

PROPOSAL FOR REVIEW

PROJECT TITLE:	PANAMÁ ATLANTIC BIOLOGICAL CORRIDOR PROJECT	
GEF FOCAL AREA:	Biodiversity	
COUNTRY ELIGIBILITY:	Convention ratified January 12, 1995	
TOTAL PROJECT COSTS:	US\$ 39.5 million	
GEF GRAND TOTAL:	US\$ 8.6 million	
GEF FINANCING:	US\$ 8.3 million	
COUNTERPART FINANCING:	US\$ 8.4 million	
IBRD LOAN:	US\$ 22.5 million	
ASSOCIATED IBRD PROJECT:	Rural Poverty And Natural Resources Project	
GEF IMPLEMENTING AGENCY:	World Bank	
COMPLEMENTARY PROJECTS:	Donors/ANCON	US\$ 2.5 million
	GEF:	US\$ 2.4 million
	ITTO:	US\$ 2.2 million
	USA:	US\$ 19.0 million*
	USA/NC/GOP	US\$ 5.0 million*
	* mostly Panama canal watershed	
LOCAL COUNTERPART AGENCY:	Institute of Renewable Natural Resources (Instituto de Recursos Naturales Renovables, INRENARE)	
ESTIMATED STARTING DATE:	October 1997	
PROJECT DURATION:	5 years	
GEF PREPARATION COSTS:	US\$ 285,000 (PDF Block B Grant)	

COUNTRY AND SECTOR CONTEXT

Country Context

1. Despite being a country with relatively high per capita income (US\$ 2,580 in 1994), Panama has one of the most unequal distributions of income in Latin America. Almost half of the Panamanian population is poor, and 23% live in extreme poverty. According to the 1991 national household survey, 4 percent of income accrued to the poorest 20 percent of the population in 1979, ten years later the percentage had fallen to 2 percent. The majority of the poor and extreme poor live in rural areas, constituting two-thirds of households. At least 40 percent of rural households live in extreme poverty versus 17 percent for urban households. Women are disproportionately affected by poverty. Nationwide about 70 percent of the households of rural poor are headed by women. Since the 1991 survey only includes households with known income, some of the poorest groups such as subsistence households and indigenous populations are excluded. These figures thus understate the actual situation.

2. Zones of rural poverty tend to be in or near ecosystems which are the most or least degraded. The former represent the degraded uplands of the central provinces and the latter represent the ecologically fragile humid forests and montane forests of the Atlantic and border zones. This relation of poverty and habitat status is not coincidental. Historically, Government has invested comparatively little to improve living standards or economic opportunities for the rural poor. Insufficient investment, particularly in the heavily populated rural areas of the Pacific, has contributed to resource degradation and emigration toward frontier zones. High population growth rates at the frontiers and in forested zones further adds to the pressure. Additionally, resource utilization has been characterized by unmanaged exploitation with few resource rents accruing to locals; with a few notable exceptions (e.g., Kuna Yala). This context -- low rural investment, non-sustainable resource exploitation, and the failure of local communities to capture benefits from resource use -- has ensured low productivity and incomes in rural zones. They, in turn, have reinforced the cycle of resource degradation, poverty and migration.

Biodiversity In Panama

3. The Isthmus of Panama is the narrow terrestrial bridge which has united the continental masses of North and South America and separated the waters of the Pacific and Atlantic oceans since the Pleistocene. This, and other biogeographic and climatic factors, combine to make Panama a high biodiversity country where multiple habitats and microhabitats greatly enhance the small country's (75,517km²) biological diversity and importance.

4. From a conservation perspective, Panamá is the only Central American country with globally important tropical moist broadleaf forest (Chocó/Darién moist forests). On a Latin American scale the tropical moist broadleaf forests of the Talamancan mountain range and the mangroves of Bocas del Toro/Bastimentos Island/San Blas are considered to be "high" priority for biodiversity conservation; indeed, two-thirds of Panama falls either into the "highest" or "high" priority category. A total of 24 distinct landscape units are recognized, within which a considerable number of endemic species are found. In terms of species diversity among

mammals, birds, reptiles and amphibians Panamá is first among the countries of Central America and the Caribbean; in terms of vascular seed plants it is second only to Costa Rica.

5. Panama's central cordillera and Atlantic region contain outstanding examples of relatively intact and healthy areas of global and regional biodiversity importance, which constitute a biological corridor. Among these are: (i) the Darién region's lowland rainforests, riverine systems, wetlands and coastal areas; (ii) the Province of Bocas Del Toro whose archipelagos have been described as the "Galapagos Islands" of the next century due to their biological richness, diverse habitats, and importance for migratory populations of manatees and green turtles; and (iii) the Talamanca Range, shared between Panama and Costa Rica, has been called the highest biodiversity region on the Central American isthmus, is an area of high endemism and encompasses the largest complex of protected areas and intact ecosystems within one bioregion in Central America including La Amistad International Park.

6. Certain factors have favored Panama over its Central American neighbors in successfully preserving biodiversity in the Atlantic coast. These include: (i) a services based economy that was able to absorb considerable surplus labor from rural areas into the Panama City, which contains today about half of the Panamanian population; (ii) the inaccessibility of most of the Atlantic coast, due to the non-existence or poor state of roads, helped reduce migratory and logging pressures; (iii) protected areas that for the most part are managed with a minimum administrative presence; (iv) the Kuna reserve (Kuna Yala), a world-recognized success which gives the indigenous communities (the Kunas) full territorial and natural resource rights and which has been protected by the Kunas from potential threats; and (v) the Panama Canal watershed's protected areas and watershed protection programs which assure the water supplies of the cities of Colon and Panama and of the inter-ocean canal. The latter is a \$400 million per year revenue operation of tremendous global economic importance where GOP and donors have invested considerable resources in its protection.

7. Today, however, threats are increasing to this almost uninterrupted corridor and unless incremental interventions are put in place, global biodiversity will suffer from the degradation of important sites and the fragmentation of the corridor. The principal threats (actual and potential) to the conservation of the landscapes forming this corridor are:

(a) The advance of the agricultural frontier and spontaneous colonization, which affects an estimated 50,000 to 70,000 ha annually, has been rapidly closing in on the country's forests and protected areas, fueled by outmigration of poor farming families from the Pacific zone to the forests and protected areas of Darién, Colón, Chiriqui and Bocas Del Toro Provinces; presently the agricultural frontier has advanced from the south to within some 20 to 30 km of the Atlantic coast in the Provinces of Colón and Cocle.

(b) New road projects will increase access to the unprotected and intact ecosystems of the Atlantic. Among the relevant projects are the completion of the Interamerican Highway through the Darién Gap, the El Llano-Cartí road into the Kuna Yala, the Almirante-Chiriqui Grande Highway in Bocas Del Toro, and to a much lesser extent, the Risco link to the proposed Almirante-Chiriqui Grande Highway, and the Boquete-Cerro Punta road.

