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IMPLEMENTATION COMPLETION REPORT
(TF-28950 TF-20454)

ON A

GLOBAL ENVIRONMENT FACILITY TRUST FUND GRANT

IN THE AMOUNT OF 6.3 MILLION SDRs (US$8.4 MILLION EQUIVALENT)

TO THE

REPUBLIC OF PANAMA

FOR AN

ATLANTIC MESOAMERICAN BIOLOGICAL CORRIDOR PROJECT

December 23, 2005

Environmentally and Socially Sustainable Development Sector Management Unit
Central America Country Management Unit
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 30, 2005)

Currency Unit	=	Balboa
1	=	US$ 1
US$ 1	=	1

FISCAL YEAR

January 1 December 31

ABBREVIATIONS AND ACRONYMS

ANAM	National Environmental Authority (*Autoridad Nacional del Ambiente*)
CAS	Country Assistance Strategy
CCA	Consultative Environmental Commission (*Comision Consultiva Ambiental*)
EIA	Environmental Impact Assessment
GEF	Global Environment Facility
ICR	Implementation Completion Report
IDB	Interamerican Development Bank
IFAD	Internacional Fund for Agricultural Development
IPDP	Indigenous People's Development Plan
ITTO	International Tropical Timber Organization
MBC	Mesoamerican Biological Corridor
MIDA	Ministry of Agricultural Development (*Ministerio de Desarrollo Agropecuario*)
MJG	Ministry of Government and Justice (*Ministerio de Gobierno y Justicia*)
NAPAS	National System of Protected Areas
NGO	Non Governmental Organization
PAD	Project Appraisal Document
PAMBC	Panama Atlantic Mesoamerican Biological Corridor
PCU	Project Coordinating Unit
PEU	Project Executing Unit
PIP	Project Implementation Plan
PRONAT	National Land Administration Program *(Programa Nacional de Administración de Tierras)*
RUTA	Regional Unit for Technical Assistance
SDRs	Special Drawing Rights
SINAP	National System of Protected Areas (*Sistema Nacional de Areas Protegidas*)
SINIA	Nacional Environmental Information System (*Sistema Nacional de Información Ambiental*)
TTL	Task Team Leader
UNESCO	United Nations Educational, Scientific and Cultural Organization

Vice President:	Pamela Cox
Country Director:	Jane Armitage
Sector Director:	John Redwood
Task Team Leader:	Mark Austin

PANAMA
Atlantic Mesoamerican Biological Corridor Project (GEF)

CONTENTS

Project ID: P045937	*Project Name:* Atlantic Mesoamerican Biological Corridor Project (GEF)
Team Leader: Mark A. Austin	*TL Unit:* LCSER
ICR Type: Core ICR	*Report Date: December 28, 2005*

1. Project Data

Name: Atlantic Mesoamerican Biological Corridor Project (GEF)

L/C/TF Number: TF-28950; TF-20454

Country/Department: PANAMA

Region: Latin America and the Caribbean Region

Sector/subsector: Central government administration (51%); Other social services (49%)

Theme: Biodiversity (P); Environmental policies and institutions (P); Participation and civic engagement (P); Land administration and management (S)

KEY DATES		*Original*	*Revised/Actual*
PCD:	06/06/1995	*Effective:*	11/01/1998	11/20/1998
Appraisal:	03/25/1998	*MTR:*		05/13/2002
Approval:	06/23/1998	*Closing:*	06/30/2004	06/30/2005

Borrower/Implementing Agency: REPUBLIC OF PANAMA/Institute of Renewal Natural Resources (INRENARE) which became the National Environmental Authority (ANAM)

Other Partners:

STAFF	Current	At Appraisal
Vice President:	Pamela Cox	Shahid Javed Burki
Country Director:	Jane Armitage	D-M Dowsett-Coirolo
Sector Director:	John Redwood	Marita Koch-Weser
Team Leader at ICR:	Mark Austin	Luis Constantino and John Kellenberg
ICR Primary Author:	Elsie Garfield and Karen Luz	

2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome:	S
Sustainability:	L
Institutional Development Impact:	SU
Bank Performance:	S
Borrower Performance:	S

	QAG (if available)	ICR
Quality at Entry:		S
Project at Risk at Any Time:	No	

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

The global environment objective of the proposed project is to contribute to the long-term conservation and sustainable use of biodiversity in the Panamanian portion of the Mesoamerican Biological Corridor (PAMBC). The project development objective is to promote substantial actions on the part of stakeholders to achieve conservation and sustainable use of biodiversity through land use practices that integrate biological, social and economic priorities. This objective would be achieved by: (i) developing and disseminating tools for integrating the biological corridor concept into sectoral strategies, local and regional planning and public investments; (ii) increasing information on the status of biological diversity along Panama's Atlantic Slope; (iii) increasing awareness of the importance and demand for the conservation of the PAMBC at the national and international levels; (iv) implementing and disseminating natural resource management pilots in priority areas of the PAMBC; and (v) reducing pressures upon protected areas and indigenous *comarcas* within priority areas of the PAMBC.

