remnant for endemic species associated with this ecoregion); (iii) Lowland Maya Forest (endemic species found in forests at altitudes of less than 1000 meters). The PNLT for example falls primarily within the Tehuantepec ecoregion and is considered an important reservoir of tropical dry forest habitats and wetlands that harbor biotic communities and individual species of great regional and global conservation value² (including many IUCN Red List species). This includes rare and endangered species such as Baird's tapir (*Tapirus bairdii*), jaguar (*Panthera onca*), red brocket deer (*Mazama Americana*), collared peccary (*Tayasu tajacu*), jabiru (*Jairu mycteria*, the largest bird in the Americas), spotted paca and ocellated turkey, great curassow (*Crax rubra*) and crested guan. It also provides critical habitat for the scarlet macaw (*Ara macao*) offering the best conditions for its growth and reproduction. Endemic species include the Morelet's crocodile (*Crocodylus moreletti*), the Central American river turtle (*Dermatemys mawii*) and the 'pez blanco' (*Peténia esplendida*).
- 1.10 During project preparation, the **ecological integrity and connectivity** of the MBR was evaluated based on a methodology, developed by The Nature Conservancy (TNC) and the PROARCA/APM Project that aims to determine whether the

² A Biological Assessment of Laguna del Tigre National Park, CI Rapid Assessment Program. CI and others. July 2000.

protected areas of Central America are meeting their conservation objectives³. Three criteria were used to assess the status of the CZs, the forest management units and the biological corridors: (i) the degree of connectivity displayed by the area; (ii) the occurrence of fires in the area in 2005; (iii) percentage land use change between 1986 and 2004. In the MUZ, less than 4% of the area covered by forest management units was deemed to have a poor level of ecological integrity (while 96% had either good or excellent levels). The same methodology was used to estimate the ecological functionality and integrity in the biological corridors of the MBR. The Tikal - Mirador - Rio Azul Biological Corridor was found to have an excellent level ecological integrity, the Mirador - Rio Azul - Laguna del Tigre Biological Corridor had a good level of ecological integrity and the Laguna del Tigre-Sierra de la Lacandon Biological Corridor was found to have a poor level. These results along with several ecological assessments undertaken in recent years⁴ indicate that while the MBR encompasses some of the last remaining large tracts of the Selva Maya, the Reserve's forests and wetlands are under increasing pressure from fragmentation and habitat loss.

- 1.11 The **cultural importance** of the MBR dates back to the times when the territory was the main settlement of Mayan populations from approximately 2000 B.C. until the 10th century A.D., when the great ceremonial centers were abandoned. In addition to the archaeological sites of Tikal and Yaxhá, the major complex found north at El Mirador, is considered the summit of the Maya civilization. The living cultures of the MBR are also significant and include the Maya-Itzá group and the ladino culture of Petén, both traditionally related to the forest and the spiritual values of the recently-arrived Maya-Q'eqchi'. This combination of natural and cultural heritage has led to worldwide recognition of the importance of the MBR, and it has been included among the 391 "*Biosphere Reserves*" officially recognized by UNESCO. Among these, the MBR is one of only seven reserves that include both a World Heritage Site (the Tikal National Park) and wetlands on the Ramsar List (the Laguna del Tigre wetland and the Yaxhá-Nakum-Naranjo wetland). The department of Petén also has had a unique experience of a protected area requested, established, and administered by a local indigenous community with the Itzá Biological Reserve (Bio-Itzá).

D. Socioeconomic context

- 1.12 An estimated total of 85,000 people live in the MBR, of which an estimated 13,000 to 20,000 live in the core zones⁵. The PNSL and the PNLT both encompass communities and cooperatives established during the "colonization process" promoted by the Guatemalan Government beginning in the 1960s and more recent settlements established along the route to El Naranjo when the oil companies built the access road to the oil camps located in the PNLT. There are communities as old

³ Análisis de las Amenazas y Causas Intrínsecas de la Pérdida de Biodiversidad en la RBM. Abt. Associates Inc. IRG. 2006

⁴ A Biological Assessment of Laguna del Tigre National Park, CI Rapid Assessment Program. July 2000.

⁵ See Annex H: 'Analysis of Social Aspects of the MBR' for a more detailed description. Estimates vary depending on the source.

as Paso Caballos, which has existed since the 1930s, and Santa Amelia, which originated as a chicle-harvesting camp. All the communities grow corn or maize as their main crop, using shifting “slash and burn” cultivation. Farms are continuing to expand in the park as a result of landowners and cattle ranchers illegally taking possession of large extents of land after an initial advance by settlers who clear the forest. The penetration and expansion of drug trafficking and other illegal activities in the PNLT has become evident in the last five or six years, making the situation more complex.

- 1.13 While incipient, livestock production is expanding and encroaching on the PNSL with over 5,000 head of cattle reported along the El Naranjo corridor in 2001, approximately 39% of households supplement their income with wage work, and go to El Naranjo as a commercial center. The official opening of the Mexico border crossing at El Ceibo and the consent of the CONAP to the permanent presence of the merchants established in the area has helped defuse the conflict that existed with respect to the road until 2003 and the pressure of agricultural activities on the PNSL would appear to be reduced as a result of the increase in commercial activities in this area.
- 1.14 Overall, 15 forestry concessions are located in the MUZ, covering a total of 560,000 ha, with a natural forest cover close to 98%. The forest harvest directly benefits approximately 7,000 persons from 1,300 families. Of these 15 forestry concessions, 13 are community concessions and two are industrial. The community concessions have 1,309 members, represented by the Asociación de Comunidades Forestales de Petén (ACOFOP). Harvesting and management of timber and non-timber resources such as xate, chicle, and pepper is allowed in the community concessions. In the industrial concessions, only the harvesting of timber resources is allowed, though the CONAP may issue permits to third persons to harvest non-timber resources. Over 90% of concessions and the territory they encompass have received a forestry certification and have maintained their certified status. Each year, satellite imagery confirms that the portions of the MBR covered by concessions are the least impacted by forest fires, in large part as a result of management practices. Other major accomplishments have included improved land use planning, a reduction of conflicts over the use of resources and land tenure, and reduced pressure from the advance of the agricultural frontier. Nonetheless, the concession process is relatively new (the oldest concession dates from 1994 and the most recent from 2002) and several evaluations recommend that actions be taken to consolidate the community concessions, particularly by strengthening the administrative, accounting, and entrepreneurial capacities of concessionaires, supporting the integrated management and sustainable use of the reserve’s goods and services and standardizing and improving the legal basis of the concession contracts⁶. Other recommendations have included placing emphasis on: (i) the sustainability of the model in the medium to long-term; (ii) the measurement of impact indicators; and (iii) non-wood products and community-based ecotourism.

⁶ Forestry Concessions: A Successful Model. Final report of the BIOFOR Project. USAID. March 2006. Summary of the legal framework for concession contracts. APESA final report. IDB 2006.

- 1.15 **Tourism.** Tourism is a sector of growing importance particularly in the central portion of the Reserve. In this zone, Tikal National Park currently receives 215,629 visitors each year and these numbers are expected to reach 310,000 visitors in 2015. The Yaxhá-Nakum-Naranjo National Park currently draws some 15,000 visitors per year with numbers expected to reach 174,000 visitors yearly in 2015 as a result of intense promotion in the international media. The southern portion of the MBR includes two smaller tourism centers. The first one is situated around the Ceibal and Aguateca sites and receives 11,000 visitors annually. The second is situated in the Eastern corridor, around Ixcún, which receives 1,600 visitors annually, mainly Guatemalans. Though it has major sites such as Mirador, the northern portion of the MBR does not have suitable infrastructure for competing internationally. There are however community-based initiatives underway which demonstrate the potential for ecotourism. In terms of the economic impact of the sector, estimated revenues from tourism in the Petén overall were US\$14 million in 2004. Revenues from Tikal National Park were US\$1 million. The direct employment generated (i.e., hotels, restaurants, guides) is estimated at 10% of total employment in major towns such as Flores and Santa Clara.
- 1.16 At present, the main social conflicts in the MBR revolve around four issues: (i) the establishment and permanence of human settlements and the harvesting of the natural resources within the protected areas; (ii) the possible development of the so-called Mirador Basin Project; (iii) promotion of oil exploration and exploitation; and (iv) opposition to the potential construction of hydroelectric plants along the Usumacinta river. In addition, within the MUZ, several of the communities established along the road from Flores to Melchor de Mencos continue to demand regularization and legalization of their plots which, according to Decree 5-90 cannot be titled to private persons since they are located in the MUZ. CONAP considers this request to be valid and solutions are being sought. Other notable efforts in resolving conflicts within the MBR have included the Cooperation and Relocation Agreements signed by the CONAP and 19 communities in 1997 and 1998; the Community Relations Strategy for the PNSL, reviewed in 2004 and validated by the 2005-2009 Master Plan for the PNSL; and the Interinstitutional Letter of Understanding signed with the Mechanism for Coordination of Associations of Campesinos of Petén and other governmental institutions promoting the resolution of land conflicts in different conservation units and signed November 7, 2005.

E. Legal and institutional framework

- 1.17 The key laws applicable to the MBR are: (i) the Constitution of the Republic of Guatemala, where Article 15 of the Transitory and Final Provisions states that it is a matter of “national urgency to foster the economic development of the department of Petén for its effective integration to the national economy”; (ii) Decree 5-90, which established the MBR, its limits and administration; (iii) the Law of Protected Areas and its Regulation ; (iv) the Emergency Law for the Defense, Restoration, and Conservation of the PNLT; (v) the Law that declares as a matter of national urgency the protection, conservation, and restoration of the CZs, MUZ and BZ; and (vi) the Executive Decree establishing the Authority for the Management and Sustainable

Development of the Lake Petén Itzá Basin. In addition, several international treaties and conventions ratified by Guatemala apply to the MBR, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora; the Convention on Biological Diversity; and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat. The legal analysis undertaken for the preparation of this Project concluded that the main issues associated with the legal framework were the lack of enforcement of existing laws and a general sense of frontier-lawlessness characteristic of the region. Few violations are brought to justice and cases such as illegal encroachments on the national parks are greatly impeded by the fact that most of the protected areas are not officially registered in the General Land Registry, leading to protracted cases in court. Other weaknesses include limited public awareness of environmental regulations (particularly with respect to natural resource use), a perceived lack of transparency in official matters, limited enforcement personnel and skills base, and the need to promote broader participation in monitoring compliance to laws and regulations.

