Proposal for Review

Project Title:	**Guatemala - Integrated Biodiversity Protection in the Sarstun-Motagua Region**
GEF Focal Area:	Biodiversity
Country Eligibility:	Convention Ratified February 21, 1995
Total Costs:	$ 9.7 million
GEF Funding:	$ 4.0 million
Country contribution:	$ 1.0 (cost-sharing)
Country contribution:	$ 2.0 million (in-kind)
Cofinancing:	$ 2.7
Implementing Agency:	UNDP
Executing Agency:	Government of Guatemala National Council for Protected Areas (CONAP)
Estimated Approval Date:	June 1995
Project Duration:	5 years
GEF Preparation Costs:	None (funded by Govt. of Guatemala and NGOs)

GUATEMALA - INTEGRATED BIODIVERSITY PROTECTION IN THE SARSTUN-MOTAGUA REGION

COUNTRY AND SECTOR BACKGROUND AND CONTEXT

1. In the Northeastern corner of Guatemala, bounded largely by the Sarstún and Motagua rivers, there is a biologically diverse region of 12,000 square kilometers which extends from the coast to the mountains. More than one third of this region comprises nine separate protected areas covering a total of 4,169 square kilometers with the remaining 7,800 square kilometers encompassing their buffer-zones and intermediate areas. The Sarstún-Motagua region surrounds Lake Izabal and the Bay of Amatique and contains a great range of ecological diversity with nine principle natural communities and five subcommunities. According to the Holdridge Life Zone classification system, the region includes tropical rain forests, subtropical rainforests, subtropical temperate humid forests, low montane rainforests, and tropical dry forests. The region also contains extensive tropical wetlands, fresh water lakes, mangroves, coastal zones and coral reefs. This heterogeneous region contains high levels of species endemism and contains various ecosystems whose biological resources have not yet been fully identified.

2. Containing one of the country's two UNESCO Biosphere Reserves, the Sarstún-Motagua region is one of the most biodiverse regions of a richly biodiverse country. Guatemala contains more than 8,000 of the 18 to 20,000 plant species in Central America and demonstrates high levels of endemicity. For example, out of the 527 orchid species in Guatemala, 57% of the taxa are endemic. Guatemala also contains the most diverse vertebrate fauna in Central America with 1453 species and 45 endemic species, the second highest level of vertebrate fauna endemicity in the region. Out of these species, there are 133 endangered species from freshwater ecosystems alone.

3. The Sarstún-Motagua region houses biodiversity which is important from a global perspective, as well as containing biological resources of significant economic value and potential; from forestry to tourism. The largest protected area within the region is the **Sierra de las Minas Biosphere Reserve** legally designated by UNESCO in February 1993 and currently in the process of being declared as a World Heritage Site. This reserve encompasses 236,300 hectares and contains some of the few pristine natural areas in Guatemala, including tropical cloud forests. This reserve provides habitat to a wide array of wildlife with several globally endangered species such as the quetzal (*Phaomacros moccino*), the jaguar (*Panthera onca*) and the tapir (*Tapirus bardaii*). Another area of ecological importance is the **Chocón-Machacas Biotope for the Protection of the Manatee.** This area covers 6,400 hectares along the banks of the Río Dulce and provides one of the only natural refuges for the manatee (*Trichechus manatus* L.) in Guatemala and one of the few in Central America. This area is also rich in bird life and is mostly comprised of wetlands, ranging from coastal areas to permanently flooded forests inland, as well as mangrove canals and estuarine lagoons. Among the other protected areas, Sarstún-Motagua also contains the **Punta de Manabique National Park.** This park of 38,400 hectares is one of the most important areas in Central America for several species of globally endangered marine turtles (*Dermochelys coriaceae, Eretmochelys imbricata, Caretta caretta,* and *Chelonia mydas*). Furthermore, the mangrove and flooded forest regions of this Park are the most extensive ecosystems of this type on Atlantic Coast of Guatemala. They provide habitat for the endangered Atlantic crocodile (*Crocodylus acutus),* manatees, tapir, and

for other endangered species. The other protected areas include: **The University Biotope Mario Dary Rivera** which contains cloud forests and critical habitats for the quetzal; **The Sarstún River Wildlife Refuge** which contains mangroves and other habitats for crocodiles, manatees and numerous birds; **The Sierra Santa Cruz Natural Monument Forest Reserve** with stretches of diverse tropical rainforest; **The Bocas del Polochic Refuge** which contains wetlands with endemic species and habitat for manatees along with freshwater sharks; **The Cerro San Gil Reserve** that includes highly endemic tropical forest; and the **Río Dulce National Park** which spans a region of great scenic beauty and diverse aquatic ecosystems containing manatees and crocodiles.