(c) Mining concessions (mostly still at exploration stage) in the mountainous zones of Veraguas, Chiriquí, San Blas, and Darién and the coastal lowlands of Colón, considered to be one of the last major unexplored porphyry copper-gold belts in the world.

(d) Native forest exploitation, with 63,000 ha under extraction permits in Darién and Chepo, executed with little environmental oversight and often resulting in forest damage and subsequent colonization due to the improved access and reduced efforts required for forest clearing.

(e) Wildlife loss through habitat conversion and fragmentation associated with logging, colonization, and agriculture practices of indigenous groups in some areas (e.g., upper watersheds in the Ngobe-Buglé comarca); and hunting pressures, from collection for pet sales and for food (e.g., market hunting of collared and white-lipped peccary in the Darién).

(f) Other threats include: (1) potential for contamination of coastal waters from petroleum wastes and spills in the canal and the cross-country pipeline, (2) watershed degradation from deforestation and sloping land agriculture without appropriate soil and moisture conservation practices; (3) a proposed hydroelectric complex in Bocas Del Toro (Rio Estí, Gualaca, Teribe-Chaguinola, Sixaola) which would reportedly inundate areas of important plant resources; and (4) use and poor handling of agrochemicals (especially, the organophosphates, organochlorines and heavy metal-based fungicides) in rural zones contaminating water supplies and affecting human and wildlife health.

8. Panama has recently taken important steps in reforming policies that affected natural resources negatively, including reduction of trade protectionism that promoted non-competitive, environmentally damaging productive activities; reducing the urban bias in public expenditures; and reforming agricultural, livestock, forestry and land policies that encouraged deforestation. In addition Panama has put in place important pro-biodiversity legislation including the legislation creating the National Protected Area System (1994), the Environmental Education Law (1992), the Forestry Law (1994), the EIA/Environmental Framework Law (1994); the Wildlife Law (1995); and adherence to international treaties (e.g., Convention on Biological Diversity, RAMSAR, and CITES). Furthermore Panama has initiated several conservation and sustainable development projects that directly or indirectly contribute to biodiversity conservation including the GEF/UNDP project focused on the Darien buffer zone, the USAID/NATURA fund for the Panama Canal watershed, IFAD sustainable rural development projects, GTZ community resource management projects and ITTO forest management projects.

9. To protect what remains of the country's healthy ecosystems, government has set aside 23% of the national territory to form the National Protected Area System (NAPAS). A review of the conservation status of the life zones represented in the NAPAS shows: (a) There is relatively little intact forest within the tropical dry forest zones, and premontane dry forest (zones traditionally favored for human settlement); and (b) significant areas of humid tropical forest, premontane wet forest, premontane rain forest, lower montane wet forest, lower montane rain forest, and montane rain forest remain relatively undisturbed. However, very few protected areas benefit from adequate management or protection. Within the 14 National Parks

only 86 guards are assigned, each pair of which on average would need to cover over 300 km². Too many of the protected areas are small, making their core areas vulnerable to outside activities and ineffective as refuges for larger mammals and birds (e.g., Baird's tapir and the harpy eagle); over two-thirds of the management units in the NPAS are smaller than 35,000 ha.

10. The national government, through INRENARE, is building on previous work under the Tropical Forestry Action Plan and developing three policy/strategy documents: (i) a National Biodiversity Strategy (GEF funded enabling activity through UNEP); (ii) a global strategy for INRENARE within a framework for sustainable management of the nation's natural resources; and (iii) the recently completed Regional Biological Corridor Plan (GEF funded through the PDF for the Mesoamerican Biological Corridor initiative, which is managed through UNDP) with which this proposal is consistent. The National Biodiversity Strategy and INRENARE's global strategy are to be completed sometime in early 1998. This project will be a major contribution to implementing biodiversity conservation and sustainable use of natural resources in the Atlantic corridor.

Regional Biodiversity Strategies

11. Panama's national efforts fit within the concept of the Meso-American Biological Corridor (MBC), a regional initiative whose objectives are to conserve a linked series of areas of global importance for biodiversity which extend from Southern Mexico to Northern Colombia, thus providing a critical biological link between the continental masses of North and South America. In cooperation with the Central American Commission on Environment and Development (CCAD), UNDP is now finalizing the Central American proposal to refine the definition of the regional activities needed to monitor and reinforce national actions aimed at establishing the MBC. In Honduras, the World Bank and UNDP are collaborating in the preparation of the GEF/IDA Biodiversity Conservation Project which supports Honduras' contribution to the MBC; in Nicaragua, the GEF/IDA Atlantic Biological Corridor project is under preparation to support Nicaragua's contribution to the MBC. In Costa Rica the protected areas system has recently been restructured with explicit "biological corridor" objectives.

12. The governments of Central America including Panama have established inter-regional coordination and prioritization mechanisms which create the needed foundation for realizing coherent biodiversity conservation programs. These mechanisms include the CCAD (currently headed by the Director General of Panama's Institute of Renewable Natural Resources) formed in 1989, the Central American Convention on Conservation of Biodiversity and Protection of Priority Protected Areas (1992) and the Central American Alliance for Sustainable Development (1994). In November 1996, the Central American Presidential Summit established the Central American Fund for Environment and Sustainable Development (FOCADES) to support regional objectives of the Alliance. In October 1996, the GEF Council approved a grant to FOCADES to support the incremental costs of activities which meet GEF operational program eligibility criteria.

PROJECT OBJECTIVES AND DESCRIPTION

13. The proposed integrated Rural Poverty and Natural Resources/Biodiversity Conservation Program (IBRD/GEF) would address the root causes leading to migration to, and expansion of, the agricultural frontier while enhancing on-site protection of areas of high biodiversity values both inside and outside of protected areas. It provides the Government of Panama with a coherent, multi-sectoral response to the interrelated issues of rural poverty, natural resources management, and biodiversity conservation. The project focuses one set of instruments on the poorer and more populous central and southern provinces of the Pacific to reduce the outmigration that pushes the agricultural frontier (and invasions of public forests and protected areas); and another set within the Mesoamerican Biological Corridor, to control access to high biodiversity areas and diminish both the pull factors and *in situ* threats to biodiversity.

14. Specifically, the integrated project would: (i) invest heavily in areas of origin of poor migrants; (ii) improve protection of protected areas; (iii) assist indigenous and non-indigenous dwellers of the Cordillera and Atlantic coast to protect and conserve biodiversity from external threats; (iv) increase awareness and promote land use planning to enlist local governments behind the principles of the corridor; (v) integrate the corridor concept and biodiversity measures within sectoral development planning and projects, such as roads; (v) build partnerships with commercial interests (e.g., mining) in the Atlantic to enhance biodiversity protection and private sector involvement in biodiversity management activities; and (vi) strengthen INRENARE and local government capacity to coordinate other on-going projects to ensure more coherent and efficient use of resources in pursuit of corridor objectives.

