

GLOBAL ENVIRONMENTAL FACILITY

PROPOSAL FOR PDF BLOCK B GRANTS

Country: Paraguay

Focal Area: Biodiversity

Project Title: *Protection of Globally and Regionally Significant Ecosystems in Paraguay*

Amount of Funding Requested: US\$ 305,000

Co-Funding (PDF): US\$ 30,000 (GTZ - pending PDF approval)

Total Project Costs: US\$ 10,000,000 (est.: \$US 5 million GEF, US\$ 5 million other)

Requesting Agency: Sub-secretariat for Natural Resources and Environment
Ministry of Agriculture and Livestock

Project Duration: 7 Months

Block A Grant Awarded: No

I. Summary Project Objectives and Description

Paraguay possesses an estimated 8,000 to 15,000 plant species, approximately 980 vertebrate species, and significant portions of four ecoregions that have been internationally recognised as regionally or globally outstanding and of the highest regional priority for conservation¹. These ecoregions are the Interior Atlantic Tropical Moist Broadleaf Forest (IATF), the Cerrado, the Pantanal Wetland, and the Chaco Savannah (map 1). The largest remaining extension of the IATF ecoregion, in absolute terms, is found in Paraguay². The Paraguayan Cerrado is positioned at the extreme western and southern limit of this massive ecoregion and at the transition with four other major ecoregions (Pantanal, IATF, Chaco Savannah and Humid Chaco) and thus supports an extremely rich and complex sample of the diversity of species and habitats for this ecoregion. Additionally, it is believed to be the only Cerrado found on calcareous soils. The Pantanal, shared among Brazil, Bolivia, and Paraguay, is recognized worldwide as a globally important centre of biodiversity, including 658 bird species, 1,132 butterfly species, and over 260 freshwater species. The Chaco savannah of Paraguay supports a diverse flora and fauna with many regional endemics, and a great complexity of habitat types.

¹ *A Conservation Assessment of the Terrestrial Ecoregions of Latin America and the Caribbean*: E. Dinerstein, D. Olson, D. Graham, A. Webster, S. Primm, M. Bookbinder, G. Ledec; 1995; World Bank in association with the World Wildlife Fund.

² National Action plan for the Interior Atlantic Forest -Tripartite Workshop. SSERNMA/WWF

Paraguay's globally important biodiversity is increasingly threatened by deforestation, intensive agriculture, human settlements and infrastructure projects. In the IATF, deforestation rates run at 3.9% per year, and studies indicate that at present rates of deforestation, remaining IATF forest reserves will be lost in ten years. Soil losses from deforestation and mechanised agriculture reach 20-80 tonnes/ha/year with over 300,000 hectares affected by erosion. In the Cerrado ecoregion, while anthropic intervention is still low, there are some indications that ecological processes are being altered and conservation practices are urgent. In the case of the Pantanal, agricultural expansion, charcoal production and infrastructure projects pose severe and growing threats to the region's ecological integrity. In the Chaco Savannah pressures are growing both from within the country and from neighbouring countries with the expansion of the agricultural frontier into this previously unexploited area.

If steps are not taken now to significantly strengthen biodiversity management, planning and conservation, existing pressures on important ecosystems and habitats will grow as a consequence of a series of infrastructure projects planned for the country (map 1). These include:

- The trans-oceanic highway which will cut through the Chaco Savannah and Cerrado Ecoregions
- The continuation and paving of the trans-chaco highway joining Bolivia and Paraguay
- The dredging and channelization of the Pilcomayo River bordering the Chaco and Argentina
- The Paraguay River Hidrovia bordering the Chaco Savannah
- The bridge across the Apa River joining Brazil and Paraguay in the IATF ecoregion.

By stimulating human settlements and promoting agriculture through increased access to markets, these projects will cause increased pressure on all four of these outstanding ecoregions. Whilst these investment projects will include traditional environmental impact assessments, *conservation of biodiversity over the entire area of influence is unlikely to be fully addressed*. Moreover, mitigation costs to ensure protection and sustainable management of outstanding biodiversity go beyond the scope of individual infrastructure investment projects.