4. Guatemala and Central America as a whole suffers from the rapid destruction and fragmentation of natural ecosystems. This process leads to the loss of rare species and creates isolated patches of habitat which restrict migration and immigration and thus reduce the long-term viability of natural communities. In 1992, Guatemala contained 43,760 square kilometers of forests, covering 40% of the country. Deforestation is currently progressing at an annual rate of 2% or about 900 square kilometers per year.

5. As in many other parts of the country, the advancement of the agricultural frontier is a major threat to biodiversity in the Sarstún-Motagua region. The population of the region is about half a million people and 40% of the region is composed of private farms--of which more than 75% are devoted to annual crops. This region is a relatively poor area, with a 79% rural population, which is marginal within Guatemala's national development priorities. There is low access to credit and to agricultural extension services which could facilitate improved agricultural practices. This region has traditionally been subject to migrations from the kek'chi people who typically practice migratory slash-and-burn agriculture and between the 1950s to 1970s, the region attracted heavy immigration from other areas of the country due to initial infrastructure development. Given this population influx and the low level of economic development, the advancement of the agricultural frontier for short-term slash-and-burn cultivation and for the expansion of cattle pasture is currently threatening the nine protected areas of Sarstún-Motagua region. In addition to the communities living in buffer zones and adjacent areas, about 21,000 people currently live within the Sierra de Las Minas Biosphere reserve and at least 4,000 live inside the other protected areas. Spontaneous colonization and agricultural encroachment are leading to rapid deforestation and habitat loss within and around the protected areas. In addition, water and soil pollution and unsustainable extractive practices in terms of fishing, hunting, timber and other forest products are further degrading the region's biodiversity. On the Atlantic cost there is also currently rapid tourism expansion and the shipping centers and other population centers in the region contribute to mounting pressure on surrounding ecosystems.

6. In 1986 Congress passed the Law for Environmental Protection and Improvement which established the National Commission for the Environment (CONAMA) as the coordinating body for environmental policy in the country. In 1989, the Law of Protected Areas established the National Council of Protected Areas (CONAP) as the lead managerial and coordinating institution for the Guatemalan System of Protected Areas (SIGAP). SIGAP includes 156 protected areas. CONAP has delegated the administration of protected areas and the implementation of master plans for these areas to several governmental organizations, such as the General Department of Forests and Wildlife (DIGEBOS), the Center for Conservation Studies (CECON) at the University of San Carlos de

Guatemala, and to different non-governmental groups such as the Defenders of Nature Foundation, the Ecodevelopment and Conservation Foundation (FUNDAECO), and the Mario Dary Rivera Foundation (FUNDARY).

7. After the UNCED Conference, the government of Guatemala through the National Commission for the Environment (CONAMA) defined the government's policies and strategy for environment and development within four main areas for action: 1) institutional strengthening; 2) institutional coordination; 3) environmental awareness, and 4) linkage between national and international strategies. CONAMA also seeks to integrate all its activities related to environmental management with the work of civil society, including NGOs, community groups, and the private sector.

8. The government of Guatemala signed and ratified the Convention on Biological Diversity and the Convention on International Trade in Endangered Species. Several Guatemalan protected areas have been categorized as World Heritage and as Biosphere Reserves. At the regional level, Guatemala supported the establishment of the Central American Commission for Environment and Development (CCAD), in which the country is represented by CONAMA.

9. Parallel to its efforts in the field of environmental protection, the Guatemalan government has embarked on a process of decentralization of the public administration. As part of this process, in 1987 the Law of the Council for Urban and Rural Development established National, Regional, and Municipal Development Councils and promoted citizen participation in the identification and development of environment and development initiatives. In addition, the Preliminary Regionalization Law promoted local decision-making, particularly through the establishment of social investment funds. To strengthen local government, the Guatemalan constitution has allocated 10% of the national budget to municipal councils. As part of this process, both CONAP and CONAMA have decentralized their activities and established regional offices, despite budgetary restrictions which have hindered their effectiveness.