15. The principal objectives of the integrated project are: (i) to direct resources for investment and technical assistance towards priority areas of rural poverty to reduce natural resource degradation and outmigration; and (ii) to conserve biodiversity in areas of global and regional interest and maintain integrity of the MBC on the Atlantic Coast. To meet these goals the IBRD/GEF project would have seven closely related components:

(1) *Capacity Building for Rural Development* (US\$ 7.8 million; no GEF financing) to: train and provide assistance for community organization, to the Ministry of Agriculture's (MIDA) Department of Rural Development; training and equipping of MIDA, NGO and private sector service providers to carry out rural development project activities in the Pacific; and training and organization of communities to carry out participatory community diagnostics and develop community action plans (CAPs); provide technical services for preparation of eligible CAP subprojects eligible for FUSARD financing; provide technical assistance, training and extension services in natural resource management and sustainable production technology development. This component is to be financed entirely by an IBRD loan and GOP funds.

(2) *Fund For Sustainable Agricultural Development (FUSARD)* (US\$ 15.8 million, no GEF financing) to provide grant co-financing to eligible CAP subprojects in the Pacific. Eligible subprojects are those with natural resource and productive communal investment content; non-eligible projects (e.g., social infrastructure) would be submitted to the Fondo de Emergencia Social (FES), or other similar programs for financing. This component is to be financed entirely by an IBRD loan and GOP funds.

(3) *Pacific Zone Protected Area Management* (US\$ 0.7 million; no GEF financing) to: provide financing to priority protected with significant ecotourism potential (Cerro Hoya National Park and the Islas Cañas, Isla Iguana and Isla Taboga Wildlife Refuges) for development of tourism infrastructure, involvement of local communities, and adequate park and wildlife protection. This component is to be financed entirely by an IBRD loan and GOP funds.

(4) *Panama Atlantic Biological Corridor (PABC) Information and Planning* (US\$ 2.1 million; GEF US\$ 1.5 million) includes: (i) supporting studies to integrate the corridor into sectoral development planning and policies; (ii) elaboration and dissemination of corridor land use plans with and among local stakeholders (municipal, community); (iii) biodiversity monitoring to identify, monitor, and address threats to the corridor and biodiversity; and (iv) promotion, information dissemination and awareness building, nationally and among communities in the region on the PABC and biodiversity. *GEF funding of US\$ 1.5 million is requested for incremental costs of activities related to protection of the MBC.*

(5) *Capacity Building For Biodiversity Conservation and Sustainable Use* (US\$ 2.2 million; GEF US\$ 1.4 million) for: (i) strengthening indigenous and non-indigenous communities capacity to monitor resource use and to conserve and sustainably use biodiversity resources, with activities to be identified during further project preparation; (ii) creating and strengthening partnership mechanisms involving private sector, NGOs and local governments/communities to enhance protection of priority areas in the Atlantic corridor, land use planning and better land use practices; (iii) upgrading management norms on public lands in support of biodiversity conservation; and (iv) development of a revenue capture and financial management systems for protected areas. *GEF funding of US\$ 1.4 million is requested for incremental costs of activities related to protection of the MBC.*

(6) *Panama Atlantic Biological Corridor (PABC) Investment Program.* (US\$ 6.8 million; GEF US\$ 5.2 million) includes: (i) assisting indigenous communities in critical areas of the corridor to regularize their access and usufruct of lands;(ii) a grants program for local biodiversity conservation and management activities, targeted at incremental needs for conservation and protection of priority areas in the corridor and; (iii) strengthening management in priority protected areas within the corridor in cooperation with local communities, governments and private sector. *GEF funding of US\$ 5.2 million is requested for incremental costs of activities related to protection of the MBC.*

(7) *Project Management* (US\$ 4 million; GEF US\$ 0.3 million) includes the carrying out of all activities related to project management, administration, supervision and coordination including the operation of the financial mechanism FUSARD. A detailed monitoring and evaluation plan will be agreed upon during appraisal. *GEF funding of US\$ 0.3 million is requested for the incremental costs associated with the management of GEF funded activities.*

16. IBRD-financed investments within the joint IBRD/GEF program are expected to begin in the third quarter of 1997. Disbursements under the GEF grant are tentatively scheduled to

begin at the end of fourth quarter 1997 or beginning of first quarter 1998. Prior initiation of IBRD-financed activities would be advantageous to GEF-supported activities, as project coordination, management and administration arrangements will have been in place for several months.

DETAILED DESCRIPTION OF PABC PROGRAM

17. The GEF PABC Program would focus on those incremental activities required to establish and protect the Atlantic forest of the MBC in Panama. Whereas current efforts of government and donors in the country provide substantial support to conservation and natural resource related activities which are consistent with, and critical to the conservation of the Atlantic corridor, they are insufficient. The Biological Corridor, which covers 40% of the country, requires incremental investment resources to fill gaps critical to corridor establishment and protection existing in the current natural resource and rural development investment program. Detailed information on the PABC Program activities to be supported by GEF are provided below:

18. **Panama Atlantic Biological Corridor (PABC) Information and Planning** (US\$ 2.1 million; GEF US\$1.5 million) would focus on filling in gaps in knowledge critical to refining and negotiating the corridor framework with national and local level actors, would include:

(i) *Rapid Biodiversity Assessments* (US\$ 0.4 million; GEF US\$ 0.3 million) with biological, as well as economic and socio-cultural valuation, for specific sites which are threatened by economic developments from mining, transport, forestry, tourism, and fishing. The information generated would be essential to build consensus around appropriate land uses to mitigate biodiversity loss of key sites and reduce potential fragmentation of the corridor. Criteria for selecting the sites will be determined during final project preparation, and may include: contribution to integrity of corridor, degree of threat, opportunity to involve local communities and private sector, etc.

(ii) *Corridor Land Use Planning* (US\$ 0.6 million; GEF US\$ 0.4 million) for continued participatory planning of the corridor. The PABC is perceived as a matrix of land uses agreed with key stakeholders at the local, regional and national levels. Those agreements would be formalized through a series of instruments, including participatory environmental land use planning, within which roles, rights and responsibilities would be defined for local communities, NGOs, private sector, and national and local government.

(iii) *Biodiversity Monitoring* (US\$ 0.6 million; GEF US\$ 0.5 million) for establishing a “minimum required” system for biodiversity monitoring, which can detect changes in vegetative cover/land use, and population trends of key indicator species, in order to more efficiently focus limited resources on threats to the PABC. This system would be linked to both ongoing (e.g., standardized reporting by park guards and field foresters) and ad hoc (e.g., Rapid Ecological Assessments, discussed above, and biodiversity/ecological research) data collection mechanisms. This national monitoring effort would be closely coordinated with the regional monitoring scheme for the MBC supported by the GEF/CCAD/UNDP project

(under preparation) and would be based on a cost-effective division of labor. Details will be worked out during final project preparation.