The objective of the full scale project proposal - *to be formulated with Block B funding requested here* - is to contribute to the protection of regionally and globally outstanding ecoregions through the promotion and implementation of conservation and sustainable uses of biodiversity in specific sites within these ecoregions. The full-scale project will include a comprehensive programme of activities that are both complementary and incremental to on-going initiatives and programmes, thereby providing a solid framework for attracting additional funding from other sources. The full project will take action at two different but complementary levels:

- 1) The first level will be the implementation of specific biodiversity conservation activities in selected sites within the outstanding ecoregions. These activities, to be developed with the participation of a wide range of stakeholders including private land owners, producer organisations, indigenous groups, municipal and state governments and NGOS, will include: demarcation of protected area boundaries; development and implementation of management plans for existing or proposed protected areas (depending on the site) and their corresponding buffer-zones, as well as demonstration and promotion of sustainable uses of biodiversity in multiple-use areas and buffer zones.
- 2) The second level of action will focus on strengthening national capacity for biodiversity

management and long-term use in order to ensure the long-term sustainability of project objectives at the pre-selected locations. This level of action will include revision of policy frameworks to provide appropriate incentives and regulatory measures to support sustainable resource use and conservation in protected areas and buffer zones; the strengthening of decision-making tools for resource management, land-use planning, and conservation; the establishment and/or strengthening of monitoring systems to ensure compliance with existing policies and regulations; the promotion of increased stakeholder participation in conservation and resource management activities, focusing especially on the private sector; the development and implementation of long-term funding mechanisms for protected areas administration, including support to the existing Special Fund for Protected Areas; and the development and implementation of information, education, and dissemination networks in protected areas.

Background

The agricultural and forestry sectors form a major part of the Paraguayan economy. These sectors generate 30% of the GDP, employ 40% of the work force, provide 90% of registered merchandise exports and raw materials for industry. Growth in these areas has traditionally occurred at the expense of the environment, however, since the end of the military regime in 1989, Paraguay has made substantial changes in its approach to natural resource management and many sectoral policies have come under review. The creation of *SSERNMA (Sub-secretariat for Natural Resources and the Environment)* marked an important step forward. Under the auspices of the Ministry of Agriculture, *SSERNMA* has a broad range of environmental responsibilities including the protection of forests, wildlife and national parks through its *National Parks and Wildlife Directorate (DPNVS)*.

The *Master Plan for the National System of Protected Areas (SINASIP)* was drafted in 1993³. This provided a strategic framework for the establishment of a National System of Protected Areas by identifying priority objectives, ranging from conservation of core areas, buffer-zone management, and sustainable use of natural resources, to sectoral policy review, development of alternative uses of biodiversity resources, and the promotion of stakeholder participation in the administration and management of the Protected Area System. In addition, different management categories were established for the areas conforming the SINASIP protected area network, ranging from National Parks with restricted access and land-use to Specially Managed Reserves in which the primary objective is sustainable land-use practices. Existing and proposed protected areas were classified under different management categories depending on the natural attributes of each region and on an analysis of biological diversity and ecological value.

SINASIP currently consists of 22 government and 6 privately managed protected areas covering approximately 3.13% of national territory. The Master Plan identifies an additional 16 areas (in both government and privately owned lands) requiring protected status which would elevate coverage to approximately 9.8% of total national territory. Even though the formal legal framework for the SINASIP is established in Law N° 352/94, implementation of the existing system is hindered by weak basic infrastructure, lack of definition of the physical boundaries of the protected areas, insufficient

³ This was led by the DPNVS with the assistance of the NGO, Fundación Moises Bertoni, USAID, the Nature Conservancy and with the participation of a broad range of actors including government officials, consultants, NGOs, academics and park guards.

human and financial capacity for enforcement, as well as ineffective inter-sectoral and inter-institutional collaboration and regulatory frameworks. Additionally, the broader legal framework for natural resource management, and the capacity of the recently created *DPNVS*, is still insufficient to meet the demands of increased environmental degradation associated with sectoral development.