10. The legal and decentralized institutional framework is in place for conservation and sustainable resource use in the Sarstún-Motagua region. For five of the protected areas, CONAP has assigned different governmental organizations and NGOs to develop and implement management plans. These organizations have a history of operating at a local level together with local communities in the region. Up to date, however, while five management plans have been prepared, the effective administration of these areas has been restricted by lack of financial resources and a fragmented approach with emphasis on strict conservation of the core areas. While some progress has been made in terms of working with local communities to promote conservation and sustainable biodiversity uses as well as increasing overall public awareness, funding has been unavailable for a strategy coordination among the different protected areas or for conservation in the buffer zones or surrounding areas. Resources are also lacking to develop a system of corridors that integrate the protected areas into an ecological whole. The individual protected areas are not likely to provide as much habitat protection for endangered species over the long-term without a network of interconnecting corridors, linking them with each other and with adjacent areas in Belize and Honduras. By maximizing the area of continuous habitat, a system of corridors could increase the long-term feasibility of maintaining biological diversity in the region.

11. The project strategy responds to national, subregional, regional, and global plans and policies. The CCAD, in 1994, developed a "Central American Strategy and Action Plan for Development and Environment" officially endorsed by all Central American governments. This strategy recommended the formation of integrated Conservation and Sustainable Development Regions. In addition, the Global Biodiversity Strategy, the 4th National Congress of National Parks, the Centroamerican Forum for Biodiversity, and the Strategy and Action Plan of CCAD, among other sources, all stress the need to improve the management of protected areas, and networks of different types of areas. In particular, they highlight the importance of integrating the management of protected areas with the sustainable use of natural resources in the surrounding areas.

PROJECT OBJECTIVES

Global Environmental Benefits and Objectives

12. The project will protect a wide array of threatened ecosystems containing globally important biodiversity by launching an integrated program for resource conservation and sustainable use in the Sarstún-Motagua region, focusing on the management of the nine protected areas. The project is based upon the premise that programs for biological conservation must include the promotion of sustainable economic uses of biological resources by communities living in and around the protected areas. The project aims to reduce biodiversity loss due to the unsustainable patterns of agricultural expansion and the overextraction of biological resources by local populations. The project will be designed and implemented with community participation through a joint partnership of decentralized governmental and non-governmental organizations with a long history of work with local communities. The project will improve the management of the nine protected areas and will define and promote sustainable economic uses of biological resources by local populations in the protected areas, their buffer zones, and in key inter-areas. Several key inter-areas will be strategically selected to target communities which are currently dependent on the protected areas or on the potential biological corridors; communities will also be considered which seem likely in the future to encroach on or otherwise threaten the protected areas. This will be achieved through the following interrelated objectives:

Specific Project Objectives

13. **Objective 1: Integrated planning and management for the nine protected areas.** The project will design and implement an integrated and decentralized system for the management of the nine protected areas in the Sarstún-Motagua region coordinated by CONAP, NGOs, and municipal and departmental governments, with the involvement of local communities. The management plans will be coordinated with each other, and will promote sustainable biodiversity uses by local communities. The project aims to develop management strategies for all nine areas in a participatory manner, employing sound scientific information regarding biodiversity and its potential for sustainable use. This process will entail the coordinated design of plans for each protected area as well as the initial identification and planning for a network of biological corridors to connect the nine areas and link them to the Central American Biological Corridor.

14. **Objective 2: Development of economic strategies for sustainable use of biological resources by human population within the protected areas, their buffer zones, and key inter-areas.** Traditional resource use practices have led to continuing poverty and decreasing environmental quality in the Sarstún-Motagua region. The project will work with local communities to identify and implement a range of specific income-generating activities based upon the sustainable use of biological resources, including a programme for ecotourism and scientific tourism. In addition, the project will develop and launch a series of economically viable small-scale enterprises, including non-traditional value-added agricultural and agroforestry products, based upon the sustainable extraction and production of biological resources.

15. **Objective 3: Strengthen capacities of local government, NGOs, and communities to establish a financially sustainable management structure for the conservation and sustainable use of biological resources in the nine protected areas.** While the legal and institutional structures are in place for decentralized resource management, local organizations lack the necessary capacities to implement integrated biodiversity conservation in the Sarstún-Motagua region. Project activities will aim at strengthening the capacities of a wide range of groups, including NGOs and community groups, biodiversity management and conservation on a self-financing basis. This will include promoting a dialogue between communities, municipal governments, and Departmental Development Councils on how to best achieve the sustainable use of biological resources. The project will also support general awareness regarding the values and uses of biodiversity in the reserves, buffer zones, and key-inter areas.