- 1.18 The MBR has a Master Plan for 2001-2006 that has been approved by CONAP through Resolution ALC 031/2001 and that is the main document for its management over the medium term. The Master Plan presents the zoning established by Decree 5-90 and establishes 16 strategic objectives for conservation and management, such as forest fire prevention, reducing the impact of cattle ranching, strengthening inter-institutional coordination and promoting co-management regimes. Given its broad, all encompassing view, the main challenge in implementing the Master Plan has been in setting realistic targets in light of the rapid land use change occurring in the MBR and of the existing capacity for management. Significant gaps have developed between the official zoning and actual settlement patterns in the core zones. The Master Plan has been updated during 2007, and the new Master Plan is expected to place more emphasis on achievable targets that can be closely monitored and institutional capacity building. Other lessons learned from the Master Plan have been that there are significant linkages between the various zones (the CZ, MUZ, and BZ) and that these cannot be managed independently. Instead, a coherent strategy is needed to divert pressure away from the core zones by providing sustainable economic opportunities in southern Petén and in the buffer zone as well as sustainable natural resource use compatible with ecosystem management in the MUZ. Another lesson learned has been that mechanisms are needed to build consensus on sustainable use of biodiversity in the vicinity of core zones. The proposed GEF project builds on these lessons learned and is designed to support the implementation of the updated Master Plan.
- 1.19 In addition to the Master Plan, CONAP has issued several policies that bear on the management of the MBR including ones for the co-administration of protected areas, use and management of non-timber forest products, and ecotourism in protected areas. In all cases, the implementation of these policies requires close coordination among many government institutions as well as support from the private sector and civil society. Of particularly relevance to the MBR, the Policy on Human Settlements in Protected Areas of Petén, approved by CONAP in September 2002 includes provisions to 'regulate' settlements in 'restricted use zones' within the core

zones in accordance with land use plans that are adapted with the specific conditions of each site and with the responsible participation of residents in managing resource use.

- 1.20 The main institutions with management responsibilities in the MBR are: the National Council on Protected Areas (CONAP), the Ministry of Culture and Sports (MICUDE) with its Institute of Anthropology and History (IDEAH), the Ministry of Environment and Natural Resources (MARN) and the Guatemalan Institute of Tourism (INGUAT). CONAP, a public entity linked directly to the Presidency, among others promotes conservation of the country's natural heritage, oversees the national system of protected areas (SIGAP) and implements the National Biodiversity Conservation Strategy. CONAP is presided by MARN and includes representatives from the Center for Conservation Studies of the University of San Carlos (CECON), environmental non-governmental organizations, the Association of Municipalities, INGUAT and the Ministry of Agriculture, Livestock and Food (MAGA). Several other entities such as the Ministry of Energy and Mines, the Ministry of Defense, CONTIERRA⁷, and the municipalities have incidence on the MBR, adding to the complexity of its management. Sectoral policies are often contradictory, jurisdictions are overlapping and overall coordination is weak.
- 1.21 CONAP is the entity that administers the MBR. It has a Regional Office located in Santa Elena, Petén. Its operational capacities are limited by a regular budget of about US\$1.78 million annually, which represents only 30% of the optimal budget estimated by the regional office of CONAP to ensure effective management of the MBR. Of this total, 70% is earmarked for the administration of the MBR, 24% for protection and restoration of the PNLT, and 6% for promoting the stewardship fund ('*Fondo Patrimonial*') for the Yaxhá-Nakum-Naranjo Park. Of the total budget, over 60% is earmarked to personnel, leaving little funds for other recurrent costs or investments in monitoring, research or restoration of biological resources. According to the 2005-2008 multiannual program of the Technical Bureau of the Budget of the Ministry of Finance, CONAP's budget has seen an annual increase of approximately 6%, and equivalent increases for the MBR can be expected. While a personnel of over 370 people is assigned to the MBR, the staff is unevenly distributed across the Reserve and has limited technical capacities.
- 1.22 Decree 5-90 recognizes the CECON as the administrator of the Laguna del Tigre, Naachtum Dos Lagunas, San Miguel La Palotada, and Cerro Cahuí Biotopes; and it recognizes the IDAEH as the administrative entity of the Tikal National Park (PNT). The administrative functions of CONAP imply both direct responsibility in the CZs, the MUZ, and the BZ, as well as the possibility of delegating the administration of these territories through co-administration, concession, or agreements for carrying out specific programs. In this context, the Foundation Defensores de la Naturaleza

⁷ Created through government agreement 452-97, CONTIERRA is the national entity charged with facilitating and supporting, at the request of parties, the conciliatory or judicial resolution of conflicts that present themselves in association with the property rights of land. Petén is the department that has the greatest number of cases submitted to CONTIERRA.

co-manages PNSL under an agreement with CONAP and the BALAN Association co-manages Mirador-Rio Azul National Park.

- 1.23 Following approval of the Policy on Human Settlements, the regional office of CONAP-Petén took steps to establish a Community Relations Unit that was given a mandate to resolve conflicts over land and resource use in zones as defined by the policy and re-activate or develop Cooperation Agreements⁸ with communities willing to participate in management of the MBR. Nonetheless, budgetary limitations and the lack of institutional support for the policy have limited its full implementation to the point that the Unit eventually disappeared as a department of CONAP.
- 1.24 CONAP's Center for Monitoring and Evaluation (CEMEC) is responsible for maintaining updated databases on socioeconomic, ecological, and biological characteristics of Petén. CEMEC facilities are currently co-managed on the basis of a collaborative arrangement between CONAP and the Wildlife Conservation Society (WCS). And in November 2005, CONAP established a independent Monitoring and Evaluation Unit, responsible for monitoring key indicators in all protected areas.
- 1.25 Politically and administratively, the department of Petén is divided into 12 municipalities, five of which have part of their territory in the MBR. According to an assessment undertaken for the PDPRBM, these local governments are weak in their administrative, technical and financial capacities and have had limited participation in the management of the natural and cultural assets within their territories. The Municipality of San Andres has established agreements with communities for preventing and fighting forest fires in the PNLT; however their effectiveness has been limited.⁹ Decentralization and municipal development laws approved in 2002 include provisions for a system of Development Councils at the national, regional, departmental, municipal and community levels. Community Development Councils (COCODES) have been established in the MBR with the aim of promoting projects prioritized by communities. While still incipient, this structure provides an opportunity to engage local residents in micro-projects in sustainable use of biodiversity.
- 1.26 Several international, national and local NGOs are active in conservation initiatives in the MBR. Conservation International (CI) helped establish ProPetén in 1991 which currently works with local communities to conserve biological diversity by increasing environmental awareness and by developing economic alternatives for local communities. ProPetén administers the 'Estacion Biologica las Guacamayas (the Scarlet Macaw Biological Research Station), a field station located within PNLT that serves as the main center for scientific studies and training in the MBR.

⁸ Instrument of the Human Settlements Policy for Protected Areas of the Petén, which defines rights and responsibilities of communities under mechanisms established by CONAP.

⁹ The State of Conservation of PNLT. Tropico Verde, 2003

F. Conformance to regional and national plans

- 1.27 Nationally, the current government has attributed special importance to environmental issues in its proposals regarding rural development (Strategic Agenda for Integral Rural Development in Guatemala), on national competitiveness (National Agenda on Competitiveness), and in its Guate Verde program. Guatemala is also a signatory to the International Convention on Biological Diversity and has had a National Strategy for Biodiversity Management since the late 1990s. An important part of its strategy has been the creation of a national system of protected areas (SIGAP) administered by CONAP, of which the MBR represents approximately 75%. The SIGAP establishes Conservation Regions that help optimize the allocation of knowledge and resources within the system and promote the replication of lessons learned. The actions to be financed by this Project are consistent with the policy and strategic lines of SIGAP and incorporate the results of recent evaluations. In addition, the components of the proposed GEF Project fit within the objectives of the Regional Strategy for the Conservation and Sustainable Use of Biodiversity in Mesoamerica endorsed by the Central American Commission for Environment and Development (CCAD).