(iv) *Corridor Promotion and Information Dissemination* (US\$ 0.5 million; GEF US\$ 0.3 million) to ensure high visibility for the corridor as a concept and a strategy for the integration of biodiversity concerns within national, regional and local development. Activities would be focused both at the general public as a means of creating public support for the corridor, as well as at key stakeholders to create an incentive for their participation within planning processes, partnerships and strategic alliances built around the conservation of key elements of the corridor (e.g., indigenous lands, protected areas, primary forests, critical watersheds, etc.)

19. **Capacity Building For Biodiversity Conservation and Sustainable Use** (US\$ 2.2 million; GEF US\$1.5 million) would focus on strengthening of government and non-government organizations and communities for the conservation and sustainable use of biodiversity resources in the PABC.

(i) *Training and Assistance to Government and Non-government Organizations and Communities* (US\$ 1.7 million; GEF US\$ 1.2 million) strengthening of key stakeholders through environmental education and selected training and capacity building exercises in order to facilitate their assumption of responsibilities in PABC corridor conservation and protection activities (e.g., in indigenous lands, protected areas, primary forests, critical watersheds, coastal zones, etc.). Specific programs would be targeted at (a) indigenous and non-indigenous communities in support of pre-defined, eligible activities clearly related to the conservation and sustainable use of biodiversity; (b) NGOs, private sector, and local governments in support of the PABC strategy ; (c) central government (non-INRENARE) on incorporation of biodiversity and corridor strategy into sectoral planning; and (d) human resource development for protected areas administration and management, including private sector partners, NGOs and local governments and communities. Specific efforts will be made during preparation to create alliances within the mining sector to strengthen environmental oversight and integration of biodiversity issues into mining practice through the private sector Mining Board and promotion of “model” practices.

(ii) *Modernization of Protected Area Management* (US\$ 0.5 million; GEF US\$ 0.2 million) including upgrading of management norms, assistance in development of decentralized and participatory management and management planning systems, training of personnel, and development of a revenue capture and financial management system for protected areas.

20. **Panama Atlantic Biological Corridor Investment Program** (US\$ 6.8 million; GEF US\$ 5.2 million) would provide grants to finance eligible costs of securing the long term protection of the corridor and biodiversity, including equipment, consultants, operational expenses, studies, workshops, training, study tours and development and dissemination of materials.

(i) *Indigenous Lands* (US\$ 1.6 million; GEF US\$ 1.3 million) would include assisting indigenous communities in critical areas of the corridor in managing their lands in order to ensure their access to them and the biological resources they contain, according to community needs and principles of sustainable use. In some cases activities may include assisting communities with regularization of land tenure and resource user rights.

(ii) *Local Biodiversity Conservation and Management* (US\$ 2.0 million; GEF US\$ 1.7 million) would support a grants program targeted at incremental costs of biodiversity conservation and management activities in pre-defined, high priority areas of the corridor, to be carried out by indigenous and non-indigenous communities, NGOs, municipal governments and the private sector. In all cases grants would be conditional on explicit quid pro quo agreements that establish the responsibilities of grant recipients as regards sustainable resource use. Specific efforts would be made to create alliances within the mining sector in order to influence development patterns, involve private mining in biodiversity protection and financing, and avoid negative impacts. As a complement, the FUSARD mechanism set up under the associated IBRD-financed project would provide US\$ 2.9 million in financing for productive activities associated with poverty alleviation and sustainable resource management along the agricultural frontier currently threatening to break through into the PABC in northern Veraguas (Districts of Calobre, Cañazas and Santa Fe). The CAPS activities (community action plans) to be developed as the guide for FUSARD investments, would support local corridor planning and would potentially identify eligible subprojects for GEF grant financing. The Indigenous Peoples Development Plan, being finalized under project preparation, where appropriate, would also identify priorities to be financed.

(iii) *Protected Area Management* (US\$ 3.1 million; GEF US\$ 2.2 million) would include financing of the management of globally important protected areas located within the PABC but which lack adequate protection and management or that are potentially threatened by uncontrolled economic development activities and lack the tools to respond. Three areas have been selected as priorities, representing, together, a range of ecosystems: (i) Darien, to build on the GEF financed project being implemented through UNDP; (ii) Omar Torrijos-El Cope, a key link in the center of the PABC currently facing potential threats from mining and, within the medium term, advance of the agricultural frontier; and (iii) the altitudinal ecosystem complex extending from La Amistad/Volcan Baru to the Isla Bastimentos/San San Pond Sak covering a range of habitats from mountain ecosystems to coral reefs and seagrass meadows. Eligible investments would include: demarcation; management plans; infrastructure and equipment for protection, rudimentary research and visitor facilities; and direct involvement of non-government actors including private sectors in administration, management and protection.

21. **Project Management** (US \$4 million; GEF US\$ 0.3 million) would contribute toward financing the incremental costs of project administration, coordination, and management related to GEF-financed activities.

PROJECTS COSTS AND FINANCING

22. The estimated cost of the integrated IBRD/GEF Rural Poverty and Natural Resource/Biodiversity Conservation Program is US\$ 39.5 million. The cost of the PABC is estimated to

be US\$ 11.6 million, of which US\$ 0.3 million represents the cost of the GEF PDF preparation grant. The incremental costs of proposed PABC activities are calculated to be US\$ 8.3 million. The incremental costs analysis and justification for the GEF grant are provided in Annex 1. The financing plan for the PABC program would consist of: a GEF grant of US\$ 8.3 million to finance part of the incremental costs of activities which contribute to meeting global biodiversity objectives; IBRD co-financing of US\$ 1.9 million (negotiations completed in March 1997); and US\$ 1.2 million in counterpart funds or in-kind contributions from GOP, local governments and communities. In the course of finalizing project preparation work, other sources of co-financing will be sought to increase the project's impact and coverage. A detailed cost table and financing plan is attached.

RATIONALE FOR GEF FINANCING

23. The project supports the first two objectives of the Convention on Biological Diversity, especially through in situ conservation and sustainable use of biodiversity in accordance with Article 8. It is consistent with the GEF Operational Strategy and eligible for GEF funding under three of the four Operational Programs: Mountain Ecosystems, Forest Ecosystems and Marine, Coastal and Freshwater Ecosystems. The project would protect a diverse range of habitats and ecosystems including the globally distinct Choco/Darien moist forests; areas of the Talamanca range with the highest levels of biodiversity on the Central American isthmus; and an altitudinal range of habitats in the Bocos del Torro region extending from the montane forests of the La Amistad N.P and associated watershed forests to coastal wetlands (San San Pond Sak) and offshore mangroves, sea grass beds and coral reefs in Islas Bastimentos. The project will also provide support for conservation of migratory and endangered species such as green turtles and manatees.