The global environmental objective clearly states that the project is contributing to a long-term objective of conservation and sustainable use of biodiversity in the PAMBC. The project's development objective was ambitious given the relatively short five-year time frame and the fact that this implied: (i) a fundamental transformation of the institutional framework and approach to conservation, and (ii) raising the awareness and supporting actions of local communities and other actors living in the corridor which has proven elsewhere to be a slow process. The fact that the project faced substantial risks was brought out clearly in the project document.

3.2 Revised Objective:

N/A

3.3 Original Components:

The project had five components.

Component 1. Corridor Planning and Biodiversity Monitoring (US$2.53 million, 20% of total cost) would focus on gaps in knowledge critical to refining and negotiating the corridor framework with national and local level actors. It included three sub-components:

- ***Sub-component 1.1 National Planning and Intersectoral Coordination*** (US$0.64 million) would support the "promotion of the Mesoamerican Biological Corridor (MBC) vision of conservation and sustainable use of biodiversity and the leveraging of project funds by influencing key stakeholders." The sub-component would work at the national level.
- ***Sub-component 1.2. Local and Regional Planning in Priority Areas*** (US$1.14 million) would support "participatory planning activities which integrate the PAMBC, refine its definition based on locally supported opportunities, as well as influence them so that, where appropriate, they are consistent with national sectoral and PAMBC strategies." The sub-component would focus on priority areas for project intervention within the PAMBC including support for indigenous groups and key corridor protected areas.
- ***Sub-component 1.3. Biodiversity Monitoring*** (US$0.75) would support development of a baseline and monitoring of habitat quantity as well as monitoring several indicator species as proxies for habitat quality.

Component 2. Mesoamerican Biological Corridor (MBC) Awareness and Promotion (US$1.15 million, 9% of total cost) would focus on creating the MBC as a concept, vision and image within Panamanian society in general and among key stakeholders. It included two sub-components:

- ***Sub-component 2.1. National Awareness*** (US$0.82 million) would aim to ensure high visibility for the biological corridor as a concept and as a strategy for integrating biodiversity concerns within national, regional and local development.
- ***Sub-component 2.2. International promotion*** (US$0.33 million) would reinforce the vision of the MBC by creating international awareness and interest in Panama as an eco-tourism destination and country making serious efforts to conserve biodiversity.

Component 3. Capacity Building for Conservation and Sustainable Use of Biodiversity (US$1.98 million, 15% of total cost) would focus on strengthening government and non-governmental organizations (NGOs) and communities for the conservation and sustainable use of biodiversity in the PAMBC. Its three sub-components included:

- ***Sub-component 3.1. Strengthening at the Community Level*** (US$1.98 million) would assist communities to participate effectively in planning processes, to utilize biodiversity resources sustainably, and to access and use resources for investments in priority areas (financed under Component 4).
- ***Sub-component 3.2. Training in Environmental Management*** (US$0.21 million) would provide training to private sector companies and to environmental professionals.
- ***Sub-component 3.3. Modernization of National Protected Areas System*** (US$0.77 million) would support the reorganization of the protected areas department, training of protected areas staff, park guards and volunteers, and local representatives.

Component 4. Investments in Priority Areas of the PAMBC (US$6.04 million, 47% of total cost) would provide grants to finance eligible costs of securing the long-term protection of the PAMBC and biodiversity. It included two sub-components:

- ***Sub-component 4.1. Support for Conservation and Sustainable Use of Biodiversity: Subprojects*** (US$3.25 million) would provide grants to activities to strengthen indigenous land security and land use, and to community groups to finance subprojects which support conservation and sustainable use of biodiversity.
- ***Sub-component 4.2. Investments in Protected Areas*** (US$2.79 million) to ensure adequate protection and conservation of biodiversity in priority protected areas.

Component 5. Project Management (US$1.10 million, 9% of total cost).