PROJECT DESCRIPTION

16. **Objective 1: Planning for integrated biodiversity conservation in the nine protected areas.**

1.1) Design master plans for the four protected areas which do not yet have them and update the plans for the five areas which currently have them. The plans will be prepared by the NGO or government organization designated to implement the plan in each area together with municipal and departmental governments and the local communities living in and around the protected area. The different organizations working in each area will compare plans and share experiences with each other to avoid duplication, facilitate joint planning on similar issues, and draw on each others' particular resources and capacities.

1.2) Assessment of main community types and main species of vascular plans and vertebrates in the nine protected areas based upon existing information and rapid ecological assessments.

1.3) Identification, design, and feasibility plans for biological corridors to interconnect the nine protected areas and to link these with the larger Central American corridor. If possible, the plans for the corridors will be integrated with the plans for the protected areas.

1.4) The project will develop and conduct a program for ecological-economic zoning to establish tools for integrated biodiversity planning around the nine protected areas.

1.5) Develop a program to restore key ecosystems in and around the protected areas, together with a program for forest fire control with local communities, NGOs and local government.

1.6) Establish a program for long-term biodiversity identification including classification of species according to current or potential economic uses. Partnerships will be sought with both domestic and foreign institutions. Traditional uses and ethnobotanical knowledge will be researched along with possible new methods to sustainably use biological resources.

17. **Objective 2: Development of economic strategies for sustainable biodiversity use in the protected areas, their buffer zones and key inter-areas.**

2.1) Work with local communities to jointly implement sustainable biodiversity use projects financed through traditional mechanisms, such as bank loans and credit.

2.2) Explore, and if possible establish, innovative financial mechanisms, such as "eco-labelling" (the ecological certification of local products) and a Heritage Fund for the Sarstún-Motagua region, to provide self-sustaining sources of funds for conservation. Revolving funds will be established and managed by cooperative associations and local communities to finance productive activities and micro-enterprises.

2.3) Establish a Geographic Information System (GIS) using the information from the ecological-economic zoning to identify different agro-ecological regions and their potential productive uses.

2.4) Implement pilot programs, including training of local farmers, such as agroforestry plots and the production of value-added non-traditional commercial products including non-timber forest products, to provide economic alternatives to currently unsustainable methods of agriculture and natural resource use. Other experiences in this field will be reviewed and the commercial possibilities for different products from the region will be evaluated in light of the ecological zoning. Feasibility studies will be conducted for a set of the most promising products to identify production technologies, storage and transport needs, national and international markets, and financing possibilities.

2.5) Design of plans for scientific tourism and eco-tourism which provide benefits to local communities derived from biological conservation and which provide funds to support the on-going management of the protected areas.

18. **Objective 3: Capacity-building for self-financing conservation and sustainable use of biodiversity in the nine protected areas.**

3.1) Organization of consultative forums for each of the nine protected areas and their adjacent communities on biodiversity use and conservation. These consultations will involve community groups, NGOs, Municipal Environment and Development Commissions, Departmental Development Councils, and representatives from the private sector. In addition, the project will ensure the participation of all these groups in protected area

planning and the generation and analysis of information from the ecological-economic zoning activities.

3.2) Provide technical training and assistance to the Municipal Environment Councils and the Municipal Development councils to strengthen their capacities to participate in the design and implementation of biodiversity conservation and sustainable use programs in the nine protected areas, their buffer zones, and key inter-areas.

3.3) Develop a community-level training program for youth in the value and sustainable use of local biodiversity.

3.4) Design and implement a curriculum for primary schools in the communities within the nine protected areas, their buffer zones, and key inter-areas to improve the current environmental curriculum with information about the value and use of local biodiversity.

3.5) Review of legislative and administrative arrangements and processes regarding the conservation and use of biological diversity to promote mechanisms, such as environmental impact assessments, which will ensure biological conservation and sustainable resource use over the long term.

3.6) Disseminate results at national and international levels to share lessons for other protected areas and organize donor round tables and consultations to mobilize new resources from domestic and foreign sources.

RATIONALE FOR GEF FINANCING

19. This project falls within the mandate of the GEF to contribute to the protection of globally endangered biological diversity. The nine protected areas of the Sarstun-Motagua region and their surrounding areas contains a diverse matrix of ecosystems--including dry, humid, and very humid forests, wetlands, mangroves, coastal zones, and coral reefs--which provide critical habitat for a wide range of endangered species such as jaguars, manatees, marine turtles, and quetzals. On a regional scale, this project will help to integrate the protected areas in the Sarstún-Motagua region with protected areas on the frontier with Belize to the North (the Temash-Sarstoon Wildlife Sanctuary) and Honduras to the south (the Cusuco National Park and the proposed Barra del Rio Motagua National Park). In this way, this project will further the integrated protection of biodiversity along the length of the Meso-American Biological Corridor extending into Mexico.