24. The proposed project will contribute to conservation and sustainable use of the Atlantic corridor forests in Panama, supporting the Panamanian contribution to maintenance of the Meso American Biological Corridor, within the regional framework agreed under the UNDP regional project. The project is consistent with guidance from the Conference of the Parties in that it supports (i) conservation and sustainable use of habitats, ecosystems and endemic species (ii) capacity building, including human resource development and institutional strengthening (iii) sustainability through demonstration of integrating biodiversity issues into sustainable sectoral development (iv) and will strengthen local and indigenous people's involvement in conservation, including innovative mechanisms for conservation management. The project specifically responds to guidance from COP3 through increased support for capacity building at the local level to involve local communities in biodiversity management and monitoring, building on traditional knowledge and practices and using economic incentives; promoting environmental awareness and information dissemination to foster conservation of biodiversity and sustainable use; encouraging intersectoral cooperation; and supporting rapid biodiversity assessments in line with Article 7.

25. The project is a high priority for GOP. The national GEF endorsement letter is attached to this proposal as Annex 2.

COMPLEMENTARY PROJECTS

26. The GOP and interested donors are currently supporting about five on-going or proposed projects in the area of the Atlantic corridor which contribute to PABC conservation objectives. In 1996, a total of about US\$ 6.3 million (of which 80% was donor funding) was budgeted for such activities within PABC protected areas and their buffer zones. Over the medium term, financial commitments to support implementation of these conservation oriented projects total about US\$ 32 million. Of this total, about US\$ 24 million are for protection of the Panama Canal Watershed, which generates substantial national benefits through reduced siltation and sustainability of international shipping traffic.

27. UNDP/GEF is supporting biodiversity conservation in the Atlantic Corridor through a Pilot Phase project: Biodiversity Conservation in the Darien Region. This Pilot Phase project aims at developing a new strategy for managing the areas adjacent to the Darien National Park (DNP), based on sustainable use of biodiversity in cooperation with local communities. Project activities include: a) expanding the scientific information base regarding the DNP and adjacent areas; b) strengthening the institutional capacity of agencies involved in resource protection; c) identifying innovative economic activities and establishing a financial mechanism to contribute to their funding needs; and d) involving local resource users in project management and adoption of sustainable resource practices. Project start-up began in January 1995, and implementation to date has concentrated primarily on the establishment of representative and participatory project structures, the identification of alternative livelihood activities for local communities (including marketing mechanisms), and creation of a "small grants fund" for sustainable use/alternative livelihood activities. Project implementation is expected to end in late 1998.

28. The proposed Atlantic Biological Corridor Project will complement the on-going Darien Project by focussing on DNP park management, including infrastructure, staff training, demarcation activities, etc., and by providing support for additional actions at the local community level, focussing especially on indigenous lands and activities to maintain the integrity of the Darien ecosystem. The PABC project will build on the experiences and lessons learned in the UNDP/GEF Darien Project, and will ensure complementarity of activities with local communities in the DNP buffer zones during the period when the two projects are under simultaneous implementation (eg, 1998).

PARTICIPATION AND SUSTAINABILITY

Participation

29. The preparation of the Rural Poverty and Natural Resource Management project involved participatory rural diagnostics and consultations carried out over a two month period in the project areas, followed up by community visits by the specialist consultants for a five month period. In addition, 10 formal workshops and seminars were held with over 360 stakeholders including government, NGOs, foundations and other national, regional and local level organizations operating in the project areas. A large number of community level workshops were also held, as well a large number of consultations with the public and private institutions that would be involved in project implementation. Training was provided to certain

government officials in participatory diagnostics, which they then continued to implement. Several of these consultations, diagnostics and information sharing were held in indigenous communities, an indigenous peoples development plan was completed, and the results incorporated into the formulation of the project components.

30. To finalize preparation of the PABC Project, a major focus will be on further social assessment and stakeholder consultation, participatory design within targeted areas of the proposed corridor, and corridor promotion. Participatory mechanisms for project implementation are being designed and will be finalized during the final stages of project preparation for better planning and land use and to foster partnerships for management of biodiversity important areas. The underlying assumption of the project is that conservation of the corridor is only possible through continued support from the main stakeholders, requiring a permanent process of consultation that can ensure stockholders' ownership of project objectives.

31. Participation within the PABC project framework has been complemented by activities supported by CCAD and the GEF/UNDP PDF to define the regional framework for establishing the Mesoamerican Biological Corridor. The CCAD team worked closely with the Panamanian MBC team and regional project preparation also engaged the participation of relevant Panamanian institutions and organizations (government and non-government) in both the technical and social aspects of corridor definition. The strong emphasis on participation in both the regional and national MBC preparation efforts has resulted in greater public awareness in Panama of the corridor and biodiversity conservation objectives.

Sustainability

32. To ensure the sustainability of the PABC beyond the GEF project period, the project would: (i) seek to develop cost recovery and financing mechanisms for the NPAS to augment GOP's current budget and cover the incremental costs of providing adequate management inputs; (ii) promote activities favorable to biodiversity such as participatory land use planning/environmental zoning, ecotourism, sustainable forest use by indigenous communities, sustainable agroforestry systems, management of non-timber forest products, protection of areas critical to municipal or community quality of life (e.g., water sources, mangroves); (iii) improve the ability of local and national institutions to assess and integrate biodiversity values in development planning; (iv) create fora for ongoing dialogues, consultations, and negotiations between key actors at the local, regional, and national levels; (v) promote rural development activities under the IBRD-financed activities which would assist in reducing poverty and resource degradation-driven migration into forested and protected areas; (vi) ensure that local communities chose activities that are environmentally, socially and financially sustainable; (vii) establish mechanisms -- biodiversity monitoring and land use planning -- to ensure projects benefit biodiversity conservation. Finally, and perhaps most importantly, the project would develop strategic partnerships with stakeholders (communities, indigenous groups, private sector, local governments, NGOs, etc.), involving them in implementation and capacity building activities. Their involvement would help to ensure that project objectives are "owned" locally and institutionalized nationally and that the capacity to further these objectives exists at both levels.

LESSONS LEARNED AND TECHNICAL REVIEW

33. Two of the most important lessons learnt from activities associated with the Mesoamerican Biological Corridor in the region involve the need to: (i) involve local populations and institutions (e.g., local government, community and sectoral organizations, NGOs) in the design, implementation and benefits of the project in order to assure the long term conservation of the biodiversity within and outside of protected areas; and (ii) view the development of the corridor concept within the broader context of sustainable development and land use, requiring that the “corridor” become the product of a longer term process which focuses on achieving intersectoral agreements between relevant actors at the national, regional and local levels.