The project was Panama's second GEF project and was one of a series of country projects designed in the context of the regional Mesoamerican Biological Corridor program. The project design took into account lessons learned from the regional MBC project (UNDP/UNEP/World Bank/GTZ/CCAD) and national-level MBC projects in Honduras and Nicaragua, such as the importance of: (i) involving local populations and institutions in the design, implementation and benefits of the project in order to ensure long-term conservation; and (ii) viewing the development of the biological corridor concept within the broader context of sustainable development and land use. Other lessons applied during project design include the importance of small farmer training for the adoption of appropriate technologies, and approaches for working effectively with buffer zone communities.

While the project components were clearly linked to the project's objectives, their number and complexity posed a serious challenge for an institution that was being restructured and eventually, with the passage of the General Environmental Law in mid-1998, charged with a much broader mandate. In particular, the challenges were underestimated for Components 1 and 2 listed above.

3.4 Revised Components:

There was no major or formal revision of any component. However, during the design of the Bank-financed National Land Administration Program (*Programa Nacional de Administración de Tierras* , or PRONAT) in 2000, it was agreed that certain project activities and goals should be transferred to that operation which had as it central mandate land issues and included a component on protected areas and indigenous lands. This was formalized retroactively by a letter dated August 4, 2004 which accepted the government's proposal to remove the corresponding indicators from the PAMBC, including: demarcation of 295 km. of priority protected areas and 175 km. of indigenous *comarca* boundaries. In addition, PRONAT assumed responsibility for supporting the legal recognition of the indigenous *comarca* Naso Tjer Di.

3.5 Quality at Entry:

The project's quality at entry is considered **Satisfactory**. The GEF technical reviewer found the project to be innovative both in terms of its "sincere effort to move from failed blueprint approaches toward supporting participation of beneficiaries in a rolling (sic) design, and because it incorporates a regional multi-country corridor concept." The reviewer expressed concern that the initial design did not pay adequate attention to the conservation opportunity presented by Panama's *comarca* legislation.(1) The final project design made this a central focus.

The project design took into account relevant lessons and the project components were clearly linked to the project's objectives. The design adequately addressed safeguard issues, and the treatment of indigenous peoples and the corresponding Indigenous People's Development Plan (IPDP) are exemplary. Since 43 percent of the project area and roughly 50 percent of the corridor's population are indigenous peoples, the interaction with indigenous authorities during project preparation and the treatment of issues of concern to them were critical ingredients for project success. Likewise, the project design included measures to ensure the full participation of women.

The project was consistent with the three Bank assistance strategies under implementation during its lifetime. The first CAS, dated December 28, 1994, included a focus on poverty reduction and sustainable growth, including environmental conservation. The project remained relevant to the objectives of the Bank's 1998 CAS which included a goal of promoting environmentally sustainable development and, in this regard, cited support for the implementation of the Environment Law approved in 1998. Finally, the project objectives remain relevant to the recently approved Interim Strategy Note (Report No. 32887-PA; August 30, 2005) which continues a focus on poverty reduction policies with particular attention to rural and indigenous communities where chronic poverty is entrenched. A follow-up project, blending IBRD and GEF financing, is included in the 2005 Interim Strategy Note's lending program.

The project was designed to complement (e.g., partially-blended in GEF terms) the Bank-financed Rural Poverty and Natural Resources project. The PAMBC's concept was to conserve and address threats to biodiversity in the relatively well preserved ecosystems of the Atlantic coast, while the Rural Poverty project's sustainable rural development component aimed to address the root causes of migration from the Pacific coast and the resulting expansion of the agricultural frontier which posed a significant threat to those ecosystems. The challenge of slowing down migration provided to be difficult. The push factors producing migration from the Pacific region (e.g., entrenched rural poverty, insufficient land, low returns to agricultural activities) were beyond the influence (in the short term) of either project to produce the substantial and widespread improvements needed to slow migration. In addition, an adequate method for measuring the corresponding development impact indicator was not identified.(2)

The project's design would have benefited from strengthening a few aspects. First, the specification of impact indicators could be improved: two were broad and difficult to measure (e.g., reduction in colonists

and deforestation), and the other was narrow and not particularly meaningful (e.g., all donor and multilateral projects greater than US$2 million within PAMBC consistent with biological corridor concept). Second, design of two project sub-components could have been improved. In the case of Sub-component 1.1 National Planning and Intersectoral Coordination, it was difficult for ANAM to get other government ministries to incorporate the corridor concept into their policies and operations. In the analysis of critical risks in the PAD, this was rated Substantial because "a national-level interlocutor, with sufficient influence to facilitate coordination between sectors, cannot be found." This is an enormous challenge in most countries, and the medium-term risk minimization measure was somewhat vague.(3) The other example is Sub-component 4.1 Subprojects, where the analysis of the links between certain types of subprojects to conservation goals could have been strengthened.