20. This project falls under the *Guidance for Programming GEF Resources for 1995* "to promote conservation through protection, management, and sustainable use of biodiversity and its elements," in accordance with the Biodiversity Convention (CBD), especially in terms of capacity building, training, research, development of strategies, and information dissemination. This project also falls under the scope of Article 6 of the CBD which calls for the development of programs for the sustainable use of biodiversity resources. Article 8, moreover, calls for the promotion of sustainable development in communities adjacent to protected areas so as to further their protection.

21. The project will also provide a model for a participatory and integrated approach to the conservation and sustainable use of biodiversity resources. Lessons and experiences from various components of this project will be valuable for the development of protected area plans and the management of biological resources in other parts of Guatemala, the broader region, and the world.

SUSTAINABILITY AND PARTICIPATION

22. This project proposal resulted from an extensive series of consultations and workshops at local and national levels involving national and local government organizations, NGOs, and local community representatives. Through this participatory process, which included two broad-based workshops, the project proposal was identified, formulated and officially endorsed by representatives from fifty-two different groups from around the country. The project's objectives and activities stress the development of a participatory process and recognize that the involvement of local communities is a fundamental pillar of integrated biodiversity conservation. The project activities are designed to involve community groups in the management of the protected areas and to strengthen the capacities of local organizations to participate in the process of conservation planning and implementation.

LESSONS LEARNED AND TECHNICAL REVIEWS

23. Based upon the review of this project proposal by an expert from the STAP Roster, CONAP and the project partners revised their original proposal. These participating agencies held a follow-up workshop with national and local government organizations, NGOs, and local stakeholders to discuss the revision and to secure their involvement and endorsement.

PROJECT FINANCING AND BUDGET

24. The total cost of the project is **$9.7 million**. The GEF contribution to the project amounts to **$4.0** million. In-kind contributions from the Guatemalan Government and the NGO community total **$ 2.0 million**. **$1 million** in cost-sharing has been secured, and **$2.7 million** in co-financing are being actively pursued. A detailed break-down of project costs by objectives and projected outputs is provided below:

PROJECT BUDGET*

Objective 1:	**US$**
Output # 1	2,500,000
Output # 2	340,000
Output # 3	550,000
Output # 4	600,000
Output # 5	240,000
Output # 6	300,000

TOTAL:	4,530,000
Objective 2:	
Output # 1	510,000
Output # 2	915,000
Output # 3	400,000
Output # 4	670,000
Output # 5	200,000
TOTAL:	2,695,000
Objective 3:	
Output # 1	150,000
Output # 2	50,000
Output # 3	50,000
Output # 4	100,000
Output # 5	75,000
Output # 6	50,000
TOTAL:	475,000
Total Project Cost	7,700.000

* This budget does not include in-kind contributions.

INCREMENTAL COSTS

25. All the costs associated with achieving the global benefits described in this project can be considered incremental. Until now conventional assistance to the region has come from international donors, NGOs, and foundations which have provided government and NGOs with assistance for specific projects in and around the individual protected areas of the Sarstún-Motagua region. This assistance, while significant and haing laid the groundwork and foundation for this project, has been mostly channelled toward the acquisition of new lands to be added to the protected areas, (particularly Sierra de las Minas), demarcation and zoning of core areas, and preliminary agricultural extension assistance. While the overall priorities and legal framework are in place for biodiversity conservation, the Guatemalan government does not have sufficient resources to implement a long-term program for conservation which promotes the sustainable use of biological resources by local communities. As a result, full GEF assistance is necessary to protect the unique biodiversity of the protected areas of the Sarstún-Motagua region. Without GEF funds, national and international funding will not fill the gap, and the protected areas will remain subject to increasing encroachment and unsustainable exploitation.

ISSUES, ACTIONS AND RISKS

26. The attainment of project objectives rests on the on-going participation, involvement and input of stakeholders in all stages of project implementation. As such the project will need to establish

the appropriate mechanisms to effect this, including conflict resolution mechanisms, while at the same time providing the technical assistance required for the sustainability of project objectives. While the change in national and local government personnel may present a risk in terms of continuity, this risk is addressed by the important role accorded to NGOs and local resource users.