G. Threats and Intrinsic Causes of Loss of Biodiversity

- 1.28 The predominant threats to the biodiversity and ecological integrity of the MBR are as follows: **Fires:** Fires and their effects on natural vegetation cover and associated fauna are closely monitored in the MBR. The most critical year in recent times was 1998, when the area affected by fires covered 440,000 ha. In 2003, CEMEC reported that 398,000 ha of forests and/or wetlands were burned or approximately 19% of the total area of the MBR. In the PNLT alone fires affected more than 40% of the total area.¹⁰ While the frequency of fires is closely associated with cycles of droughts, other human-related factors such as unsustainable land use practices contribute to the threat.
- 1.29 **Conversion to unsustainable agricultural uses:** The agricultural frontier is rapidly advancing in the MBR, placing direct pressure on the CZs and biological corridors. An estimated 10% of the MBR was converted to agricultural uses between 1986 and 2004. Conversion rates were significantly higher in the cores zones (6%) than in the MUZ (2%). The expansion of agricultural uses has followed road corridors in the vicinity or within PNSL and PNLT, such as those to Naranjo and Bethel. Unsustainable practices such as cattle ranching and the use of agrochemicals are prevalent along these corridors, leading to encroachment on forests and potential contamination of aquatic ecosystems.
- 1.30 **Unplanned human settlements:** Along with the advance of the agricultural frontier, population growth and immigration to the Petén further threaten the ecological integrity of the MBR. Population growth is estimated to be 7% to 10% per year, largely due to the immigration of poverty-stricken farmers from the

¹⁰ Monitoring of Forest Fires and Estimates of Surfaces Burned in the MBR, 2003. WCS, IRG, CONAP/CEMEC.

highlands to the south. The situation is particularly alarming in PNLT, where the number of settlements grew from 13 communities in 1999 to 42 communities¹¹ and numerous smaller agglomerations in 2003, leading to increased land use conflicts, contamination due to the absence of solid and liquid waste management, illegal activities such as poaching and illegal logging, and other related threats. Rapidly changing land use has widened the gap between the official zoning scheme for the Reserve as established in the 2001-2006 Master Plan and reality on the ground, further aggravating conflicts over land and resource use. The general lack of security, particularly in the border zones, adds to the potential conflicts and difficulties in enforcing zoning regulations.

- 1.31 **Oil industry:** Petroleum development constitutes a challenge for biodiversity in the MBR, particularly for PNLT where rights to explore have been granted in about 55% of the area. While this is an economic necessity for the country and the direct effects of the operations are unknown, an analysis of tissue samples of two species of fish in PNLT showed evidence that individuals collected at varying distances to one of the oil wells were stressed, possibly due to exposure to contaminants such as heavy metals, chlorinated hydrocarbons, arsenic and other compounds.¹² The oil industry has also led to the creation of roads into previously unsettled areas and the lack of control further contributed to the conversion of natural ecosystems.
- 1.32 The identified threats are consistent with the 2001-2006 Master Plan and reflect the weakness of existing governance structures and conflicts that arise when high-value natural resources such as petroleum, coincide with areas of high biodiversity and environmental value. The analysis undertaken during the preparation of this project confirmed that these threats are also the result of several inter-related causes related to socioeconomic conditions, policy issues and institutional capacity as detailed below.
- 1.33 **Marginalization of the population and insecure rights to land and resource use:** Poverty is prevalent in the MBR as evidenced by the reliance on subsistence agriculture, limited or non-existent access to basic services, illiteracy rates and absence of secure land and resource use rights. Socioeconomic surveys conducted in the region have highlighted the importance of poverty and food insecurity in land use strategy¹³ and concluded that farmers' ability to reduce pressure on forested areas through the adoption of more intensive (but sustainable) practices is constrained by weak market conditions and prices, low levels of farmer organization, lack of secure land and resource use rights, and limited sustainable alternatives livelihoods. Clarifying land and resource use in and around the MBR is thus fundamental.
- 1.34 **Absence of fully endorsed integrated conservation strategy with a regional vision:** While considerable funds have been invested in conservation initiatives in the last decade, these initiatives were often undertaken without a view to the

¹¹ The Status of Conservation of the Laguna del Tigre National Park. Tropico Verde. 2003

¹² A Biological Assessment of Laguna del Tigre National Park, CI Rapid Assessment Program. CI and others. July 2000.

¹³ Food security and land use deforestation in Northern Guatemala, Avrum Shriar, Food Policy. 2002.

socio-ecological integrity of the MBR. Land use and management plans, where they exist, have had limited support from local stakeholders, including municipalities. While information exists on the status and trends within the MBR, it has not been used effectively to develop management strategies that adapt to the changing conditions of the Reserve.

- 1.35 **Poor coordination and regional development policies that are incompatible with the conservation of biodiversity:** Coordination among institutions responsible for specific sectors (agriculture, energy, tourism) has been absent, limited or even contradictory often leading to conflicting stances on how resource management and development should take place in the MBR. Underlying economic private and public interests (e.g., cattle ranching, petroleum production) have driven the formulation of policies that do not mainstream biodiversity conservation. While several cooperation agreements exist between institutions with jurisdiction over the MBR (such as the agreements between local governments and communities for fire prevention and control), there is limited capacity to ensure compliance with these agreements.
- 1.36 **Insufficient resources and capacities for biodiversity conservation.** The limited operational capacity of the Regional Office of CONAP in Petén is not sufficient for adequate administration of the MBR. Training, technical assistance and awareness-raising efforts are still weak, limiting the possibilities of working systematically to manage the Reserve as an integrated system. As a result, its capacity to exercise adequate control and surveillance of the MBR (including the prevention and control of forest fires), follow-up on plans, resolve land-use conflicts, including the legal processes for recovering illegally occupied territories, and expedite administrative procedures faces severe constraints that, when combined, threaten the ecological integrity of the MBR, particularly in the CZ and biological corridors. The presence of CONAP and other institutions across the Reserve tends to be sporadic.¹⁴
- 1.37 **Lack of a sustainable source of financing for biodiversity conservation:** As CONAP's budget represents about a third of the funds needed for effective management of the MBR conservation initiatives depend, with few exceptions, primarily on external project financing that cannot support the recurrent costs of routine management functions such as monitoring, fire prevention and control and surveillance. This dependency on external sources creates a disincentive for the cash-strapped Government to assume its responsibilities for financing the management of the MBR. In addition, the centralized administration of the scarce resources hinders local participation and management adapted to the social and biophysical conditions. The Stewardship Fund (Fondo Patrimonial) created for Yaxhá National Park

¹⁴ In an evaluation of management effectiveness based on the methodology designed by WWF and the World Bank, only PNSL and Mirador-Rio Azul National Park received moderate ratings (70% and 68.49% respectively). Five of the core zones received ratings of 50% or lower. The high ranking given to PNSL was attributed to the co-management regime in place with the Foundation Defensores de la Naturaleza. The Laguna del Tigre-Río Escondido Protected Biotope received the lowest ranking (31.33%), confirming the need to extend management arrangements to other units.

demonstrates how mechanisms can be established to fund conservation activities with the active participation of the private sector and other local stakeholders.

H. Project Strategy

- 1.38 The Project recognizes that the ecological integrity of the MBR as a critical part of the Selva Maya will depend on a substantial improvement of its management effectiveness. To this end, the Project strategy has several important features including: (i) a regional approach that places the MBR within a broader context of the Department of Petén and addresses the root causes of biodiversity loss such as poor coherence in sectoral policies; (ii) a focus on participatory conservation that renders municipalities and communities settled in the MBR allies of the MBR, rather than a threat; (iii) self-reliance with an emphasis on the horizontal transfer of knowledge and experience among communities and user groups so that they can manage their territories and resources while reducing conflicts and improving the quality of life of their inhabitants; (iv) consolidating and expanding the network of co-administrator organizations in specific parts of the MBR; (v) capacity building and the promotion of institutional leadership that make it possible for the administrators of the MBR (CONAP and others) to handle the different situations that stem from the direct and indirect influence of the communities settled in or around the MBR; (vi) land use management to ensure a balance between activities fostering sustainable production and those associated with protection for the zones of high biological importance; and (vii) monitoring and evaluation of the Project and of the situation of the MBR.
- 1.39 The project has also been formulated in accordance with the GEF Focal Area Biodiversity and the Operational Program # 3 Forest Ecosystems, with the aim of: (i) improving the enabling environment for enhancing management effectiveness of the MBR, thus helping it fulfill its purposes of conserving globally important biodiversity and maintaining the ecological integrity of the Selva Maya; (ii) seeking the sustainable use of forest ecosystems through co-management combining production, socio-economic and biodiversity goals; (iii) replicating successful outcomes derived from effective stakeholder partnerships and the experience and learning gained. Similarly, the project is in conformity with the GEF strategic objective BD-1: Catalyzing Sustainability of Protected Areas. The main reason for choosing exclusively this strategic priority relies in the main purpose of the project, which is to strengthen the ecological integrity and connectivity of the MBR, taking into account that the reserve represents 75% of the national system. Given this coverage, the Project is designed to improve management effectiveness of the MBR as an individual PA while simultaneously having a significant impact on management effectiveness of the national PA system. To foster management effectiveness, the project will support activities eligible under SO1 such as: (i) system capacity building for long-term sustainability in terms of the development of a coherent set of sectoral policies and norms; (ii) institutional capacity building of CONAP and partners with an emphasis on co-management for biodiversity conservation; (iii) innovative financing mechanisms at the system level; and (iv) catalyzing the engagement of communities in biodiversity conservation, including

monitoring and evaluation. In addition, there is a strong system-wide lesson sharing and replication element proposed through the national PA monitoring and evaluation unit in CONAP (USEC). Contributions to the GEF's strategic targets for biodiversity will be documented through the GEF BD-1 Tracking Tool (see Annex E). The project also responds to the Strategic Plan for the Convention of Biological Diversity (CBD) and its design complies with the ecosystem approach principles, as defined in decision VII/11.

- 1.40 Cost-effectiveness is inherent to the Project's strategy, as it is designed around entities already operating in the MBR such as the CONAP Monitoring and Evaluation Unit and CEMEC (USEC/CEMEC) and it optimizes the allocation of human resources through co-management. It also provides for cost-sharing in project administration with an execution scheme that is fully integrated with the IDB loan for the PDPRBM.