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

The project's objectives have been achieved to a large extent: the concept of the MBC is now an integral part of the vocabulary of sustainable development in Panama; protected areas have been substantially strengthened; norms have been established to plan and manage protected areas with participation of key actors; regulations for the use, trade, management and conservation of wild flora and fauna of the country have been put into effect; the biological monitoring system has been designed as an integral part of the National Environmental Information System (*Sistema Nacional de Información Ambiental*, or SINIA); a Strategic Plan for Environmental Education has been developed, through which environmental education will become an integral part of formal education at the elementary and high school levels, and key programs of non-formal and informal environmental education are being implemented. One hundred subprojects have been successfully implemented benefiting nearly 35,000 rural inhabitants. Indigenous communities carried out 75 percent of these subprojects. Participation of women in decisionmaking processes, planning and execution of subprojects, and in local capacity building and strengthening has been nearly 50 percent.

These achievements are particularly remarkable, because Panama was at an early stage of development regarding environmental matters. Its protected areas system was young (legally created in 1994) and the General Environmental Law 41 was adopted in 1998, shortly after the project's approval. The law created the National Environmental Authority (*Autoridad Nacional del Ambiente*, or ANAM) which had the full range of responsibilities for environmental matters; it established a new, decentralized framework for environmental management. Thus, a fundamental process of institutional and legal change was in its initial stages as the project began. From a broader perspective, this type of project which focused on involving communities in biodiversity conservation was new for the Bank and the Borrower which posed additional challenges.

The project's outcome is rated **Satisfactory**. All those interviewed during the ICR mission and the participants in ANAM's comprehensive evaluation process indicated that they considered the project had made important contributions especially in consolidating the new institutional framework for environmental management in Panama, and transforming the approach to management of protected areas to one that was participatory and inclusive of local communities and the indigenous *comarcas*. The project is considered by those working on environmental matters in the Central America region to be the most successful MBC project. The proposed follow-up project will be important in consolidating and amplifying the positive results of the first, as part of the long-term process of conserving biodiversity and critical ecosystems in Panama and the broader MBC.

The outcome indicators for measuring achievement of the project's objectives were ambitious and, in one

case, unrealistic. However, based on the available information, most have been achieved. The primary source of information concerning the project's environmental impact is from mapping exercises. With project support, in 2000, ANAM produced Panama's first vegetation and ecosystem maps (scale 1:250,000) using UNESCO categories and data from satellite imagery (1991, 1996-99). To measure the project's impact, the information and maps corresponding to the PAMBC were updated in 2004 on the basis of 2000-2003 data and compared with a historical map (1989-1992). Over the ten-year period, a total of 192,700 hectares of natural forest were transformed into non-forest productive systems, with the most notable changes in the central region of the Ngobe-Bugle *comarca*.

The results of a related analysis of forest cover using ITTO categories found for 1998 a deforestation rate of 50,000 hectares per year for the entire country. A forest cover analysis published in 2004 (based on 2000 cartographic data) indicates a gross rate of deforestation of 47,158 hectares per year and a net rate of 41,321 hectares. Although this indicates a slight decrease in the deforestation rate for the entire country, an analysis of changes occurring between 1992 and 2000 in the project area shows a clear decrease in deforestation indexes, with the exception of the Ngobe-Bugle *comarca* where the rate increased.(4)

As indicated earlier, no precise measurement of the development impact indicator of reducing the number of colonists moving into the PAMBC was possible. However, the ICR for the complementary Rural Poverty and Natural Resource Management project indicated that while the overall rate of migration from the Pacific Region had not been reduced significantly, it had dropped slightly in several provinces relative to the levels in the 1970s and 1980s. There is anecdotal evidence including the perception of the population and authorities of certain localities in the PAMBC under severe threat, that specific project supported actions such as voluntary patrols, negotiations with colonists, management plans and coordinated efforts with the relevant authorities such as the local police and Ministry of Government and Justice have apparently limited increasing encroachment of colonists into St. Isabel on the border of the Kuna-Yala *comarca*, and the overlapping area of the Ngobe-Bugle *comarca* with the La Amistad Park and Protector Forest Palo Seco.