INSTITUTIONAL FRAMEWORK AND PROJECT IMPLEMENTATION

27. The project will be implemented by a partnership of decentralized government agencies and non-governmental organizations, working in close collaboration with municipal and departmental governments, and with community groups. This decentralized framework provides a rare opportunity for local communities to participate in the development of an integrated strategy for the management of the region. Each protected area will be managed by an NGO or government agency particularly designated for that area. CONAP has already assigned a different institution, mostly NGOs, to manage each of five of the protected areas. In terms of government organizations, the General Directorate of Forest and Wildlife (DIGEBOS) is managing the Río Dulce Park while by the Center for Conservation Studies (CECON) of the University of San Carlos de Guatemala is managing the Biotope for the Protection of the Quetzal. In terms of NGOs, the Mario Dary Rivera Foundation (FUNDARY) is managing the Chocon-Machacas Biotope for the Protection of the Manatee while the Defenders of Nature Foundation is managing the large Sierra de la Minas Biosphere Reserve. The Cerro San Gil is also managed by an NGO, the Ecodevelopment and Conservation Foundation (FUNDAECO).

28. These five groups are all locally based and have a history of working with the local communities. The will continue to manage their respective areas. Lead organizations for the management of each of the four other protected areas will be selected through a competitive process by a committee jointly led by CONAP and UNDP giving preference to locally-based organizations with a history of community work and support.

29. To coordinate project activities, a Coordinating Council for the Sarstún-Motagua Region will be established with the participation of CONAP as executing agency, along DIGEBOS, CECON; and the various NGOs which will be responsible for implementing management activities in the protected areas. These NGOs will include the Defenders of Nature Foundation, FUNDAECO, and FUNDARY. The Coordinating Council will also include other organizations designated to manage the protected areas along with representatives from the local development and environmental councils and local community groups. This Coordinating Council will be responsible for developing conflict resolution mechanisms to ensure stakeholder consensus regarding project activities.

Project Monitoring and Evaluation

30. In addition to standard UNDP monitoring and evaluation procedures, a special panel of independent high level experts will be identified to provide, at key moments in project implementation, substantive technical support in the different areas addressed by the project (i.e. ecosystem and protected area management, participation methodologies, legislative and regulatory reform, financial and economic instruments to ensure financial sustainability). Systematic feedback of project stakeholders will also be ensured by holding regular meetings in which the project's operational strategy and workplan will be reviewed and agreed upon.

TECHNICAL REVIEW

GUATEMALA: INTEGRATED BIODIVERSITY PROTECTION IN THE SARSTUN-MOTAGUA REGION

SUMMARY:

1. The Sartún-Motagua Region is a unit of component elements that together represent one of the most significant remaining areas of biological diversity in Central America. It covers species in a full range of habitats from one of the most humid to one of the driest areas on the isthmus. There are many important endemic species of flora and fauna and the region is vitally important to migratory birds. This is an excellent opportunity for GEF and UNDP to assist NGOs and government in their efforts to conserve one of the few remaining biological jewels of Central America. Unless a coordinated effort is made to conserve this area soon, it will succumb to the pressures now operating along its edges.

2. From an economic point of view, over 60 rivers and streams originate in the high mountain forests of the Sierra de las Minas alone. This "water factory" supports subsistence and commercial agriculture, entire municipalities and industries. Seeds from species of conifers found only in the Sierra de las Minas have proven to be some of the most valued for use in reforestation programs worldwide.

3. The project design is innovative and exciting. The proposal does an excellent job of balancing the need to address human needs while seeking to conserve and protect threatened natural areas. It takes into account the needs of previously marginalized sectors of society, including indigenous groups, and promotes their active participation in the implementation of the project. The proposal builds on existing initiatives and relationships in order to decentralize protected areas management. The document demonstrates that the project was developed through a consultative process that bodes well for the groups working together to implement the project and achieve its many goals.

4. In my judgement, the project is feasible as described, particularly if part of the funding goes directly to NGOs without passing through government (along the lines of the Philippine GEF project). I question whether the amount of funding budgeted ($7.7 million) is sufficient to cover all the project goals.

5. This area has enjoyed strong commitments from government and local and international NGOs for quite some time, and there are no signs that interest in the area is subsiding. A commitment by GEF and UNDP would enhance the long-term biological and social security of the region by supporting the decentralization of protected areas management and bringing an overarching linkage between activities.