I. Coordination with other projects of the Bank, regional financing institutions, the GEF, and other donors

- 1.41 The GEF Project responds to the IDB Country Strategy for Guatemala for the period 2004-2007, which has poverty reduction as its main objective, with an emphasis on supporting the Government's efforts towards sustainable economic growth and employment generation. As mentioned above, this GEF Project is conceived as a complement to the PDPRBM, a 6-year investment loan of US\$30 million of which US\$10.94 million will be used as co-financing. The objective of the loan is to promote the conservation of the MBR through sustainable use, inclusive and participatory management of natural resources, cultural heritage, tourism activity, and environmental management with a view to improving the quality of life of Petén residents. The Program consists of the following components: (i) Sustainable Management of Natural Resources and the Environment, which, in addition to support for the management of the MBR, includes: (a) management support to four protected areas south of the MBR (411,000 ha), (b) diversification of productive activities in the BZ and the southern part of Petén to stabilize the agricultural frontier with an emphasis on families living in extreme poverty; (c) pollution control and water quality monitoring in the watershed of Lake Petén Itza (immediately south of the MBR); (ii) Enhancement of Archeological and Other Tourism Sites which includes financing for restoration and rehabilitations of archeological sites and small-scale infrastructure for nature-based and cultural tourism; and (iii) Institutional Strengthening which includes strengthening of local organizations such as the COCODES and local tourism committees, implementation of the municipal action plans, operational decentralization of line agencies such as MARN and INGUAT and a public awareness program on the benefits and environmental services provided by the protected areas of the Petén. The GEF Project fits within the first component of the investment loan and was conceived to complement that Program thematically and geographically.
- 1.42 The MAGA has been executing the IDB-funded Sustainable Development Program for Petén (973/OC-GU and 974/OC-GU) in an area to the south of the MBR and with

some specific interventions in selected parks and in the buffer zone. This includes restoration of archeological sites (Yaxhá and Aguateca), sustainable natural resource management, systems for environment-friendly agricultural production and regularization of land titles. The Operating Regulations for the GU-X1001 have incorporated lessons learned from this project.

- 1.43 The World Bank Land Administration Project has two components, namely: (i) cadastre and regularization of lands in the southern parts of Petén (excluding the CZ and MUZ of the MBR), and (ii) opening a registry office in Petén to modernize management of the registry files. By targeting land tenure issues in the southern part of Petén, this project is expected to contribute to reduce the migration towards the MUZ and CZ of the MBR, thus reducing pressure on its biodiversity and natural resources. The GEF Project is expected to benefit from that project in terms methodologies and information bases.
- 1.44 Two GEF projects have been carried out in the MBR, from which lessons have been taken: (i) support for the management and protection of the Laguna del Tigre National Park and Biotope (GEF/World Bank), and (ii) strengthening of community management in the Bio-Itza Reserve (GEF/UNDP). The results from the GEF/UNDP enabling activity “Definition National Priorities and Assessment of Capacity Building Needs in Biodiversity in Guatemala” have been taken into account, in particular related to biodiversity information management. Monitoring and research activities of the MBR will be integrated with the systems already established by the Regional Program for Consolidation of Mesamerican Biological Corridor (UNDP/UNEP/WB), which is coordinated by the Central American Commission for Environment and Development (CCAD), and information links will be established with the Inter-American Biodiversity Information Network (IABIN–GEF/WB). Finally, coordination has also been established with the regional GEF/IDB/World Bank project on Integrated Ecosystem Management in Indigenous Communities, which has Petén as one of several priority sites in Central America.
- 1.45 **Other donors.** With US\$40 million invested over almost 15 years, USAID has been the cooperation agency with the largest presence in the area, accompanying the incipient environmental institutional framework from the outset. Although USAID has now largely phased out, it continues, in collaboration with The Rainforest Alliance, to promote sustainable production. International NGOs also have a long track record of involvement, aimed initially at strengthening local organizations. The Wildlife Conservation Society (WCS) is actively involved in monitoring the ecological integrity of the MBR, which will be fully integrated with the monitoring efforts to be financed with the GEF Project. The GTZ and the government of the Netherlands have participated actively in financing the Forestry Action Plan, which promoted the process of community and industrial forestry concessions, a sustainable management mechanism that has proven successful. At present, the government of the Netherlands is financing a project for institutional strengthening of the CONAP, with some actions in the Petén region, with which synergies will be ensured, in particular related to the strengthening of the monitoring and information management capacities.

J. Lessons Learned

- 1.46 Previous initiatives have yielded the following insights: (i) management and conservation of the protected areas are bolstered through the participation of local governments who are often in a better position to mobilize village efforts; (ii) before making any decision, however wise it may seem, the local authorities and communities should be given a chance to engage in the process, and not feel that they are being imposed unilaterally; (iii) educational and training in community-based tourism should be provided to communities and tour operators to ensure the quality of the services, which in turn can guarantee the success of their enterprises; (iv) before trying to introduce changes in a settlement, it is necessary to achieve community integration so that residents have a shared vision. Cohesive, organized communities will more easily accept conservation projects than the atomized settlements; (v) to ensure success, the rules of co-management should be clear and fully developed among the different actors and the participating organizations must have a mature organizational structure to cope with the challenges faced by CZ; (vi) the success of any program depends on the degree of prior knowledge of the different actors involved, informed decisions and effective dissemination; (vii) conflicts over sectoral developments policies, such as in the case of petroleum, have exacerbated the negative impacts of industrial development; interest in conservation processes by companies operating in the zone should be fostered; and (viii) the environmental education program initiated in Petén should be continued and reinforced, using materials tailored to the context of teachers and students. In addition, experience nationally and regionally has demonstrated the importance of addressing financial sustainability as one of the key aspects of management effectiveness of protected areas.

II. OBJECTIVES AND DESCRIPTION OF THE PROJECT

A. Project Objectives

- 2.1 The **development objective** of the Project is the conservation and sustainable use of the biodiversity of the MBR, with an emphasis on areas of high biological importance, based on the strengthening of institutional capacity and effective participation of different interest groups so as to optimize MBR's management. The **global objective** is to contribute to the ecological integrity and connectivity of the Selva Maya, a region highly significant for the biodiversity of Mesoamerica. The **specific objectives** are to: (i) strengthen the institutional arrangements needed for the effective, sustainable, and participatory management of biodiversity in the MBR; (ii) foster the sustainable use of biodiversity in the MBR; (iii) support the implementation and monitoring of policies, standards, and other instruments for managing the MBR; and (iv) contribute to the generation and administration of information for the MBR's adaptive management.

B. Description of the Project Components

- 2.2 The Project has the following components: (i) strengthening of institutional capacities and agreements for the effective management of the MBR and its

biodiversity; (ii) incentives for the conservation and sustainable use of biodiversity; (iii) design and implementation of policies and other instruments for management of the MBR; and (iv) the generation and use of information for the adaptive management of the MBR.

1. COMPONENT 1: Strengthening institutional agreements and capacities for the effective management of the MBR and its biodiversity (GEF US\$1,060,000; total US\$2,600,000).¹⁵

- 2.3 Both the PDPRBM and the GEF Project include as one of their strategic lines the strengthening of governance, particularly contributing to the process of decentralization, with a view to greater coordination with and participation of communities and local governments. In this component, the GEF Project will primarily finance capacity building for biodiversity conservation of CONAP and its partners in co-management (activities 1b,c and d) while the loan will focus on building capacity of the other government institutions (e.g. MARN), municipalities and COCODES in natural resources management. The following activities are included:
- 2.4 **Strengthening institutional capabilities for governance of the MBR (GEF: 0; total: US\$1,500,000).** With these resources, MARN will hire consultants to provide technical assistance and training to strengthen the administration and management of the Reserve at three levels: (i) **Local:** including local governments (e.g. strengthening of municipal environmental units, promoting municipal representation on management committees for CZ and the formulation of urban land use plans for the five municipalities of the MBR), the Authority for the Management and Sustainable Development of Lake Petén-Itzá; and community associations (COCODES). (ii) **Regional:** reinforcing key sectoral regional offices (MARN, MICUDE/IDAEH, SCEP, and INGUAT) as well as the Mesa Regional; and (iii) **Binational:** strengthening capacities for implementing binational agreements relating to natural and cultural resources, commercial relations and security issues along the borders with Mexico and Belize.
- 2.5 **Improving and developing new mechanisms for co-management in core zones, biological corridors, community polygons, and other special use areas (GEF: US\$200,000; total: US\$200,000).** This subcomponent will help extend and implement co-management arrangements proven to be the most effective tools for biodiversity conservation in the MBR. It will build on the experience gained with the co-administration agreements in the CZ and the concessions contracts in the MUZ. With the resources allocated to this subcomponent, MARN will hire consultants to provide technical assistance directed at CONAP partners (ACOFOP, local NGOs) for the following purposes: (i) updating the concession contracts for the management units in the MUZ with a view to improving and standardizing their technical, administrative and operational aspects; (ii) adapting and expanding the model for concession contracts for providing conservation services in special use zones; (iii)

¹⁵ The total represents the GEF financing and the co-financing from the PDPRBM (1820/OC-GU).

extending and improving implementation of co-administration agreements for the core zones (including the Community Relations Strategy for PNSL); (iv) developing new mechanisms for the co-management of the biological corridors that involve the participation of community organizations and the local private sector.