Furthermore, the incorporation of environmental or biodiversity concerns into sectoral and development planning remains incipient, and as such, is rarely included in traditional decision-making tools (sectoral plans, EIA, cost-benefit analysis, national accounts, land-use planning etc.). Progress in this field is, however, being achieved through the formulation of a *National Strategy for the Protection of Natural Resources - ENAPRENA* - currently being developed with funding from GTZ. This project has undertaken a series of participatory diagnostic studies involving over 200 people in different fora and inter-sectoral and inter-institutional working groups to define sectoral guidelines for bringing productive activities more in line with sustainable development objectives. Diagnostic studies include the agricultural, live-stock and forestry sectors; industrial and urban contamination; and the river systems.

Selection of Areas.

The pre-selected sites and corresponding ecoregions are:

- **Interior Atlantic Tropical Moist Broadleaf Forest (IATF):** A Specially Managed Reserve along the divide between the Parana and Paraguay river basins, connecting existing protected areas and their corresponding buffer zones, complementing existing initiatives down river and providing greater biodiversity conservation value than that of the existing fragmented areas alone.
- **Cerrado:** The northern area of the Cerrado ecoregion bordering Brazil, including the proposed *Estrella Scientific Reserve*. Management plans for the reserve will be strengthened and demonstrations of sustainable uses of biodiversity conducted.
- **Chaco Savannah:** The region on the North West border of Paraguay with Bolivia, including the existing National Park *Defensores del Chaco*, linked to two new parks: *Guarani-Timane* and *Daniel Caceres*.
- **Chaco Savannah/Pantanal:** The region in the extreme North East of Paraguay bordering Bolivia and Brazil, including the proposed *Rio Negro National Park* which houses representations of the Chaco Savannah ecoregion and the transitional zone to the Pantanal. Project activities will focus on the formulation and implementation of management plans and the promotion of sustainable uses of resources in the buffer zones of this complex.

The pre-selected areas mentioned above were identified jointly by the *DPNVS* and the *Biodiversity Coordination Team (BCT)* which serves as the Steering Committee - composed of three NGOs⁴ and the University of Asuncion - for the development of the National Biodiversity Programme in Paraguay. This preliminary selection was effected on the basis of the following criteria: existing or proposed protected areas of the SINASIP falling within ecosystems classified as of highest regional priority for conservation; existing and potential threats to biodiversity from infrastructure projects; complementarity with on-going initiatives from national, bilateral and multilateral sources, and; stakeholder endorsement and potential for active involvement in the development and implementation of the full project in each

⁴ Alter Vida (Centre for Studies and Capacity Building for Ecodevelopment), CETEC (Centre de Rural Community Education, Training and Technology), Fundacion Moises Bertoni-For Nature Conservation

area. Based on this assessment, four specific sites were identified as being of the highest priority, where urgent incremental actions would be required to complement existing baseline activities in the generation of global environmental benefits.

i) Specially Managed Reserve Along the Divide between Parana and Paraguay River Basins - Interior Atlantic Tropical Moist Broadleaf Forest (IATF)

The IATF ecoregion is the most densely populated area of the country with the most intense agricultural activity and the highest biodiversity. Deforestation has resulted mainly from mechanised land clearing on large private holdings for intensive agriculture, and small-scale clearing by peasant farmers from Paraguay, and the large numbers of settlers from Parana and Mato Grosso do Sul, Brazil. Timber exploitation has further accelerated deforestation with over 250,000m³ of round wood being processed in 1990 with little reforestation. While the export of unprocessed logs is prohibited by law, an estimated 600,000m³ of logs are smuggled to Brazil from this region each year.

The region has few protected areas under direct government management and these are instituted by decree only, with the land being privately owned. A variety of different privately owned reserves and others under the administration of the *Itaipu Binational Park* are already established. Recognizing the urgency of protecting this region, the government has recently initiated several important sustainable development projects.