Detailed Comments:

Relevance to biodiversity issues:

6. **Global:** As described in the project document, the project contributes to the conservation of biodiversity of global importance. The Sarstún-Motagua zone covers wide range of habitat that are home to many endemic species of flora and fauna. This is where the North American and Caribbean tectonic plates converge, and because of this, it is a zone where there is a wide variety of plants and animals from both South and North America. By far the treasures of the proposed project is the Sierra de las Minas, a unique and sizable stretch of mountains and forest. In the Sierra de las Minas (the largest intact protected area in the region), seven genera and 17 species of conifers are found. Seeds from this area are some of the most valued for reforestation and timber plantations projects around the world. The Sierra de las Minas is also one of the most extensive and secure quetzal (Pharomacros mocinno mocinno) habitats left in the world.

7. Of addition significance, the Sarstún-Motagua zone contains some exceptional and relatively pristine examples of a wide variety of globally threatened ecosystems ranging from marine and wetland to lowland forest and montane cloud forest habitats.

8. **Regional:** The project will complement conservation sites in Belize, Mexico and Honduras. Protection of such a large continuously forested area such a the Sierra de las Minas will help ameliorate local and regional climate change that has already been observed in some part of Guatemala. The marine and coastal portion of the project is extremely important for the conservation of marine turtles.

9. The Sarstún-Motagua region is important for the habitat it provides to migratory birds. The Bocas del Polochic wetlands and the Sierra des las Minas mountain range are particularly important in this regard.

10. **Local:** The Sarstún-Motagua Conservation Region will complement other conservation activities in Guatemala. The unique habitats found in the zone - ranging from the most humid to the driest in all of Central America - complete the representation of ecosystems not covered by the expanse of lowland tropical forest being protected in the northern province of the Petén. Conservation of this area is particularly important as it comes under increasing threat from subsistence and commercial pressures.

11. The Sierra de las Minas is the source for most of the water that flows int the Polochic and Montagua reivers; 62 rivers and streams flow from this mountain range alone. these waterways are the primary source of drinking water, irrigation, and industrial use for most of southeastern Guatemala. Ensuring this supply of water is essential to agricultural and livestock productivity and human existence in the zone. In addition, the waters of the Polochic river are the main source for the Bocas del Polochic wetlands, Lake Izabal, and the Río Dulce river.

12. The Sarstún-Motagua is home to many groups of indigenous peoples as well as ladino populations. From the Biotopo el Quetzal, along the Polochic river, across Lake Izabal and down the Río Dulce river, mostly Q'eqchí people are found. As the proposal notes, may Q'eqchí are semi-nomadic and, traditionally, have not enjoyed legal land tenure security. By involving the Q'eqchí

directly in the project, and addressing disparities in land tenure, the project has a very good chance of stabilizing the agricultural frontier and reducing habitat fragmentation in the region.

Adequacy of design:

13. The design is innovative and represents a significant shift in the way protected areas are managed in Guatemala. It decentralizes administrative authority and control, with local NGOs and governments playing an active role in the execution of the project.

14. Another extremely important aspect of the design is that it very carefully builds on existing institutional experience and capacities in the zone. It does not force some new and untested scheme that will disrupt the successful activities that are already taking place in the area. Organizations like CECON, Defensores de la Naturaleza and FUNDAECO have worked successfully for years in the region. Their involvement in the project and experience in protected areas management in this extremely complex zone will greatly increase the likelihood that RECOSMO will be successful. The participatory nature of the design and execution of the project is also notable.

15. Of particular importance is the initial investment to sort out issues related to land tenure. This subject presents serious problems throughout Guatemala, but it is especially apparent in the Sarstún-Motagua region. Especially in the mountain areas along the Polochic and around Cerro San Gil, tenure is ill-defined and once steps are taken to resolve this issue, more effective land-use planning and protected area management will be possible.

16. Another innovative aspect of the proposal is the inclusion of a significant level of funding for the establishment of trust and revolving funds. They will provide the long-term access to capital that is crucial for the success of the community development activities of the project.

17. The comprehensive program combines the necessary elements for conservation and development: protected areas management; environmental and informal education; training, workshops and seminars; market development; and research. The market development component is a particularly important addition to the usual set of components.

18. Although not explicitly stated in the proposal, it can be inferred that monies earmarked for the "Implementing Agencies" will be dispersed directly from UNDP to each group. This is absolutely essential to ensures that finances do not get delayed because of bureaucratic red-tape within the Guatemalan central government. Having the finances go directly to the implementing agencies also ensures their semi-autonomy which, as suggested in the proposal, is vital to the success of the project.