- 2.6 Strengthening the operational capacity of the CONAP in the MBR (GEF: US\$660,000; total: US\$700,000).** In order to strengthen the CONAP's ability to perform its planning, coordination, monitoring and enforcement functions in the MBR, MARN will contract services and purchase goods for the following purposes: (i) the re-establishment of the Community Relations Unit, as the main unit responsible for implementing the Policy on Human Settlements. This includes working with local NGOs and municipalities in preparing land use plans in the community polygons with a Cooperation Agreement pursuant to the Policy, establishing inter-institutional agreements for compliance and monitoring of these Cooperative Agreements and generally promoting community consensus in the context of the updated Master Plan for the MBR. GEF resources will be used to contract community relations personnel (two technical, three field assistants) for the regional office of CONAP in Petén, as well as staffing of branches of the Unit for the PNSL and the PNLT (two technical and one field assistant), purchase equipment and contract consultants to provide on-the-job training in skills such as negotiation and conflict management; (ii) specialized services for automating the procedures of CONAP's single window¹⁶ with the USEC/CEMEC; (iii) the purchase of logistical equipment needed to improve CONAP's capacity for control and surveillance in the MBR so that the resource rangers can carry out permanent rounds of patrols in collaboration with the Ministry of Government and the Ministry of Defence; (iv) the establishment of control posts (two in the PNLT, two in the PNLT, and one in Yaxhá); and (v) on-the-job training for technical personnel of CONAP and its partners assigned to the MBR in consensus-building techniques, gender equity, overseeing management and land use plans and supervising biodiversity conservation projects.
- 2.7 Partnerships with the formal education sector in the region for environmental education and skills training (GEF: US\$200,000; total: US\$200,000).** A strategy spanning the entire MBR for raising awareness of and providing environmental education for opinion-makers (media), human resource educators at all levels, and municipal environmental planning units will be implemented. The strategy builds on and promotes coordination and exchange between already existing initiatives such as the Environmental Education Program in the PNLT. The formal departmental environmental education forum will be reactivated.¹⁷ Working closely with the local formal education community, MARN will hire consultants to design and produce educational materials on biodiversity conservation and the local economy to be distributed through schools, municipal offices, NGOs, COCODES and women's and youth groups. These materials will be complemented by media packets and

¹⁶ The Single Window is an administrative instrument of CONAP that aims to improve the process of receiving, reviewing, resolving, and monitoring the requests and cases received.

¹⁷ Inter-institutional Coordinating Body for Monitoring the Environmental Education Strategy, CISEEA.

interactive learning events (e.g., theater plays, contests) aimed at target groups, including women, youth, and children. A partnership will be established between CONAP, local universities and other providers of skills training to develop training modules focused on forest products, tourism services, and sustainable commerce. This activity also encompasses the implementation of the Project's communication plan.

2. COMPONENT 2: Incentives for the conservation and sustainable use of biodiversity in the MBR (GEF: US\$400,000; total: US\$7,400,000)

2.8 This component will promote the adoption of natural resource use practices for the purpose of diversifying the local economy and generating new income, thus stabilizing encroachment onto protected ecosystems with important biodiversity value. In addition to creating off-farm employment opportunities, a key objective will be to foster the conditions and develop the systems that will make it economically feasible for farmers and other resource users to intensify and diversify production in ways that are environmentally sustainable, thereby helping them to limit pressure on remaining forest. The PDPRBM resources will finance activities in the MUZ and BZ as well as south of the MBR, while the GEF resources will help systematize best practices for productive activities and finance innovative investments compatible with the use restrictions of CZs, special use zones, and biological corridors. For the preparation of the component, detailed designs and feasibility analyses were undertaken for a representative sample of activities and pilot projects (i.e., non-timber forest products, ecotourism), and an exhaustive market study including an econometric model of demand was conducted for nature-based and cultural tourism in the MBR. The component includes:

2.9 **Innovative investments in the use of biodiversity and environmental goods and services of the MBR (GEF: US\$170,000; total: US\$950,000).** This subcomponent will finance small-scale pilot projects aimed at bolstering sustainable alternative livelihoods in the MBR. Eligible projects will include support to commercialization of environmental goods and services, promotion of access to new markets, and support to entrepreneurial development. Based on eligibility criteria, including technical and financial feasibility, compatibility with land use zoning, demonstration value, replicability and timeliness, projects will be screened for financing with a view to providing opportunities for better incomes for the local population and serving as a catalyst for biodiversity conservation. A sample of projects has already been identified as part of the preparation of the PDPRBM. Examples of projects include: (a) reintroduction and reproduction of native plants and wildlife; (b) value added to raw materials (lianas, seeds) produced under certified processes, xate nurseries and plantations under natural forest cover; (c) crafts using little-known timber species; and (d) innovative ecotourism support services. With the GEF resources, MARN will hire consultants to provide technical assistance in systemizing and disseminating through local NGOs best practices in the sustainable use of biodiversity and in helping community groups (e.g., producers organizations, women's groups) develop project proposals eligible for financing on the basis of

demand. GEF resources will be used selectively in the vicinity of the CZ, the biological corridors and special use zones.

- 2.10 **Diversification of forestry products and entrepreneurial training for the administration of concessions (GEF: \$US50,000; total: US\$1,150,000).** This subcomponent will finance pilot projects to be carried out by local organizations (concessions, community management units, private reserves) and aimed at diversifying forest products through value added and marketing of little-known timber products and development of production units for medicinal plants. Building on the results of recent evaluations (see ¶1.14), MARN will also hire consultants to provide training in business management and accounting, and horizontal exchanges between forestry concession managers for the purpose of transferring experiences.
- 2.11 **Low-impact nature-based tourism activities and tourism circuits in the CZ, biological corridors and MUZ (GEF: US\$50,000; total US\$3,950,000)** The objective of this subcomponent is to pair communities and tourism operators along circuits that link the core zones and biological corridors in order to consolidate and diversify the tourism product in line with the zoning scheme of the MBR. MARN will contract services, goods and works for the following purposes: (i) the construction of two small tourism information centers managed through cooperative arrangements and other small-scale public infrastructure such as signs, trails and low-impact access; (ii) travel costs for horizontal exchanges between communities providing support services for tourism (bird watching, demountable tented camps) to strengthen the circuits and diversify nature-based tourism; (iii) mobilization costs for the establishment of Tourism Committees in the communities of Carmelita, Paso Caballos, and Uaxactún; and (iv) small pilot projects for promoting existing tourism routes in the Reserve, especially those linked to the CZs, biological corridors, and community managed sites (e.g. those visited by boat from Paso Caballos along the Río San Pedro that combine a visit to El Perú with interpretive routes of the surrounding area, from Carmelita along the Maya trails to Tintal, and from Uaxactún to combine Mirador with Río Azul).
- 2.12 **Incentives for sustainable agricultural activities in appropriate areas (GEF: US\$130,000; total: US\$1,350,000).** This subcomponent is aimed at fostering sustainable agriculture activities (indigenous agroforestry systems, backyard gardens, medicinal plants, selective intensification schemes such as 'green manure', native fruits and vegetables) in strategic sites of the MBR. In both the MUZ and the BZ, priority will be given to proposals from families of small producers living in extreme poverty with difficulties when it comes to participating in the labor market and women's organizations. The investments will be made mostly with resources from the PDPRBM. MARN will hire consultants to systematize and disseminate good practices in sustainable agriculture for the socioenvironmental and legal conditions of the MBR.
3. **COMPONENT 3: Design and implementation of policies, regulations, and other instruments for the management of the MBR (GEF: US\$920,000; total: US\$1,920,000)**

- 2.13 This component will help harmonize and improve implementation of public policies directed at the Petén region and in particular to the MBR that pertain to key factors in the loss of biodiversity such as those related to land security, sectoral development policies and the absence of a secure source of financing for conservation activities. The resources of the PDPRBM will be directed primarily at the sustainable financing mechanism. Included in this component are the following:
- 2.14 **Supporting the resolution of land and resource use conflicts¹⁸ in the MBR, particularly in the biological corridors and core zones to the west of the 90° meridian (GEF US\$400,000; total: US\$400,000).** MARN will hire consultants to provide the technical assistance that will complement the work of the Community Relations Unit already described under Component 1, in particular it will determine the legal and registry status of the various zones of the MBR, using, to the extent possible, previously generated information and available methodologies such as those used in the IDB Sustainable Development Program for the Petén and the World Bank Land Administration Project (see ¶1.42 and 1.43). Boundaries will be mapped and demarcated with benchmarks in the field, prioritizing areas based on ecological and social criteria and beginning with pilot projects that can be replicated to other zones. Advisory services and consensus-building workshops will be financed to implement the “Interinstitutional Letter of Understanding regarding land conflicts” in close coordination with the entities responsible for negotiating and resolving disputes over land use, and with the active participation of the municipalities affected by these disputes. This process will culminate in the official entry into the National Land Registry of national parks, biological corridors and community-managed units under Cooperation Agreements pursuant to the Policy on Human Settlements.¹⁹
- 2.15 **Improving policies, norms and regulations for controlling threats in the MBR (GEF: US\$130,000; total: US\$130,000).** MARN will contract technical assistance and finance workshops aimed at improving and clarifying policies, norms, standards and regulations governing natural resource use and economic development in the MBR. Policies will be harmonized in coordination with relevant sector agencies to mitigate conflicts that stem from their enforcement and to mainstream environmental management (e.g., in petroleum and tourism operations, solid waste management). This includes a policy of disincentives to discourage activities that create threats to biodiversity conservation (for example cattle ranching).
- 2.16 **Support the environmental audit and expert assessment functions performed by judicial officers in the MBR (GEF: US\$200,000; total: US\$200,000).** This

¹⁸ Land conflicts here means disputes over possessions and use right over lands, due to overlapping boundaries and boundary markers, inconsistency between areas registered and area occupied, invasions, and other uncertainties over land ownership. CONTIERRA reports as of 2005 a total of 302 cases of land conflicts throughout the department, and 127 conflicts inventoried by the Office at San Benito, which serves the municipalities that correspond to the MBR.

¹⁹ Priority areas include Mirador Rio-Azul NP, San Miguel La Palatoda Biotope, Cerro Cahui Biotope, Naachun-Dos Lagunas Biotope, Sierra de Lancandon NP, Laguna del Tigre NP, and community polygons such as Carmelita, Uaxatun. Selection criteria include: (i) biodiversity value; (ii) level of threat from encroachment; (iii) absence of cooperation agreements for natural resource use in community polygons.

subcomponent will support the application of rules and regulations undertaken by judicial officers in the MBR. The GEF resources will finance environmental audits and independent expert assessments to aid in the documentation and resolution of strategic cases that arise from illegal activities (for example, usurpation of land in core zones, illegal logging). This will be accompanied by support for the operation of the Office of the Special Prosecutor for Crimes against the Environment in the Petén Region, as part of the Strategy for Environmental Justice and Fighting Impunity.