One is a \$US 50 million World Bank National Resource Management Project which will promote improved productivity agricultural systems that incorporate the management of natural resources via appropriate land use planning. It will use rainfall catchment areas (micro-cuencas) as the basic planning unit and has five major components; agricultural development; infrastructure development; support to indigenous communities; institutional development; and pilot agricultural credit. A sub-component of the agricultural development component will establish a \$US 5.0 million pilot programme (Natural Resources Conservation Fund, FOCORN) for the promotion of technology designed to sustain agricultural production. A protected area sub-component (\$US 5 million), will include the strengthening of a national park covering 78,000 ha in the Cordillera de San Rafael, priority studies for protected areas in the catchment areas of the rivers Monday and Tembey, and the formulation of management plans for the Kuri'y (2,000 ha) and Nacunday reserves (2,000 ha) (map 1).

Other relevant initiatives in the region are associated with infrastructure projects financed by the IDB, with components addressing protected area management (Cerro Sarambi region, \$US 9 million, Ybytyruzu National Park region, \$US 1.8 million, and Laguna Blanca region, \$US 38,000). Others include localized projects supported by GTZ (Rural Development Project San Pedro de Norte), the European Union (agrarian colonisation in San Pedro de Norte and Caaguazu-support in natural resource use); and the Spanish Agency for International Co-operation which focuses on the recovery of the historic centre in the Ybycui National Park and the strengthening of the Park's Visitor Centre (map 1).

Additionally, the Itaipu Binational Park will spend some US\$ 5 million per year over ten years on sustainable development activities in the area of influence of the Itaipu dam. The well-known NGO Fundacion Moises Bertoni (FMB) owns and manages *Reserva Natural del Bosque Mbaracayu* and has acquired important experience with buffer zone management and the development of incentives and methods for implementing forest reserves on private land.

These commitments illustrate the national and international efforts to address the advanced environmental degradation and loss of biodiversity in this region. However, the magnitude of the threats to this ecoregion call for more concerted action if this area of unique and high biodiversity is to be successfully conserved. In view of the land-tenure regime in the IATF ecoregion, reflecting a mix of government and privately owned land, the most effective control over land-use is to decree a large area under the SINASIP management category of *Specially Managed Reserves*.

The primary objective of this category is to promote sustainable methods of land use, restore degraded areas, and control erosion and sedimentation to ensure effective watershed management. With this in mind, and aiming at complementing existing activities, the full project will decree a *Specially Managed Reserve* along the divide between the Paraguay and Parana Rivers. This proposed reserve will effectively create a *multiple use corridor* within the Interior Atlantic Forest, linking existing protected areas and their corresponding buffer zones, thereby enhancing the biodiversity conservation value provided by the existing isolated protected areas.

The reserve will include a mosaic of areas where sustainable use of biodiversity resources will be demonstrated, promoted and implemented around core areas of restricted access and use. As well, it will complement the on-going infrastructure and resource management initiatives described above by protecting crucial headwater areas up-river from these projects and demonstrating alternative land-use practices that can be replicated throughout the entire area. While duplication will be avoided by concentrating project activities up-stream from these projects, Block B preparatory activities will include a more detailed analysis of on-going sustainable development activities to ensure maximum complementarity and incrementality.

ii) *The Estrella Scientific Reserve (Cerrado)*

This region has been less exploited than the areas of the IATF, however, over-exploitation of resources is now causing expansion of the agricultural frontier. Traditional extensive cattle rearing in this area is now changing to semi-intensive farming with more environmentally aggressive technologies, threatening existing biodiversity. Unplanned colonisation, prospecting and mineral exploitation, and the transoceanic highway and the bridge over the River Apa will further increase pressure on biodiversity.