A third outcome indicator was that all internationally financed projects over US$2.0 million should include an analysis of the potential impact on the PAMBC. Strictly speaking, only one such project, the Sustainable Development Program for Bocas del Toro, was initiated during the period and it fully incorporates efforts to strengthen the PAMBC. Concerning investments in other sectors, the GEF technical reviewer of the PAMBC project recognized the intractable nature of threats posed by mining and highway projects around the world, concluding that: "It may not be feasible to work with other sectoral interests to jointly agree upon ways to do more than mitigate the damage and the chain of damaging events, started by mining and highway projects." A prominent example arose during the PAMBC project when a national road project with high-level political support was being moved quickly to the construction phase despite the fact that it would cut through one of the PAMBC's important protected areas. A combination of good analysis and pressure from international and local NGOs, the local population, as well as ANAM's adherence to guidelines for environmental impact assessments (EIA) led to the eventual shelving of this proposal. Threats from mining projects were low during the project due to low prices, but this is now resurfacing as a potential threat. Although an Environmental Assessment Law had been approved in 1994, it was not until 2000 that Decree 59 establishing detailed requirements governing environmental impact studies was promulgated. The project supported the preparation of a legal proposal to modify Decree 59 to explicitly include the PAMBC concept and other improvements to the decree.

4.2 Outputs by components:

The project's components have, for the most part, been successfully carried out and are rated satisfactory as detailed below.

Component 1—Corridor Planning and Biodiversity Monitoring. This component is rated **Satisfactory** based on key accomplishments of its three sub-components that would generally be expected to contribute directly to biodiversity conservation.

- ***Sub-component 1.1 National Planning and Intersectoral Coordination.*** As a strategic matter, ANAM focused its efforts at two levels: (i) getting in place the legal, technical and institutional elements for national environmental management including those related to biodiversity conservation; and (ii) working at the local and regional levels. Thus, intersectoral coordination at the national level received less attention.

  The sub-component's significant accomplishments involving key actors at the national level include: (i) definition in 2000 of the technical guidelines for preparing management plans for the National Protected Areas System (*Sistema Nacional de Areas Protegidas*, or SINAP); (ii) revision, formulation, and validation of the regulations of the Wildlife Law 24 of 1995, which regulates the use, commercialization, management, and conservation of the country's plant and animal resources; (iii) institutional agreements between ANAM and indigenous authorities that guarantee the effective participation of indigenous people in the planning and implementation of the PAMBC in the *comarcas* and priority geographic areas of the project; (iv) agreements signed by ANAM and the Ministry of Government and Justice's Department of Indigenous Policy with *comarcas* and settlers to resolve disputes concerning land ownership; (v) support and coordination with the Ministry of Economy and Finance on the formulation and execution of the Bocas de Toro Sustainable Development project; (vi) development with the Ministry of Education and rural communities of a Strategic Environmental Education Plan; (vii) creation of a strategic alliance for the management of the Talamanca eco-regional complex, located in the western part of Panama and the southeast of Costa Rica; and (viii) support for the creation of the Private Natural Reserve Network Association of Panama.

- ***Sub-component 1.2 Local and Regional Planning in Priority Areas.*** This sub-component produced an essential foundation of information, analysis and process for the long-term conservation of the PAMBC. Key outputs were the preparation of management plans for four priority protected areas (International Park La Amistad, Wetlands of International Importance San San Pond Sak, National Park Volcan Baru, and Protector Forest Palo Seco) involving local stakeholders through a process of consultations and public validation. Although considerably delayed due to a slower than expected preparation and approval process (ANAM formally approved 3 plans in 2004 and 1 in 2005), the management plans were a positive contribution, and interviews indicated that the plans are currently being implemented. Because of the delay in their approval, however, some implementation activities planned under the project were delayed or eliminated. Three other management plans financed by other sources were completed: Darien National Park, General Omar Torrijos Herrera National Park, and Marine Park Bastimentos Island. Other planning exercises for priority areas considered at risk included: (i) Plan of Action for Overlapping Area of the Ngobe Bugle *comarca* and the La Amistad Park and Protector Forest Palo Seco; (ii) Land Use Plan for the Almirante-Punta Pena Road for which a multisectoral steering committee of national, regional and local stakeholders was formed; (iii) Diagnostic Study and Action Plan for the Talamanca Eco-region (Costa Rica and Panama); (iv) Socio-environmental Evaluation of the Naso Teribe territory (needed for initiating the legal process for establishment of the *comarca*); and (v) Integrated Solid Waste Management Plan for two communities in the Kuna Yala *comarca* which was subsequently financed under Component 4.