- 2.17 **Implementing financial mechanisms for the sustainable use and conservation of biodiversity in the Reserve (GEF: US\$190,000; total: US\$1,190,000).** MARN will finance: (i) a study of the contribution of the MBR and its biodiversity to the regional and national economy to help build the case for a permanent financing mechanism, to justify annual budgetary allocations, and as an input for the system of national accounts; and (ii) implementation of a business plan for the MBR that will consolidate and introduce instruments for capturing funds to finance the recurrent costs of the management and administration of the MBR. MARN will use the GEF resources to hire consultants to provide technical assistance for updating the fee system of CONAP, increasing existing or introducing new tourism-related funds, and negotiating interinstitutional arrangements between CONAP, INGUAT, MICUDE, Ministry of Energy and Mines, MAGA, MINFIN, and others, to cover the revenues not captured from the Fund for the Development of Hydrocarbons, the tax on tourists, and other sources. This will include the establishment of one or several ‘Stewardship Funds’ (Fondo Patrimonial) for the sustainable use and conservation of biodiversity in the CZs, building on the experience of a similar fund created for Yaxhá in 2005. Past experience with the development and operation of conservation trust funds supported by the GEF will be examined in establishing the financing mechanisms.²⁰

4. COMPONENT 4: Generation and use of information for the adaptive management of the MBR (GEF US\$950,000; total: US\$950,000)

- 2.18 The purpose of this component is to improve capacities to collect and administer accurate and timely information required for adaptive management of the MBR. The following activities will be financed:
- 2.19 **Consolidating and improving the exchange of information for the management of the MBR (GEF: US\$ 350,000; total: US\$ 350,000).** This subcomponent will information gaps, particularly in the socioeconomic dimension of biodiversity conservation in the MBR. Data (including maps) on land use, demographic trends, conservation activities and social conflicts under different forms of co-administration²¹ will be updated using remote sensing images and other sources. GEF resources will finance follow-up studies to previous investigations of the socioeconomic situation in the PNLT and the studies done in the PNSL. Inter-

²⁰ GEF Evaluation Report #1-99 Experience with Conservation Trust Funds and GEF Lesson Notes no. 5 and 6.

²¹ Co-administration, delegation of administration, Resources Management Concession (commercial and industrial), Cooperation Agreement, and Private Natural Reserve, among others.

institutional agreements will assign specific responsibilities to the different actors involved in data collection and administration and promote information sharing among local, regional, and international organizations.

- 2.20 **Establishing the monitoring and evaluation system of the performance and impact of managing the MBR (GEF: US\$490,000; total: US\$490,000).** This subcomponent will consolidate the Project baseline and support periodic monitoring of performance and impact in accordance with the requirements of CONAP (and its new Monitoring and Evaluation Unit), the Bank and GEF, and in coordination with the National Committee for Biological Monitoring. Field measurements will be collected and desk evaluations of system indicators, consistent with the requirements of the GEF and its tools (tracking tool for SP1), will be carried out using, where possible, already installed capacities of the USEC/ CEMEC, collaborating NGOs, universities and beneficiary organizations participating in the project. Using GEF resources, MARN will purchase equipment and hire consultants to provide technical assistance and training for the USEC/CEMEC²² to collect data, analyze and report on management effectiveness indicators until now not covered in its routine operations. Support will also be given to disseminate monitoring reports through web pages and other means.
- 2.21 **Developing a research agenda for biodiversity conservation (GEF: US\$110,000; total: US\$110,000).** This subcomponent is aimed at promoting and launching a regional research agenda for the entire MBR. The GEF resources will finance: (i) mobilization costs for institutional mechanism for establishing priorities for research with the involvement of the scientific community; (ii) rapid ecological assessments of core zones and biological corridors; (iii) an evaluation of good practices for sustainable resource use at demonstration parcels; and (iv) the development of bioprospecting and research on issues of adaptive management of the MBR (including thesis studies in collaboration with local universities).

III. COSTS AND FINANCING

- 3.1 The cost of the incremental activities described above amount to US\$17.2 million, of which the GEF will finance US\$3.66 million, to be administered by the Bank. The PDPRBM (1820/OC-GU) will provide US\$10.94 million in co-financing²³. The remaining amount of US\$2.6 million corresponds to associated financing of US\$1.7 million and US\$0.9 million from USAID and Conservation International (CI), respectively. Table III-1 shows the indicative budget for GEF and loan resources. The detailed budget, including co-financing, is presented in Annex II.

²² CEMEC will continue to serve as the clearinghouse for information on the MBR. The Monitoring and Evaluation Unit of CONAP will be responsible for analyzing trends as well as exchanging and disseminating the information throughout SIGAP.

²³ The co-financing from the loan will come from components 1 (sub-component 1a, US\$4.8 million and sub-component 1b, US\$3.2 million) and 3 (1.54 US\$ million for institutional strengthening). Also, the loan will contribute with 1.4 US\$ million for project management.

TABLE III-1 Budget by Source of Investment (in thousands of US\$)

Components	GEF	IDB-Loan	Total US\$
1: Establishing the institutional agreements needed for the efficient, sustainable, and participatory management of biodiversity in the MBR	1,060	1,540	2,600
2: Support for activities compatible with the conservation and sustainable use of biodiversity in the MBR	400	7,000	7,400
3: Support for the design and implementation of policies, regulations, and other instruments for managing the MBR	920	1,000	1,920
4: Strengthening the generation and use of information for the adaptive management of the MBR	950	0	950
Other Costs			
Administration and Supervision	300	1,300	1,600
Financial Costs		100	100
Audits	30		30
TOTAL	3,660	10,940	14,600

IV. PROJECT EXECUTION

A. Project Execution and Administration

- 4.1 The executing agency for the GEF Project is the Ministry of Environment and Natural Resources (MARN) with the technical support of CONAP. Given that the GEF Project is part of the PDPRBM, its execution scheme will be completely integrated within that Program. The MARN will assume full administrative, financial, and management coordination responsibilities vis-à-vis the Bank and the GEF for both operations. As an executing agency, CONAP will assume the day-to-day technical responsibility of the GEF Project through an inter-institutional agreement with MARN. This agreement as well as the first disbursement of the resources of the financing under Loan Contract 1820/OC-GU will be conditions precedent to the first disbursement of the GEF resources.
- 4.2 Operating Regulations for the execution of the PDPRBM and the GEF Project have been prepared. These Regulations, to be approved by MARN, establish the rules and procedures for each component, eligibility criteria for demonstration and pilot projects, the procedures for preparing the Annual Institutional Action Plans (AIPs) and Annual Operational Plans (AOPs), and the methodology for evaluating and monitoring the AIPs and AOPs. As a condition precedent to first disbursement, MARN will present evidence that the agreed-on Operating Regulations are in effect.
- 4.3 The Program Unit (UP) created within MARN to oversee execution of loan 1820/OC-GU will also support this operation. The UP will be located in Petén and will have administrative and financial staff in Guatemala City, reporting to MARN's Administrative and Financial Directorate. Its functions will be to: (i) coordinate and management program execution, including the contracting of consultants and contractors for all program components; (ii) administer and supervise activities related to execution; (iii) organize presentations of products to the corresponding institutions; and (iv) facilitate assistance for the community development committees and other grassroots organizations in preparing their initiatives. .
- 4.4 The UP will consist of an Executive Director (directing the project planning process, serving as liaison to those involved, and overseeing execution of the Program), and a

support team (made up of a limited number of technical and administrative staff). The UP will include two additional positions financed by GEF funds: a Technical Director directly responsible for the GEF Project and a project specialist assigned to the planning and supervision of activities financed by GEF resources. Selection of the Technical Director by MARN will be a condition prior to first disbursement.

- 4.5 The CONAP, MARN, INGUAT, MICUDE/IDAEH, MAGA, Energy and Mines, and SCEP will continue to participate in the Inter-Institutional Commission for the Sustainable Development of Petén (CIDSP), institutionalized by governmental decree to act as an oversight body for PDPRBM, including the GEF Project. CIDSP serves as a forum to ensure coherence in sectoral policies through regular, informed exchanges between agencies that have jurisdiction on the MBR. It will be responsible for inter-institutional coordination on all policy matters related to the project, be the highest instance of approval of the POA and oversee the development of the Business Plan.

B. Procurement

- 4.6 Works and goods will be procured in accordance with the Bank policies established in document GN-2349-7 and consultants will be selected and contracted in accordance with the Bank’s policies set forth in document GN-2350-7. The applicable limits on the amounts for the contracts for goods and works are shown in the following table.

TABLE IV-1 LIMITS ON CONTRACTS (IN US\$1,000)

Type	International Public Biddings	National Biddings	Shopping	Direct Contracting
Goods	≥ 250	≥50 y < 250	≥10 < 50	<10
Works	≥1500	≥150 y <1,500	≥25 < 150	<25

C. Execution and Disbursement Periods

- 4.7 The execution period will be 54 months and the disbursements will be for 60 months counting from the entry into effect of the contract. The tentative timeline for disbursements is shown in Table IV-2.