Only 10,273 ha are under protection in this ecoregion in the ecological Reserve Serrania de São Luis. There are relatively few biodiversity conservation initiatives in this region with the exception of a feasibility study for the Cerro Sarambi National Park, under an IDB loan for the consolidation of rural settlements. In view of this and the high biodiversity value of the region, a further 50,000 ha has been proposed in the Master Plan to expand the existing scientific reserve with the main objective of maintaining samples of ecoregions and genetic resources. The area identified for this reserve (Estrella) has high habitat biodiversity, areas of deciduous dry to sub-humid forest and cerradon, abundant wild life including the species *Amburana cearensis* (trebol) which is in severe danger of extinction. The full project, to be developed with Block B funding, will review the limits of the proposed reserve and develop and implement its management plan. It will also set up demonstration projects in the buffer zone around the reserve with selected stakeholders to demonstrate alternative land-use practices in the Cerrado and incorporate biodiversity considerations into the definition of appropriate criteria and guidelines for the proposed agrarian reform in the area.

iii) *The Transfrontier National Park Complex Guarani-Timane/Daniel Caceres*

The Chaco region of Paraguay, covering 61% of the territory and supporting only 2.5% of the population, is considered two different ecoregions by the recent World Bank Study. Approximately two thirds of this region corresponds to the Chaco Savannah ecoregion classified as the highest regional priority for conservation in this recent study. This ecoregion is known in Paraguay as the *Dry Chaco*. Although classified as savannah in the World Bank study, the dominant vegetation of this region is dense xeromorphic forest characterised by a semi-continuous tree layer of 8-12 metres with species such as *Aspidodosperma quebracho-blanco* (quebracho-blanco) *Choris insignis* (samuhu), numerous succulents, a shrub layer of 4-8 metres, and scattered emergent trees reaching 15-20 metres. It has high densities of mammals including endemic and sub-endemic species, e.g. *Eudromia formosa*. Although sparsely populated, the region suffers from extensive deforestation and cattle-rearing that is causing rapid environmental degradation, soil erosion, salinisation and in some areas almost desert-like conditions. Hunting continues to threaten wildlife despite difficult to enforce regulatory legislation. The over-exploitation of the eastern region of Paraguay has led to the agricultural frontier expanding into the Chaco. These pressures are further increased by a range of infrastructure projects.

Only 0.96% of the whole Chaco region is classified as protected. The SINASIP Master Plan has proposed the creation of 10 new areas in the entire Chaco, eight of which are localised in the Chaco Savannah. In the light of this deficiency, and the uniqueness of the Chaco ecoregion, the government has taken important steps to increase the conservation of this area. One initiative is the European Union's 14.8 million ECU\$ project for the "Lasting Development" of the Chaco Region (Desarrollo Duradero del Chaco). This project seeks to promote the development of both the Savannah and Humid Chaco regions through land-use planning, and promoting sustainable production with special emphasis on ethnic groups. The project will start with three subregional units situated in the areas of Villa Hayes, Marischal Estigarriba and Fuerte Olimpo (map 1). It is presently starting-up the initial 18 month planning period in which the government will develop a land-tenure programme and the project its Operational Workplan. Another initiative is the Chaco Environmental System Project funded by the German Humboldt Geophysics Institute which is undertaking a land-use zoning of the Chaco based on data on soils, vegetation, geology, hydrology and present land-use. The GTZ financed Experimental Station in the Central Chaco is working on alternative agricultural systems.

While these projects represent substantial progress, little is being done to identify or demonstrate alternatives uses of the region's biodiversity. In keeping with the SINASIP policy of: protecting transfrontier areas as a cost-effective means of protecting areas large enough for the long-term conservation of genetic resources, the selected site is situated in a border-zone corresponding to the National Parks *Guarani-Timane* (470,940 ha) and *Daniel Caceres* (604,770 ha) located on the north-western frontier with Bolivia and adjacent to a recently created Bolivian National Park and extending to the existing Paraguayan National Park "Defensores del Chaco". The proposed area will join the existing parks on both sides of the border and create a protected area of 1,855,710 ha in Paraguayan territory alone. Project activities will include strengthening of management plans (including demarcation requirements), and demonstration projects of sustainable use of biodiversity in the buffer zones based on experimental pilot experiences in Argentina.