34. Experiences of bi-laterally financed and NGO projects in the region are being integrated into the design of buffer zone activities. These projects have found that small farmer training for the adoption of appropriate technologies is the single most cost efficient intervention for environmental protection in the region. A recent Bank review of this type of project in Latin America reported that (i) by encouraging the active involvement of community groups, such projects are much more likely to meet the community’s needs than if they reflect the priorities of a government agency; (ii) once the communities develop a sense of ownership of a project, they are willing to share in its costs and to ensure its maintenance; and (iii) once a community group is given responsibility for implementing a project that it has helped to design, it shows great interest in ensuring that the private contractor executing the project does so well and honestly.

35. The UNDP/GEF Biodiversity Project underway in the Darién incorporates several of these lessons: substantive buffer zone community involvement in implementation, and providing greater economic incentives for project beneficiaries. The experiences of this project with buffer zone communities have shown the extreme importance of: (i) tailoring expected outputs and project phasing to the rhythms and pace of indigenous people’s traditional decision making processes; (ii) understanding, and designing project activities around the limited absorptive and implementation capacity found in the communities; (iii) clearly defining the roles of the project and the communities in project administration, fund management, decision making, and implementation in order to avoid creating false expectations or leaving ambiguities which cause implementation delays; and (iv) establishing clear linkages between conservation and development activities. Additionally, experience has shown the need for more substantial action in support of the management of the Darién National Park, particularly as regards: (i) park protection, (ii) demarcation and clarification of the access and land use rights of indigenous peoples, and (iii) involvement of indigenous communities inside the park and in key buffer zone communities in park protection and management. The proposed PABC project would address these needs and build on the Pilot Phase project’s implementation experience.

36. An expert from the STAP Roster reviewed the project in February 1997. The reviewer found that this was a much needed project, that it would help fill the gaps in existing conservation work in Panama, and it would therefore enhance the probabilities of success for every conservation effort in Panama and in Central America. The reviewer supported the

integration of the biodiversity activities into the rural poverty alleviation activities, the strengthening of the administrative unit, and the project's focus on participation, all within the regional framework of the MBC. The reviewer also recommended giving more emphasis to the legislation related to indigenous people in Panama and the opportunities created by this legislation for biodiversity conservation, as is demonstrated by the success of the Kuna Yala *comarca* in Panama. The comments of the STAP Roster expert are attached as Annex 3. These comments will be addressed during final project preparation.

INSTITUTIONAL FRAMEWORK AND PROJECT IMPLEMENTATION

37. The Institute of Renewable Natural Resources (INRENARE) would be responsible for channeling of GEF resources and for the implementation of the project. INRENARE's Directorate of Parks and Wildlife (DPW) would assume direct responsibility for the project's execution and for project coordination within INRENARE. Project management and administration assistance would be provided by the joint MIDA/INRENARE Project Coordination Unit (PCU) of the RPNRP. The PCU would also coordinate between agencies (INRENARE and MIDA) to assure coherence in annual work plans and geographic and thematic focus, particularly as related to activities within and around protected areas and other critical elements of the biological corridor. Implementation in the field would be mostly carried out by local organizations, in accordance with community and protected area action/management plans; a critical element would be the formation of strategic partnerships between the main stakeholders, such as formation of "patronatos" (committees involving local citizens, NGOs, and private sector in fund raising and decision-making in addition to sectoral ministries) for the management of protected areas. Various arrangements for subproject implementation are being explored and will be finalized during project preparation.

ISSUES, ACTIONS, AND RISKS

38. The main issues facing the project are: (i) creating acceptance for, and securing the conservation of, the biological corridor within the context of sectoral development initiatives and policies; (ii) the degree of success over the medium term in resolving the poverty issues in the central provinces which underly the advance of the agricultural frontier in the Atlantic; (iii) addressing critical indigenous peoples issues (e.g., territorial claims); (iv) political will to enter into credible environmental planning, regulation and enforcement of mitigation programs in the mining and transport sectors; (v) threats imposed by mining activities, especially if exploration proceeds to exploitation; and (v) ability to influence donor planning and financing to contemplate the presence and conservation needs of the biological corridor. Significant advances are being made to manage the risks stemming from these issues: by strongly focusing GEF activities on the implementation of a process which develops a series of agreements and definitions of responsibilities between local, provincial and national stakeholders to secure the conservation of a biological corridor; by emphasizing participation and assistance to indigenous groups; by establishing a dialogue and partnership with mining interests during the early exploration phase; and through the association of the GEF PABC/IBRD Rural Poverty and Natural Resource Management project. These actions are complemented by project strengthening of protection in the NPAS, support to locally identified initiatives, biodiversity monitoring and environmental impact assessment and promotion of alternative development options (e.g., ecotourism).

39. Risks also exist regarding institutional capacity to execute the project. The first response would be for the project to actively seek, promote, and form strategic partnerships between government, private sector and communities to draw as broadly as possible on existing capacity. For government, INRENARE recognizes its weaknesses in this respect and, during project preparation, an intensive training program was drawn up to deal with internal capacity limitations. Regarding the ability of communities (indigenous and non-indigenous), private sector, NGOs and local governments to fulfill their roles, further preparation work is required to understand and agree on training needs to ensure their effective participation. Training needs will be finalized prior to final project approval.

TABLE 1. COSTS AND FINANCING

COMPONENT/ACTIVITIES	IBRD	GEF	GOP	Communities	TOTAL
1. Capacity Building for Rural Development					
a. Training and rural organization	2,850		375		3,225
b. Technical services to communities for subproject preparation	850		675		1,525
c. Technical assistance, training, extension to communities	<u>1,800</u>		<u>1,200</u>		<u>3,000</u>
Subtotal	5,500	0	2,250	0	7,750
2. Fund For Sustainable Agricultural Development	<u>11,600</u>		<u>800</u>	<u>3,350</u>	<u>15,750</u>
Subtotal	11,600	0	800	3,350	15,750
<i>Subtotal, Sustainable Rural Development</i>	<i>17,100</i>	<i>0</i>	<i>3,050</i>	<i>3,350</i>	<i>23,500</i>
3. Pacific zone protected area management	457		195	25	677
Panama Atlantic Biological Corridor					
4. PABC Information and Planning					
a. Rapid biodiversity assessments	150	270			420
b. Corridor land use planning	90	420	100		610
c. Biodiversity monitoring	125	460			585
d. Corridor promotion and information dissemination	<u>100</u>	<u>320</u>	<u>60</u>		<u>480</u>
Subtotal	465	1,470	160	0	2,095
5. Capacity Building For Biodiversity Conservation & Sustainable Use					
a. Training and technical assistance to communities	120	720	80		920
b. Training for NGOs, private sector, and local government	75	370	35		480
c. Training and technical assistance to government	80	120	55		255
d. Modernization of protected area's management	<u>315</u>	<u>150</u>	<u>75</u>	<u>0</u>	<u>540</u>
Subtotal	590	1,360	245	0	2,195
6. Atlantic Biological Corridor Investment Program					
a. Support to indigenous land management	150	1,310	55	131	1,646
b. Community, private sector and local gov't biodiversity subprojects	115	1,710	100	75	2,000
c. Protected area management subprojects	<u>570</u>	<u>2,165</u>	<u>245</u>	<u>150</u>	<u>3,130</u>
Subtotal	835	5,185	400	356	6,776
<i>Subtotal, Biodiversity Conservation & Management</i>	<i>1,890</i>	<i>8,015</i>	<i>805</i>	<i>356</i>	<i>11,066</i>
7. Project Management	3,050	300	650	-	4,000
8. GEF PDF Block B		285			285
TOTAL	22,497	8,600	4,700	3,731	39,528