- ***Sub-component 1.3 Biodiversity Monitoring.*** The sub-component was successful in generating important new information and analysis, and providing the foundation for a biodiversity monitoring

system. Vegetation and ecosystem maps for Panama (scale 1:250,000) produced in 2000 are a valuable contribution and filled a real need for accurate, basic biodiversity information. A subsequent updating of the vegetation map in 2004 produced a brief analysis of where deforestation was occurring over the period in question and what the role of population growth might be in driving this. This map is widely considered an important contribution to biodiversity conservation efforts in Panama. The best map previously available used Holdridge Life Zones, which are broader vegetation categories that indicate where each class of vegetation should be found. The exercise carried out under the project looked at where each more narrowly defined vegetation class actually exists today, making it a much more useful basis for planning conservation strategies. It has been used broadly, from universities and research institutions interested in Panama's biodiversity to consultants preparing environmental impact reports. Similar maps were produced in each of the Central American countries through their own Mesoamerican Biological Corridor projects, allowing a map of the entire isthmus to be created, which will greatly facilitate cross-border work on biodiversity conservation in the corridor.

Additional inputs for the biodiversity monitoring system include: (i) vegetation maps (1:50,000) and biological data bases for five protected areas of the PAMBC which were the result of Rapid Ecological Evaluations undertaken to prepare their management plans; and (ii) important scientific publications on fauna and flora prepared in collaboration with institutions such as the University of Panama.(5) Another report on Panama's forest cover was completed in 2004 which presented the results of quantitative analyses of the status of forests based on satellite imagery, including an assessment of changes that occurred between 1992 and 2000. ANAM has initiated the process of establishing a monitoring network of universities, researchers and NGOs to gather, analyze and disseminate the biodiversity data collected; the first agreement has been signed with the University of Panama. Finally, ANAM initiated, with support from the project, the first national monitoring of water quality of 24 rivers (interactive hydrological map produced) which is of direct relevance to biodiversity conservation and ecosystem health.

The expected outputs of this sub-component were ambitious given the time and resources allocated, and there were some shortcomings. In regard to the vegetation mapping exercise, there is a much richer depth of data that could have been analyzed using the 2004 map updating study, and the implications could have been useful for informing management actions. For instance, an analysis of deforestation within protected areas could have helped to concentrate resources on areas most under threat. Unfortunately, the analysis that was done was not sufficiently detailed to be very useful. Concerning the biodiversity monitoring system, the system was designed, the equipment (hardware and software) purchased, and ANAM staff trained, albeit with considerable delays, but it did not become operational during the project's lifetime. This may be because the design document produced by consultants was more a presentation of the intellectual foundations of a monitoring system, rather than a specific, concrete plan for the system. Because of this, considerable additional work would have been necessary to actually set up the system. The fact that this system was to be integrated into Panama's National Environmental Information System which was in the process of being designed and implemented may have been another delay factor. Monitoring of two (of three planned) indicator species including the harpy eagle never occurred. However, a subproject cofinanced through Component 4 was carried out by the Audubon Society of Panama and provided education and training to rural communities in the PAMBC about this endangered species. A sea turtle monitoring program in the San San Pond Sak wetlands was carried out successfully for three consecutive years.

Component 2—Mesoamerican Biological Corridor Awareness and Promotion. This component is rated **Satisfactory**. The PAMBC communications campaign produced many positive results and is considered a success by most of those interviewed; it has achieved its numerical targets with respect to

reaching the local population (30%) and primary school teachers (50%) in the PAMBC with slightly less than the target for local decision-makers. The public awareness campaign has been successful in making the corridor concept widely known in Panama. The component was most successful in creating "name recognition" or "branding" for the corridor, but less successful in creating a real understanding of the Mesoamerican Biological Corridor as an "operational concept" or "raising the level of public debate." In addition, a few persons indicated that it would have been useful to hone a simple and clear message for high-level national decision-makers.