(iv) *Trinational National Park, Trans-ecoregion Complex Rio Negro (Chaco Savannah/Pantanal)*

The second area is the SINASIP-proposed Rio Negro National Park (350,000 ha) located in the north-

east of the Chaco Savannah on the Bolivian and Brazilian borders. Recently declared a RAMSAR site⁵, this area supports one of the highest genetic diversities in the world⁶ and covers the transition zone between the Chaco Savannah and Pantanal, housing examples of both terrestrial and aquatic flora and fauna from both these outstanding ecoregions. It is currently in a good state of conservation but is suffering growing threats from cattle rearing, deforestation from the influx of Brazilian settlers, and infrastructure projects. Bolivia has recently declared adjacent territory as a protected area and negotiations with Brazil are underway to declare a similar reserve. The full project would formulate and implement a management plan and promote sustainable use of resources in the buffer zones of this complex.

Potential stakeholders for project development and implementation in the selected sites of the Chaco would include private landowners and local government institutions, the Paraguayan Association of Indigenous Groups and specifically the Chamacoco and Ayoreo groups in the Rio Negro region and the Ayoreo, and the Chiriguano-Guarani and Tapiete-Guarani groups in the *Daniel Caceres/Guarani-Timane* complex, the Livestock-Rearing Association and the NGOs; *Fundacion para el Desarrollo Sostenible del Chaco* and *Fundacion Chaco*, among others.

II. Description of Proposed PDF Activities

The full project will take action in selected globally and regionally significant sites to conserve core areas of restricted-use, and promote, demonstrate and implement sustainable biodiversity use in their corresponding buffer-zones. It will also undertake a series of actions aimed at strengthening local capacities for integrated biodiversity management. The pre-selection of these priority sites has been effected on the basis of technically sound documentation and with the participation of representatives from government, NGO and academia. However, several issues must still be addressed with Block B preparatory funding before the full project can be formulated in detail.

PDF resources will be used to:

- Confirm pre-selected sites at both local and national levels, and identify potential partners for project implementation at each site, especially among the private sector.
- Undertake a stakeholder analysis to identify the broad range of actors that will participate in project design, implementation and evaluation;
- Carry out stakeholder consultations at national and local levels to discuss and agree upon project strategy, activities and outputs;
- Detail the exact location and extension of pre-selected sites through field assessments to up-date existing SINASIP information (1993) on each proposed area. This will include; confirming the conservation status of each area and adjusting proposed boundaries as necessary; reviewing previous

⁵ The Convention on Wetlands of International Importance, Especially Waterfowl Habitats - RAMSAR- (Convention named after the Iranian town where it was opened for signature on 2 Feb 1971) aims to the halt of decline of wetland habitats and wild life.

⁶ Vavilov 1951 Atlas do Meio Ambiente do Brasil EMBRAPA 1994

ranking of priority conservation measures for each location; and assessing current opportunities and feasibility for mitigation programmes.