CALCULATIONS OF INCREMENTAL COST

Context and Broad Development Goals

1. The Isthmus of Panama is the narrow terrestrial bridge which has united the continental masses of North and South America and separated the waters of the Pacific and Atlantic oceans since the Pleistocene. This, and other biogeographic and climatic factors, combine to make Panama a high biodiversity country where multiple habitats and microhabitats greatly enhance the small country's (75,517km²) biological diversity and importance. Included in the Meso-American Biodiversity Corridor, where it passes through Panama's central cordillera and Atlantic region, are outstanding examples of relatively intact areas of global and regional biodiversity importance.

2. Today threats are increasing to this almost uninterrupted corridor and that concrete action is taken, global biodiversity will suffer from the degradation of important sites and the fragmentation of the corridor. The principal threats to the conservation of the landscapes forming this corridor are: (1) the advance of the agricultural frontier and spontaneous colonization; (2) new road projects which would offer improved access into the unprotected and intact ecosystems of the Atlantic; (3) mining in the mountainous zones of Veraguas, Chiriquí, San Blas, and Darién and the coastal lowlands of Colón; (4) wildlife loss through habitat conversion and fragmentation associated with logging, colonization, and agriculture practices of indigenous groups in some areas; (5) contamination of coastal waters from petroleum wastes and spills in the canal and the cross-country pipeline, (6) watershed degradation from previously mentioned factors and sloping land agriculture without appropriate soil and moisture conservation practices; and (7) a proposed hydroelectric scheme in Bocas Del Toro (Rio Estí, Gualaca, Teribe-Chaguinola, Sixaola) which would reportedly inundate areas of important plant resources.

3. Recognizing the seriousness of these threats, the Government of Panama (GOP) has begun to consider natural resource degradation in a systematic way, in an effort to develop a coherent national strategy for the environment. One key element of this strategy is to deal with the root causes leading to migration to the agricultural frontier and invasion of public forests and protected areas while enhancing on-site protection for areas with global biodiversity including protected areas. This multi-sectoral response to the interrelated issues of rural poverty, natural resources management, and biodiversity conservation would focus one set of instruments on the poorer and more populous central and southern provinces of the Pacific to reduce the outmigration that pushes the agricultural frontier (and invasions of public forests and protected areas); and another set within the Mesoamerican Biological Corridor, to control access to high biodiversity areas and diminish both the pull factors and *in situ* threats to biodiversity. This strategy is supported by (1) legislation creating the National Protected Area System (1994), the Environmental Education Law (1992), the Forestry Law (1994), the EIA/Environmental Framework Law (1994) and the Wildlife Law (1995); (2) adherence to international treaties (e.g., Convention on Biological Diversity, RAMSAR, CMS and CITES); and (3) several on-going conservation and sustainable development projects that directly or indirectly contribute to biodiversity conservation.

Baseline Scenario

4. In the absence of GEF assistance for addressing global biodiversity objectives, it is expected that the Government of Panama would concentrate its resources on: (i) rural poverty alleviation programs that would generate national benefits for the poor inhabitants of the Pacific region (estimated cost: US\$ 27.2 million; financed by IBRD/GOP and including US\$ 3.7 for project management); (ii) sustainable development programs in the Atlantic that would help stabilize the Atlantic frontier (estimated cost: US\$ 16.7 million; financed by IFAD/EU/GOP); and (iii) protected area management activities generating national benefits, in particular, to reduce siltation in the Panama canal watershed (estimated cost: US\$ 20 million; financed primarily by USA/GOP funds) and to promote ecotourism development (estimated cost for 5 year period: US\$ 5 million financed primarily with IBRD/GOP funds). Biodiversity conservation programs for specific sites in the Atlantic other than the Panama canal watershed, initiated with donor support (ITTO, GEF), would also continue (estimated cost: US\$ 7.1 million).

5. These programs would help to: (i) reduce the push factors underlying the advance of the agricultural frontier in the Atlantic, (ii) stabilize communities already in the frontier; and (iii) manage the Panama canal watershed and protected areas of high ecotouristic potential, which would bring considerable national benefits. Under the Baseline Scenario the Government would also continue implementing policy reforms to remove incentives for unsustainable use of natural resources in the Atlantic region and would undertake programs aimed at strengthening public sector capacity to implement environmentally sustainable development programs. The combined cost of the baseline scenario (Pacific and Atlantic rural development investments, and protected area management activities with high national benefits is estimated at US\$ 76 million.

6. Implementation of the Baseline Scenario would be important for the development of Panama. Incomes of the rural poor in the Pacific region would increase, which would reduce their incentives to migrate to the frontier. Investments in frontier communities and the adoption of more environmentally friendly and sustainable land uses would help stabilize the frontier and reduce pressures on sites of key environmental importance. Investments in the Panama canal watershed and protected areas of high ecotourism potential would help close access to these areas and protect important sites for biodiversity.

7. Despite these positive elements, the Baseline Scenario would not result in effective protection of biodiversity conservation in the MBC of Panama, because:

- (1) Funding for biodiversity conservation and protected area management is fragmented with about 80% focused on the Panama canal watershed; about half of the protected areas included in the Panama portion of the corridor lack adequate resources, human and financial (Darien, Omar Torrijos-El Cope, and complex La Amistad/Volcan Baru and Isla Bastimentos/San San Poind Sak);

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- (2) There are no incentives for biodiversity conservation in non-protected areas included in the corridor;
- (3) There is inadequate knowledge, and thus stakeholder commitment, in Panamanian society at large, communities and local and regional governments on the importance of biological resources in the corridor and on how to use them sustainably;
- (4) There is no overall coherent land use and natural resource conservation strategy for the Atlantic region within which conservation projects and investment programs are designed and implemented;
- (5) There is no strategy or programs to engage the mining and forest sector in the goals of biodiversity conservation consistent with the principle of the corridor; and
- (6) There is no system for constant monitoring of threats to biodiversity and for disseminating information on these threats to agencies and stakeholders in a position to deal with them.

Global Environmental Objective

8. The global environment objective is to promote the long-term integrity of a biological corridor along the Atlantic slope of Panama, conserving key global biodiversity values. The ecoregions and ecosystems of the Atlantic slope of Panama have high global importance on their own merits, but in addition, they form part of a critical link in a larger Meso-American Biological Corridor (MBC) linking North America, Central America and South America. Parts of the Atlantic slope of Panama represent the most intact natural areas remaining in Central America.