19. This proposal speak clearly of including many different actors like NGOs, communities,s the private sector, women and indigenous people. As I stated above, this is commendable. However, what is not clear is exactly how these various groups will be included and will interact with each other. What power will they have? Will they truly participate in decision-making or will they simply be consulted? Who will represent the isolated indigenous communities of areas like the Polochic valley? How will conflicts between the private commercial sector, private land owners,

and the landless poor be reconciled? Whose needs will take priority over the others'? Implementors need to develop mechanisms for addressing these issues.

20. The mechanisms for accountability should also include mechanisms to enable local communities to evaluate the project and its impact on biodiversity conservation.

Feasibility:

21. Given the strong local NGO partners in the project (like Defensores de la Naturaleza and FUNDAECO), the project has the excellent chances for success. Defensores has made an absolute commitment to the conservation of the Sierra de las Minas as evidenced by their presence, programs and past level of expenditure in the area. In addition to Defensores, the Guatemalan Government, and International NGOs like The Nature Conservancy and World Wildlife Fund, have made firm and long-standing commitments to the Sierra de las Minas. These efforts would be bolstered by the UNDP project and their long-term chances for success enhanced by decentralization of the governments role in protected areas management.

22. In recent years, the country has made strides in addressing human rights issues and including previously marginalized groups in mainstream society. The proposal makes it clear that the indigenous and rural ladino communities will be the beneficiaries; even more important, it makes it clear that they will actively participate in the project. Although there may be some hesitation to advocate the full participation of marginalized groups given the country's violent past, the force of democracy in Guatemala is growing stronger and should be supported.

23. As stated above, two of the major strengths of the proposed project are its participatory nature, and its decentralized management structure. For the project to succeed, it is absolutely vital that these conditions be established. Authority must not be concentrated solely in CONAP or CONAMA. Those non-government groups traditionally working in the zone like Defensores de la Naturaleza and FUNDAECO must continue to play a leadership role in collaboration with local government.

24. To be effective, CONAP's role should be only one of coordination and not implementation. It should rely on its NGO partners and their local community partners to execute project activities. The planned decentralized approach should address this point. Also as stated previously, finances designated for NGO partners must flow directly to them from UNDP, and not be disbursed through CONAP.

25. As illustrated by the newspaper articles included in the Appendix of the proposal, there is a serious problem of illegal logging in some areas of the proposed conservation region. This has been going on for may year, well after zones were given protected area status. All of this illegal timber harvesting is the result of one or a few wealthy and impetuous individuals who act with impunity. CONAP and the Guatemalan Government must bring these illegal activities under control if the project is to succeed.

Miscellaneous comments:

26. Given the level of effort and financial resources that have been invested in the project region since the 1980's, the budget amount seems to be relatively small. More funds should be earmarked for the implementing agencies under the "Management of Protected Areas" section, especially for those groups like Defensores that have a very good track record and will be there long after the UNDP project has gone. Given the complexity and enormity of the problem that face the groups that administer the various project sites, funding for management should take first priority.

27. There is a considerable amount of money budgeted for socio-economic and biological studies. UNDP should refer to the Defensores de la Naturaleza document entitled "Informe Final: Diagnóstico para la Integración Humana a la Reserva de la Biósfera Sierra de las Minas" (September 1993) for an extensive study of Mayan and ladino knowledge, attitudes and practices in the Polochic and Motagua valleys. UNDP should also refer to Rapid Ecological Evaluation work done by CECON and Defensores in the Sierra de las Minas. Finally, when considering non-traditional use of non-timber forest products in the region, UNDP should refer to the Defensores document entitled "Conservation for Health: Small-Scale Commercial Utilization of Non-Timber Forest Resources and Human Health in the Sierra de las Minas Biosphere Reserve" (July 1994).

28. Some budget figures found on pages 63 - 66 do not coincide with values found after page 71 (Section: J. Presupuestos). These include the Fondos Patrimonial and Rotatorio, Estudios de Factibilidad, the "Consultores" lines, and Miscellaneous (Operaciones y Mantenimiento, Informes y publicaciones, varios).

29. Page 2 of Annex 1: "Disposiciones Financieras y Contables." Section C. "Pagos Directos por el PNUD." This should be clarified. If NGOs are to receive funds directly from UNDP/GEF (as NGOs in the Philippines do, for example), line 1 should include "ONGs ejecutores"; direct payment should be made to them as well as "individuals" and "companies".