Table IV-2 Indicative of Disbursements (in thousands of US\$)

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total	%
GEF	800	800	800	700	560	3,660	21%
IDB Loan	1,000	2,900	3,500	3,000	540	10,940	64%
Other Co-financing	520	520	520	520	520	2,600	15%
Total	2,320	4,220	4,820	4,220	1,620	17,200	100%
Percentage	13%	25%	28%	25%	9%	100%	

D. Monitoring and Evaluation

- 4.8 Component 4 of the project “*Strengthening the generation and use of information for the adaptive management of the MBR*” includes a series of activities that will enable the monitoring and evaluation of the Project’s performance and impacts as well as the status of the MBR. The activities are incorporated in a Monitoring and Evaluation Plan presented in Appendix F. The monitoring and evaluation system will rely on a set of indicators that make it possible to monitor the ecological and

socioeconomic conditions of the reserve (with emphasis on ecological integrity, connectivity, biodiversity, sustainable use and threats), and the impacts of the various conservation and management efforts carried out in the context of its administration. Indicators are also included for monitoring the Project's progress in terms of execution in a manner consistent with the requirements of the GEF and its tools for monitoring its strategic priorities (SP1).²⁴ These indicators have been incorporated to the Logical Framework presented in Annex A. The baseline constructed during the preparation of the PDPRBM will be completed and consolidated into existing information systems using the installed capacity of USEC/CEMEC and the various NGOs involved in the collection and analysis of data on the RBM.

- 4.9 The monitoring and evaluation system will function within CONAP in the newly established Monitoring and Evaluation Unit (USEC) and CEMEC as well as shared with partners in management such as the Foundation Defensores de la Naturaleza, WCS and ACOFOP. The existing information system managed by USEC/CEMEC will be adapted to handle all monitoring and evaluation data. Products generated by this system will facilitate the annual planning, monthly programming, and programmatic supervision of Project execution, by component and activity (including environmental, socioeconomic, technical, and financial aspects), as well as the annual, mid-term, and final evaluations to determine progress in attaining the objectives and results defined in the Project's logical framework. The products generated by the information system will be disseminated and shared periodically with all the relevant actors, including financing institutions, for the purpose of strengthening decision-making processes and coordination in the management of the MBR. The total estimated cost for the monitoring and evaluation system is US\$400,000 over 5 years.
- 4.10 A mid-term evaluation will be undertaken once 35% of the GEF resources have been disbursed, so as to allow for, if necessary, adjustments in the approach to execution and/or targets. A final evaluation will also be carried out at the end of the period of Project execution. This final evaluation will include the analysis of lessons learned and a description of the best technical, institutional, and social practices applicable to the future actions for management of the MBR, as well as the most outstanding experiences of restoration and declaration of biological corridors. These evaluations will be performed by consulting firms to be contracted by the Bank.
- 4.11 In addition to assessing progress and results, both the mid-term and the final evaluation will place special emphasis on the following considerations: (i) How is the Project contributing to decentralized and participatory management of the CZ, the biological corridors and special use zones of the MBR; (ii) What progress has been made towards ensuring the financial sustainability of biodiversity conservation and management activities in the MBR; (iii) To what extent have communities internalized and diversified the sustainable use of biodiversity and good practice in its productive activities and what types of socioeconomic benefits are being

²⁴ Tracking tool for GEF Biodiversity Focal Area Strategic Priority One: "Catalyzing sustainability of Protected Areas"

generated; (iv) Are management decisions being made on the basis of the best available and accurate information; and (v) What are the trends observed in the ecological integrity and biodiversity of the MBR and how is the Project contributing to maintaining them. The results of the evaluations, lessons learned, and best practices will be widely disseminated and shared with actors from the local and national governments, strategic local allies, co-financing agencies, and other relevant actors nationally, regionally, and internationally, including similar efforts financed by the GEF.

E. Accounting, financial management and audits

- 4.12 MARN will be responsible for the program's accounting and financial management and will: (i) maintain specific, separate accounting and budget records for the grant resources; (ii) have adequate internal audit structures; (iii) have a detailed accounting and reporting system for the administration, recording and payment of contracts for works, goods and consulting services; (iv) present the program's consolidated financial statements in a timely fashion and make the accounting information and other necessary documentation available to the Bank and the external auditors; (v) maintain appropriate records of disbursement requests; and (vi) maintain an adequate filing system for documentation supporting eligible expenditures for verification by the Bank and external auditors. A revolving fund of 5% of GEF funds will be established. MARN will present the Program's financial statement annually in accordance with the General Conditions to the TC agreement. These statements will be audited by an independent firm of auditors acceptable to the Bank, based on terms of reference approved in advance by it (document AF-400) and using the Bank's standard procedures for the selection of external auditing services (AF-200).

V. BENEFITS, FEASIBILITY AND RISKS

A. Benefits

- 5.1 Execution of the project will result in significant global, national and local benefits, including contributing to the maintenance of the Reserve's ecological functions, safeguarding a diversity of forest and associated ecosystems, of which some are unique and unfragmented, and protecting plant and animal species including significant breeding populations of mammals and birds and several threatened, endangered and endemic species. Globally, the project is expected to contribute to the ecological integrity of the Selva Maya, the most extensive tropical broadleaf forest remaining in Central America. Although difficult to quantify, global benefits are expected to include carbon sequestration based on the results of a recent study conducted to quantify the potential of the forestry concessions to reduce CO₂ emissions. Global benefits will also be generated through the enhanced management of two Ramsar sites, including one that encompasses the greatest concentration of freshwater wetlands in Mesoamerica. The project will also contribute to achieve regional objectives by enhancing the connectivity and promoting replication of best practices to other portions of the Selva Maya in Mexico and Belize as well the Mesoamerican Biological Corridor. Nationally, the project will help consolidate the SIGAP by improving and expanding co-management models to a network of core

zones and biological corridors that encompass 75% of the national protected area system, by strengthening key capacities for management effectiveness including consensus building, conflict management, monitoring and evaluation and by leveraging a permanent stream of revenues that can be used for managing the Reserve as a system. Locally, the Project will promote alternative productive activities compatible with the biodiversity conservation objectives of the Reserve, thereby reducing resource use conflicts. The clarification of the legal status of various zones of the MBR will also contribute to enhanced land use security.

B. Feasibility

5.2 **Institutional.** The following circumstances contribute to the Project's institutional feasibility: (i) the emphasis placed on strengthening CONAP and its comanagement arrangements with its existing and new partners to ensure greater presence in the MBR, including improved community relations; (ii) implementation of a genuine process of citizen participation and decentralization building on the practical experience of the forestry concessions; (iii) formalization of the CISDP as a proven forum to discuss and coordinate sectoral policies and actions in the context of the Project, including bringing to the forefront matters related to oil production activities, cattle raising, tourism and other economic activities of the MBR; and (iv) the installed capacity of USEC/CEMEC as a center operating from Petén and dedicated to monitoring and evaluation of environmental indicators. The recent creation of the CONAP Monitoring and Evaluation Unit will also contribute to the timely incorporation of the practical experience gained in biodiversity conservation and management, thus enabling replication to other areas within the national system of protected areas and contributing to overall institutional viability.

5.3 **Financial.** Recent evaluations of experiences in sustainable financing of protected areas²⁵ highlight the need to diversify the portfolio of sources of funds to reduce the risk that conservation activities might be financially unsustainable. With this in mind, the financial sustainability strategy of the MBR has been divided into two sections. First, establishing a Stewardship Fund (Fondo Patrimonial) for the MBR. Second, the design and implementation of a Portfolio of Financing Mechanisms for the initial capitalization of the fund and to provide a stable revenue stream, which, supplemented by interest from the stewardship fund, would make possible the effective conservation of the MBR. In order to integrate these two sections, activity 3.e of the GEF Project foresees the development of a Business Plan of which some elements appear in Annex G. The Business Plan, which will have the endorsement of the High-Level Institutional Committee, will be the financial instrument for supporting the adaptive management of the Reserve and will help ensure a match between needs and funding sources for conservation activities. In order to generate financial projections for the various mechanisms factoring in their feasibility, an analysis was undertaken of the revenues that could be generated with the implementation of the Business Plan. This analysis indicates that a fund in the order of US\$4.5 to US\$6.5 million could be established by 2011, thereby generating

²⁵ IUCN-The World Conservation Union. August 2005. Sustainable Financing of Protected Areas: A global review of challenges and options.

sufficient resources to cover basic recurrent costs for managing the Reserve. Additional contributions to the Stewardship Fund could eventually come from different institutions, including foreign governments, international organizations, and the private sector. This plan will be a means to facilitate co-administration of the MBR and communicate with the national and international donors. Annex G presents the results of the analysis undertaken for preparing the Project.

- 5.4 An important proportion of the Project's activities imply recurrent costs that will require continued financing, such as operation and maintenance of equipment and salaries of personnel. During Project preparation, CONAP and the Ministry of Finance agreed to plan for yearly increases in budget, such that the total amount of recurrent costs will be covered by the end of the project.
- 5.5 **Social and Environmental.** The social viability of the GEF Project is the result of processes initiated and developed in the period immediately prior to it (2001-2005) during which CONAP and the entities that co-administer the CZ of the MBR have taken steps to overcome the traditional confrontation with the communities in these areas, and to build a new relationship, in an effort to harmonize the objectives of conservation and human development of the local population. The Project will consolidate these processes by providing solutions to conflictive issues such as rights to land and resource use, paving the way for a strategic partnership with the local population around the objectives of biodiversity conservation. The involvement of local NGOs with a track record in working with communities and the emphasis on communities learning from each other also enhance the social dimension of the project. The re-establishment of the Community Relations Unit of CONAP and the selection of activities and investments derived from a participatory process to identify local priorities are other factors that contribute to the social viability of the Project.
- 5.6 As stated above, the Project will contribute to a series of environmental benefits which translate to positive impacts such as (i) improvements in the on-site capacities to manage the MBR; (ii) conservation of biodiversity as an integral part of the local economy and the production of goods and services; (iii) secure legal status of the CZs and biological corridors; and (iv) maintenance of the ecological integrity of ecosystems of regional and global importance. Significant negative impacts are highly unlikely given the scale, nature and location of the small pilots projects to be financed in some of the components. Nonetheless, the Project's Operating Regulations will include environmental and social sustainability eligibility criteria for the selection of these projects and for preventing any temporary impacts that might arise in execution.