- Evaluate and identify, *in close collaboration with on-going programmes and initiatives*, potential mechanisms for the promotion of alternative land-use practices and sustainable resource use in buffer zones areas (e.g. fiscal mechanisms such as tax relief schemes and economic instruments such as incentives for specific land-use practices).
- Evaluate and identify potential alternative uses of biodiversity in each selected site and formulate a programme of demonstration projects to be implemented in the buffer zones of the selected sites.
- Further expand on the initial baseline scenario analysis undertaken in preparation for this Block B proposal. This will include a detailed analysis of relevant on-going initiatives and their corresponding workplans to ensure that project activities are not only complementary but scheduled so as to maximize mutual benefits (e.g. timing of assessments, workshops and training courses, locations of demonstration projects, etc.). In addition, special attention will be placed on the capacity of potential implementing partners (institutions, NGOs, private sector, local communities). This will permit a more precise definition of institutional responsibilities for specific activities and scheduling these so as to avoid exceeding institutional absorptive capacity.
- Formulate a detailed programme of action, based on the results of the above activities, composed of conservation sustainable use measures in each of the four selected sites. This will include an estimation of total and incremental costs as well as the recurrent costs of sustaining project activities.
- Identification of relevant ecosystem management practices from neighbouring countries in order to replicate best practices, e.g. Argentine Chaco.
- Formulate, on the basis of a cross-sectoral needs analysis, a training and institutional strengthening programme for integrated biodiversity management and conservation planning to ensure the long-term sustainability of the proposed site-specific actions. This programme, to be implemented by the full scale project, will include:
 - a) Review of key sectoral policies and regulatory frameworks identified as the causal and proximate causes of biodiversity loss in each ecoregion;
 - b) Strengthening of planning and decision-making tools (for both local and national government counterparts as appropriate) to include biodiversity concerns in sectoral development, e.g. accounting, cost-benefit analysis and E.I.As.
 - c) Strengthening monitoring systems to ensure compliance with existing policies and regulations, e.g. up-dating key equipment and Monitoring mechanisms; introducing new tools such as systematic environmental auditing; revising systems of penalties and fines for infringements; and promoting new mechanisms for co-participation in monitoring activities.
 - d) Expanding and/or creating information and dissemination networks in protected areas.
 - e) Establishing and/or strengthening long-term funding mechanisms for recurrent costs of protected

areas management. This will include strengthening the *Special Fund for Protected Areas* created by the Law No 352/94 with funds derived from taxes, contributions, royalties, resources created by special laws, subsidies, donations and indemnizations.

- Develop a comprehensive resource mobilization strategy, including identification of national and international co-financing to complement incremental and baseline funding;
- Definition of the project's execution and implementation modalities, including mechanisms for stakeholder participation in project design, management and decision-making;
- Develop a comprehensive monitoring and evaluation programme;
- Obtain technical reviews from experts on the various components of the finalized project proposal, including the incorporation of proposed revisions and ensuing recommendations;

The above mentioned PDF financed activities will be carried out under the supervision of a Project Co-ordinator, by a series of national consultants and NGOs and regional or international experts, where necessary. The Project Co-ordinator will report to a Steering Committee composed of *DPNVS* and the *Biodiversity Co-ordination Team*. This unit will consult with representatives from the principal stakeholder groups. GEF Implementing Agencies and interested bilateral agencies will also be formally requested to follow the progress of project development and advise the Steering Committee as needed. Consultation processes will be greatly facilitated by using the fora and working groups set-up under the GTZ funded ENAPRENA project. These fora include representatives from governmental organisations, NGOs, departmental and municipal organisations, international organisations, indigenous communities and the private sector. They have met often since 1995 to analyse and discuss diagnostic documents for a variety of productive sectors the results of which have been consolidated into the "*Sectoral Guidelines for a National Natural Resources and Environment Policy*". These guidelines will form the basis of an Environmental Strategy to be completed by the on-going GTZ project and for which the working groups and fora will remain constituted.

The final project proposal will be developed through a series of stakeholder workshops in which the assessments, products and activities described above will be analysed, discussed, and agreed upon. A final workshop with stakeholders, potential collaborators and funding agencies - bilateral, multilateral and GEF Implementing Agencies - will be held to review the final integrated proposal.

III. PDF Outputs

The principal output of the PDF Block B will be a detailed project document and brief - *developed with the full participation of a wide range of stakeholders* - for presentation to the GEF and interested donors for the conservation of regionally and globally outstanding ecoregions through the promotion and implementation of integrated conservation planning and buffer-zone management. Significant outputs will include a series of assessments relating to specific project components, and consultative workshops designed to obtain consensus on project objectives, activities, and outputs, as well as to determine implementing partners and potential co-financiers. An important by-product of the PDF will be the strengthened capacity of public and private stakeholders for biodiversity planning and programming through their participation in project development activities.