GEF Alternative

9. With GEF assistance for addressing the global biodiversity objectives outlined above, the GOP would be able to undertake a more ambitious program that would generate both national and global benefits. The GEF Alternative would comprise Baseline Scenario activities described earlier: (i) rural poverty alleviation in the Pacific: US\$ 27.2 million; (ii) sustainable development in the Atlantic: US\$ 16.7 million; and (iii) protected area protection with high national benefits: US\$ 25.0 million; **as well as** an expanded conservation and sustainable use program in the Atlantic slope explicitly designed to promote the integrity of the Atlantic Biodiversity Corridor. This expanded Atlantic Biodiversity Corridor program would comprise: (i) biodiversity information and planning (estimated cost: US\$ 2.1 million); (ii) capacity building for biodiversity conservation and sustainable use (estimated cost: US\$ 2.2 million); (iii) biodiversity conservation investment program (estimated cost: US\$ 13.9 million, including on-going donor-supported programs); and (iv) project management activities (estimated cost: US\$ 0.3 million). The combined cost of the GEF Alternative is estimated at US\$ 87.4 million.

10. The GEF Alternative will make possible activities and programs that would not have been possible under the Baseline Scenario, thus covering important gaps that threaten the integrity of the ABC. The PABC project would help to maintain a continuous corridor of

protected and non-protected areas with incentives for biodiversity conservation and sustainable use (in non-protected areas) or under protected area management, thus not only ensuring preservation of globally significant biodiversity but also maintaining natural habitat connections between key corridor areas. Implementation of the GEF Alternative would result in the following outcomes:

- (i) minimizing threats to biodiversity by putting in place an overall land use plan and monitoring and evaluation framework for biodiversity conservation in the Atlantic which would serve as the framework within which public investment programs for the region would be designed;
- (ii) raising awareness about biodiversity resources through information dissemination, training of indigenous and non-indigenous communities, municipal and regional governments and GOP agencies and private sector on biodiversity use consistent with the land use plans;
- (iii) minimizing access and threats to important biodiversity areas by strengthening indigenous organizations and management in selected protected areas and traditional systems of resource management;
- (v) ensuring conservation of biodiversity within the ABC outside of protected areas by financing the incremental costs of subprojects of communities that are consistent with biodiversity objectives and sustainable uses.

GEF funds would be critical to leveraging additional donor co-financing for this initiative, both from bilateral and multilateral sources.

Incremental Costs

11. The difference in cost between the Baseline Scenario (US\$ 76.0 million) and the GEF Alternative (US\$ 87.4 million) is estimated at US\$ 11.4 million. Of this amount, about US\$ 3.1 million would generate national benefits from information and planning, capacity building activities, investments in social and economic infrastructure, and sustainable productive activities in the Atlantic zone that would not have taken place under the Baseline Scenario. This results in an **incremental cost of US\$ 8.3 million** for achieving global environmental benefits through the protection of the PABC.

Component Sector	Cost Category	US\$ Million	Domestic Benefit	Global Benefit
Natural Resources Institutional Strengthening	Baseline (with other donors)	26.96	Increased capacity of agricultural and forestry ministries, NGOs, communities, and private sector service providers for natural resource management	
	With GEF Alternative	28.32	Same as above plus increased capacity of local community and private sector interests in natural resource management in areas of biodiversity of global importance.	Increased capacity for biodiversity conservation, management and protection in selected areas of global significance in the Mesoamerican

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Component Sector	Cost Category	US\$ Million	Domestic Benefit	Global Benefit
				Biological Corridor; (MBC) support to development and institutionalization of National Biodiversity Strategy and MBC.
	Incremental	1.36		
Rural Poverty Alleviation	Baseline (with other donors)	34.66	Reduction in rate of loss/degradation of economically important forests, degradation of watersheds, soils, and fresh water and coastal zone resources; improved quality of life for rural and urban dwellers; maintenance of natural resource option values.	
	With GEF Alternative	34.66	Same as above plus improved efficiency in targeting of financial resources at sustainable use of natural resources for poverty alleviation purposes.	Enhanced protection of biodiversity resources of global significance through increased access to information on development tradeoffs.
	Incremental	0.00		
Natural Resource Management	Baseline (with other donors)	23.28	Increased capacity for sust. natural resource mgmt.; increase in income/quality of life for rural & urban stakeholders; enhanced conservation/protection of economically important natural resources; maintenance of natural resource option values.	
	With GEF Alternative	24.99	Same as above plus directly increase coverage to critical areas of high biodiversity value under threat and through coordination enhance targeting and impact of other donor efforts on biodiversity	Increase the level of protection afforded to biodiversity of global significance and obtain broad-based support to the conservation and management of the MBC; reduce pressures on critical, non-protected areas of the MBC.
	Incremental	1.71		
Indigenous Land Tenure Security	Baseline	0.15	Improvement in legal processes for securing forest and land tenure for indigenous peoples.	
	With GEF Alternative	1.46	Same as above plus extension of legal security over land resources to key areas of the MBC.	Enhance the long term protection of biodiversity resources in the MBC by assisting indigenous groups to regularize their lands in key elements of the MBC and securing their access to lands based on principles of sust. biodiversity use/protection.
	Incremental	1.31		

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Component Sector	Cost Category	US\$ Million	Domestic Benefit	Global Benefit
Biodiversity Planning and Impact Monitoring	Baseline (with other donors)	1.91	Ad hoc inclusion of biodiversity values in ongoing efforts in natural resource monitoring with major focus on the Panama Canal watersheds.	
	With GEF Alternative	3.38	Coverage to areas of highest biodiversity value, which occur outside Canal watersheds, within a coherent program with explicit biodiversity objectives; improved targeting of limited financial resources at sust. mgmt. of natural resources.	Enhanced protection of biodiv. resources of global significance through increased access to information on development tradeoffs, particularly for mining and road building; creation of greater transparency in and public demand for biodiversity protection
	Incremental	1.47		
Protected Areas Strengthening	Baseline (with other donors)	9.85	Increased protection, improved management, and enhanced income through investment in infrastructure, with emphasis on protected areas in the Canal watershed; enhanced biodiversity protection through community involvement in buffer zones.	
	With GEF Alternative	12.02	Same as above with balancing of improvements within the protected area system as a whole.	Strengthen management and protection of globally significant protected areas and the MBC.
	Incremental	2.17		
Project Coordination	Baseline	3.05	Capacity to coordinate project activities.	
	With GEF Alternative	3.35	Same as above.	Increased capacity to manage those elements of the project critical to the realization and protection of the MBC.
	Incremental	0.30		
Total	Baseline	99.86		
	With GEF Alternative	108.18		
	Incremental	8.32		