C. Consultation and participation

- 5.7 An in-depth socio-cultural analysis and a complementary socio-economic analysis were undertaken as the basis for the stakeholder participation process²⁶. These two

²⁶ Report on social actors of the MBR. Luis Jose Azcarate. March 2004; Socio-economic analysis. Improving Management Effectiveness of the MBR. Abt Associates. February 2006.

studies enabled the IDB project team to identify key local organizations (including indigenous representatives) that needed to be consulted and involved in project design. A wide range of stakeholders who direct, participate actively in, and/or impact on the management of the MBR were involved at various stages of the process. In addition to field visits, a series of consultation workshops were held in 2004 and 2005 with the main objective of introducing the concept of the PDPRBM and the GEF Project and to gain a local perspective on priorities for the management of the MBR.

- 5.8 The Project's execution will be accompanied by a comprehensive communication plan cross-cutting each component. This plan's objective is to inform and promote effective participation of stakeholders in execution and to identify windows of opportunity for local actors to provide feedback. It encompasses the full spectrum from promoting local awareness and environmental education through formal and informal channels, informing the public at large of progress and lessons learned, and involving local organizations in the planning, monitoring and evaluation cycle of the Project.

D. Risks

- 5.9 Project execution faces several risks that have been analyzed during preparation to identify ways to mitigate them. The main risk is the limited **management capacity** and sporadic presence of the institutions responsible in the MBR. This risk is mitigated by the activities in Component 1, through a combination of capacity building and expansion of co-management arrangements to extend the coverage of management activities in a cost-effective manner. In addition, risks associated with potential delays in execution will be minimized by a gradual sequencing of activities in line with the capacities of organizations that have prior experience with similar projects, early engagement of communities and decentralized management.
- 5.10 The conditions of **social and political instability** in the MBR also constitute a risk to the operation. This risk is mitigated by the decentralized governance structure to receive support through the IDB loan and the emphasis on the participation of key stakeholders including the municipalities and COCODES in the project planning, monitoring and evaluation cycle.
- 5.11 The **dependence on government annual funding** for recurrent costs until financial sustainability mechanisms are in place also represents a risk. This will be managed through (i) close monitoring of the annual budgetary process to ensure that the required allocation is planned for in advance; (ii) the gradual phasing in of government financing of recurrent costs during project execution and (iii) early endorsement of the Business Plan in Year 1 of the project to leave sufficient time for its implementation.

Figure 1: Location of the MBR

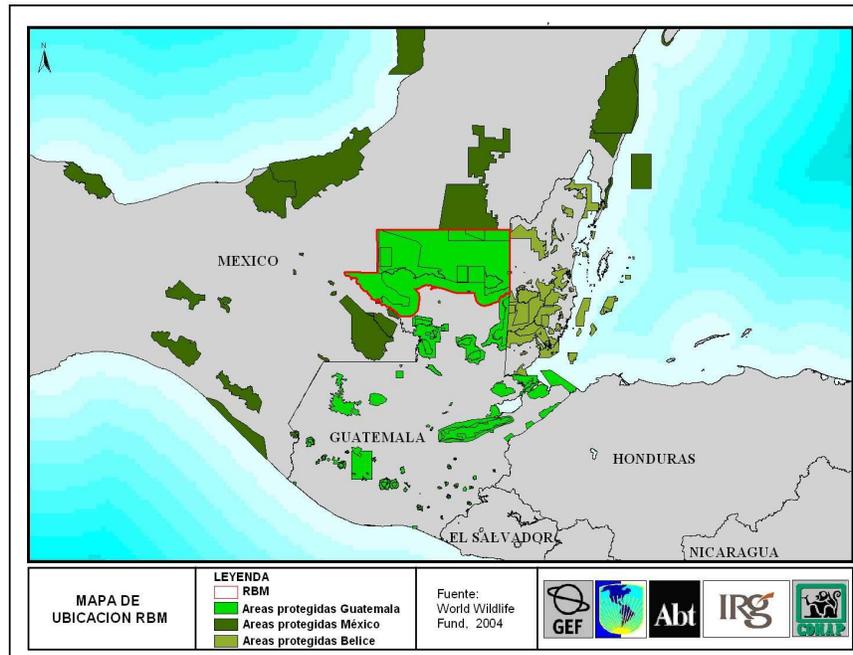


Figure 2: Zoning of the MBR

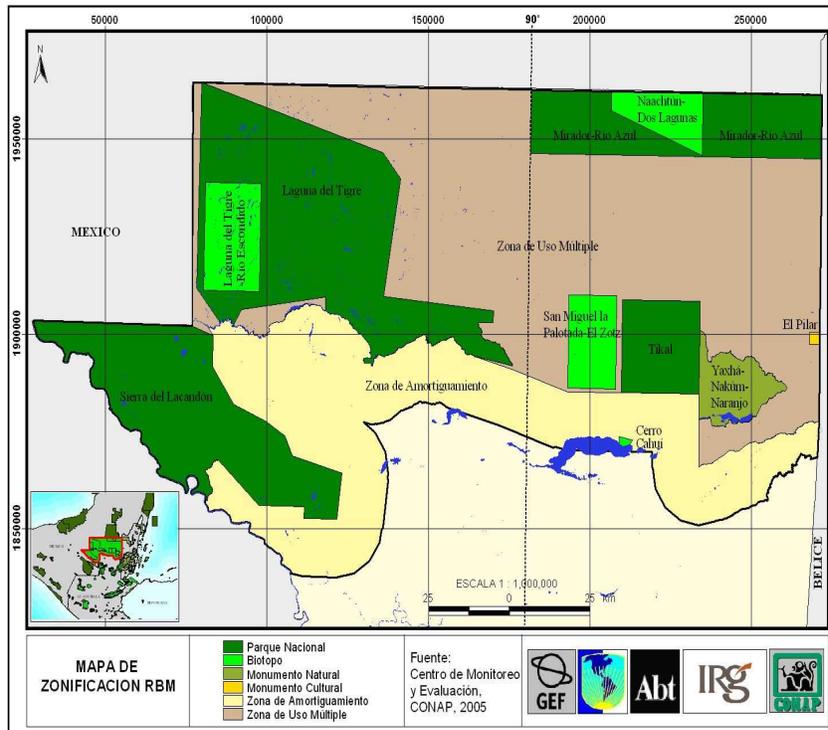


TABLE III-2. DETAILED BUDGET BY SOURCE OF INVESTMENT (IN THOUSANDS OF US\$)

Components/Activities	GEF	IDB-Loan	Total US\$ thousands
Component 1: Strengthening institutional agreements and capacities for the effective management of the MBR and its biodiversity	1,060	1,540	2,600
<i>Activity 1.a: Strengthening institutional capacities for governance of the MBR.</i>	0	1,500	1,500
<i>Activity 1.b: Improving and developing new mechanism for co-management in core zones, biological corridors, community polygons and other special use areas.</i>	200	0	200
<i>Activity 1.c: Strengthening the operational capacity of the SECONAP in the RBM.</i>	660	40	700
<i>Activity 1.d: Partnerships with the formal education sector in the Region for environmental education and skills training.</i>	200	0	200
Component 2: Incentives for the conservation and sustainable use of biodiversity in the MBR	400	7,000	7,400
<i>Activity 2.a: Small innovative investments in the use of biodiversity and environmental goods and services of the MBR.</i>	170	780	950
<i>Activity 2.b: Diversification of forestry products and entrepreneurial training for the administration of concessions.</i>	50	1,100	1,150
<i>Activity 2.c: Low-impact nature-based tourism activities and tourism circuits in the CZ, biological corridors and MUZ.</i>	50	3,900	3,950
<i>Activity 2.d: Incentives for sustainable agricultural activities in appropriate areas.</i>	130	1,220	1,350
Component 3: Design and implementation of policies, regulations, and other instruments for the management of the MBR	920	1,000	1,920
<i>Activity 3.a: Supporting the resolution of land conflicts in the MBR, particularly in the biological corridors and core zones to the west of the 90° meridian.</i>	400	0	400
<i>Activity 3.b: Norms and regulations for controlling threats in the MBR.</i>	130	0	130
<i>Activity 3.c: Support the environmental audit and compliance monitoring performed by judicial officers in the MBR.</i>	200	0	200
<i>Activity 3.d: Implementing financial mechanisms for the sustainable use and conservation of biodiversity in the Reserve.</i>	190	1,000	1,190
Component 4: Generation and use of information for the adaptive management of the MBR	950	0	950
<i>Activity 4.a: Consolidating and improving the exchange of information for the management of the MBR.</i>	350	0	350
<i>Activity 4.b: Establishing the monitoring and evaluation system of the performance and impact of managing the RBM.</i>	490	0	490
<i>Activity 4.c: Developing a research agenda for biodiversity conservation.</i>	110	0	110
OTHER COSTS	330	1,400	1,730
Administration and Supervision	300	1,300	1,600
Financial Costs		100	100
Audits	30		30
TOTAL	3,660	10,940	14,600

Summary of other sources of financing by source of investment (in US\$)

Components/Activities	USAID	CI	Total US\$
Specific Objective 1: Foster the Establishment of the Institutional Arrangements necessary for the Effective, Sustainable, and Participatory Management of Biodiversity in the MBR		165,000	165,000
Specific Objective 2: Strengthening the Integrated Management and Sustainable Use of Biodiversity in the MBR	1,300,000	350,000	1,650,000
Specific Objective 3: Supporting the design, implementation, and monitoring of policies, standards, and other instruments for managing the MBR	200,000	385,000	585,000
Specific Objective 4: Strengthening the generation and administration of information for the management of the MBR	200,000		200,000
TOTAL	1,700,000	900,000	2,600,000