IV. Eligibility

Paraguay ratified the Convention on Biological Diversity on December 14, 1993.

V. National Support

National commitment to biodiversity conservation is clearly exemplified by the development of the Master Plan for the National System of Protected Areas (SINASIP), the subsequent creation of the System through the passage of Law No 352/94 and the baseline activities already underway in the country to implement this Plan. The final GEF proposal, to be developed through Block B funding, will request financing for the incremental activities identified as necessary for the protection of regional and globally important biodiversity presently under increased threat. Biodiversity management, including regulatory frameworks, sustainable land-use, and conservation practices, must be incorporated into sectoral development activities, expected to increase in the aftermath of planned infrastructure projects. This proposal has been presented by the Ministry of Agriculture and Livestock through the Ministry of External Affairs.

VI. Justification

The full scale project will help protect globally important biological diversity within the framework of Paraguay's National System of Protected Areas. The project will include a series of activities to promote the conservation of biodiversity-rich sites in globally outstanding ecoregions, the implementation of sustainable biodiversity use in buffer zones around these areas, and the required capacity building activities to ensure the long term sustainability of project objectives. The project will involve a variety of local and national stakeholders in conservation and alternative economic activities, promote partnerships to address underlying causes of biodiversity loss, disseminate information to decision-makers and stakeholders, promote the incorporation of biodiversity values into the productive sectors, and introduce economic incentives for conservation and sustainable use of biological diversity. In this sense, these activities fall within the priorities outlined in the *GEF Operational Strategy* and within those outlined for the relevant operational programmes for semi-arid and forest ecosystems.

VII. Items to be Financed

BUDGET BY ACTIVITY

	Description	Cost (US\$)
Activity 1	Needs assessment and consultation meetings in four locations to detail and confirm pre-selected sites and identify stakeholders	90,000
Activity 2	Evaluation and selection of mechanisms for promotion of alternative land-use in buffer-zones	25,000
Activity 3	Selection of alternative-uses of biodiversity for demonstration projects in buffer-zones	35,000
Activity 4	Evaluation of baseline scenarios in selected protected areas and buffer zones of on-going activities to ensure complementarity and to estimate incremental costs.	25,000
Activity 5	Develop a training programme in resource conservation and management to ensure the long-term sustainability of site-specific actions (including design of management tools such as monitoring systems, information and dissemination programmes and instruments for long-term funding of conservation measures)	35,000
Activity 6	Resource mobilisation to complement incremental and baseline funding	10,000
Activity 7	Workshops and consultations with project stakeholders to define and agree on project-related activities and participation in project execution.	40,000
Activity 8	Formulation of full project, including PDF co-ordination, technical reviews, definition of execution and implementation arrangements and monitoring and evaluation programmes.	45,000
TOTAL		305,000

BUDGET BY INPUT

Description	Duration	Cost
Project Co-ordinator (includes Travel/DSA)	7 months	40,000
Resource Economists(includes Travel/DSA)	3 months	26,000
Participation/Rural Sociologist (Local)	3 months	10,000
Protected area/Buffer zone specialists (includes Travel/DSA)	5 months	35,000
Legal Policy (Local)	3 months	10,000
Capacity Building Needs Assessment/Environmental Management Expert	3 months	26,000
Economist/Market Research (Local)	3 months	10,000
Site Confirmation workshops (4), Project Design Consultative Workshops (4) (Local & National including travel & logistical costs), Donor Round Table (1)	Periodic	100,000
Administrative support (Secretarial, supplies, communications)	7 months	20,000
Materials (includes maps, reports, bibliographic materials, etc.)	N.A.	20,000
Technical Review/Advisory Support (Expert panel)	N.A.	8,000
TOTAL	N.A.	305,000

* Where possible national consultants will substitute for international ones.

MAP I

PARAGUAY - ECOREGIONS OF GLOBAL IMPORTANCE, PRESELECTED SITES AND MAIN CONSERVATION RELATED PROJECTS