- ***Sub-component 2.1. National Awareness.*** The biological corridor concept was virtually unknown in Panama when the project started up. In 2001, a massive campaign was launched to spread and promote the concept of the PAMBC, its objectives, and its actions through radio, television, Internet web page, printed materials, talks, workshops, seminars, interscholastic competitions with environmental themes, organization of ecological fairs, participation in regional fairs and other popular events. This campaign was focused principally in the rural areas considered a priority in the PAMBC. An independent evaluation of the impact of the campaign (2002) and the actions with the mass media determined that a positive attitude change has occurred within the population in relation to the environment and the use of natural resources. Awareness of the PAMBC is good, particularly in the project's action areas toward which the major force of the campaign was directed. The results showed a much higher level of knowledge and understanding of the PAMBC among indigenous groups, as follows: Naso Teribe 91%, Ngöbe Buglé 75%, and Kunas 71%. It is important to note that the universe of those surveyed included housewives, teachers, leaders, and authorities in the areas visited. On the basis of these results, a second campaign was designed in 2003. The second independent survey carried out in 2005 of a representative sample of local residents, leaders and teachers found that 97% of the leaders and 92% of the teachers knew something about the concept and activities of the PAMBC, compared to 63% of the local residents.(6) Concerning the respondent's opinion of the PAMBC's usefulness, a majority indicated: "to work the land better and obtain more products" or "to care for and better protect the land."

  Other achievements include the creation of an environmental journalist network, with the intent of increasing coverage of environmental themes, in terms of both frequency and content, in the print and radio and television broadcast media of the country and region. With the leadership of ANAM, the collaboration of the Ministry of Education, and support from various projects, Panama's Strategic Plan for Environmental Education which included a focus on the PAMBC was developed. Didactic Environmental Education Guides have been produced and distributed to the country's educators, and teachers have been trained in the use of the guides as a tool for incorporating environmental aspects into the country's general basic education curriculum. In addition, various forums, workshops, seminars, courses were carried out for various audiences including students, teachers, NGOs, peasants, ANAM staff, technicians, local and *comarca* authorities, and the general public.

- ***Sub-component 2.2 International Promotion.*** Dissemination of information to international audiences was facilitated through a website and the project's successes were showcased at several international fora including: (i) the World Summit on Sustainable Development in Johannesburg by the Secretariat of the Convention on Biological Diversity, September 2002, (ii) the Second GEF Assembly in Beijing, October 2002, and (iii) the Conference of Partners and Donors of the MBC in Paris, December 2002. Various promotional instruments were developed and widely disseminated. The 2004 opinion survey of international visitors to the PAMBC found that 2 out of 3 tourists were motivated to visit Panama because of factors related to the environment and/or eco-tourism, and 45 percent arrived in Panama knowing something about the PAMBC.

Component 3—Capacity Building for Conservation and Sustainable Use of Biodiversity. This component is rated **Satisfactory** to **Highly Satisfactory**. More than 10,000 persons were trained including representatives of indigenous and non-indigenous communities, governmental and non-governmental institutions, and private enterprise. Some of the capacity building efforts were directly related to concrete actions such as preparing and carrying out subprojects or establishing new organizations, while others were broader and aimed at increasing knowledge in areas such as environmental legislation. In addition, the SINAP was improved and modernized through training and other means. While, all the numerical targets were exceeded (except for private sector training), it is difficult to measure precisely the impact of these efforts due to the lack of a baseline and monitoring of the appropriation and effective use of the knowledge transmitted.

- ***Sub-component 3.1 Strengthening at the Community Level*.** In the initial project period, a variety of capacity building activities covering a wide range of topics were launched. In response to a MTR recommendation, in 2003 a strategic training program for project beneficiaries (i.e., linked more closely to the investment activities financed by Component 4) was designed which included 25 training modules in 4 thematic areas: project management, gender equality, technology transfer, and environmental management. This resulted in the training of 459 project beneficiaries and NGOs aimed at strengthening their technical and administrative capacities to carry out subprojects; more than 1,500 persons were trained in specific technologies to be applied in subprojects. The plan and materials will continue to be used by ANAM's regional offices to support the Network of Inter-institutional Cooperation for Non-Formal Environmental Education.

  Those benefiting from capacity building efforts included a wide variety of persons and organizations. Approximately 361 community volunteers selected by local leaders, authorities, and organizations were trained to be local promoters of PAMBC activities and goals; this training included ways the communities could help in the management and protection of the project's priority protected areas. Some 297 indigenous and 153 non-indigenous leaders participated in training on environmental legislation, participation and organization, and the PAMBC including its objectives, actions and coordination mechanisms. Support was also given to provincial and *comarca* planning units, local authorities such as mayors, and members (both persons and organizations) of the newly established Environmental Advisory Commissions (CCAs) to learn about environmental legislation and tools for environmental management. Support was extended to General and Regional Indigenous Congresses, and for meetings to discuss subjects related to the protection of indigenous territories and the resolution of land tenure conflicts between settlers and indigenous people. The latter involved 65 indigenous representatives in workshops and field visits to deal with these conflicts in Santa Isabel on the border of the Kuna-Yala *comarca,* the overlapping area of the Ngobe Bugle *comarca* with the Protector Forest Palo Seco, and the region of Bayano in the Madungandi *comarca*. In addition, fifteen community exchanges were implemented, including several outside of Panama, that aimed at strengthening technical capacities of the communities to develop sustainable development subprojects by learning from others (e.g., quality handicrafts) as well as sharing their knowledge with others.

  Constructive criticism from those trained offers suggestions for future efforts. Some observed that the capacity building for local communities did not always respond well to local needs; for instance, training was not always done in local languages, and sometimes used language that was too technical for participants. In several instances, training was delivered after the work it was meant to prepare for was already completed.

- ***Sub-component 3.2 Training in Environmental Management***. This sub-component has solid achievements, though the training was criticized by the external evaluator for being isolated efforts

without a strategic vision which in the evaluator's opinion would have improved the impact. Six workshops on EIA were carried out which included participants from the private sector. Ten persons working in the private sector attended the regional MBC workshops on valuation of natural resources. Private sector participants also attended workshops about international conventions on environmental quality. Some 20 university professors and 73 professionals from government entities (Ministry of Agricultural Development, Ministry of Economy and Finance, Ministry of Health, and ANAM) and NGOs, economic and environmental science professionals, and members of the Environmental Advisory Commissions received training on: "Environmental and Natural Resource Economics: Valuation of Environmental Goods and Services" which is a new area of environmental management in Panama. Some 400 professionals from various institutions including the judiciary, private enterprise, NGOs, and local communication media participated in training on various themes such as the MBC, concepts and methods of policy and biological diversity analysis, and environmental laws and instruments for their application.

- ***Sub-component 3.3 Modernization of the SINAP.*** Achievements supported by this sub-component combined with the adoption of new norms, management plans for key protected areas (Sub-component 1.1), and investments in protected areas (Sub-component 4.2) contributed to the modernization and strengthening of the National Protected Areas System (SINAP). ANAM has adopted a program for monitoring the effectiveness of protected areas management which is a significant advance made easier by the extensive work done to prepare the individual management plans including mapping (scale of 1:50,000) and biodiversity data bases. Thirty-eight staff members of the National Protected Areas and Wildlife Service directly working at the central, regional and local level in protected areas received training in administrative, technical, and social aspects of managing protected areas and conserving biological diversity. In addition, 175 park guards and volunteers were trained, including in areas such as fighting forest fires and handling conflicts with intruders in the parks. The use of volunteer park guards was so successful that ANAM prepared official guidelines governing their work which are pending approval. ANAM has prepared and initiated the public review process for a new law to modernize the SINAP which includes provisions for: updating and harmonizing the SINAP's management categories; establishing private reserves; ANAM's ability to share and/or delegate administration of protected areas to other entities such as NGOs and to grant concessions; enforcement measures and responsibilities; the rights of indigenous authorities; and sharing of economic and financial benefits. Meeting the immediate needs and ensuring the long-term financial sustainability of the SINAP remain critical, unresolved issues. The management plans for each protected area contain specific ideas for revenue generation and efficient management; in 2004, ANAM undertook, with USAID support, an analysis of the Latin American experience particularly concerning concessions for services and administration which resulted in specific proposals.

Component 4—Investments in Priority Areas of the PAMBC. This component is rated **Satisfactory** due to its positive impact on ANAM's image and relationship with communities, and tangible and intangible improvements in assets, knowledge and cohesion of communities and specific protected areas.

- ***Sub-component 4.1 Support for Conservation and Sustainable use of Biodiversity: Subprojects***. This sub-component was clearly one of the most well-known and well-received activities of the project. Many of those interviewed singled out the community-driven aspect of this sub-component, new in Panama, as one of the most significant accomplishments of the project as a whole. This was seen as a real change institutionally for ANAM, both in terms of transforming an institutional culture in which communities are seen as the problem rather than part of the solution, as well as improving the perception communities have of ANAM and their relationship with the institution. The public perception of ANAM changed from being seen as an institution that restricted people's access to

natural resources to one that helped provide alternative livelihoods that were more environmentally friendly. Eighty percent of the subprojects involved communities in remote areas which rarely benefited from development initiatives; this posed a challenge, but also offered new possibilities. In particular, beneficiaries observed that it was a new experience for them to be involved in the entire subproject cycle, receiving training and technical assistance coupled with the means to put what they learned into practice. The external evaluator found a high level of appropriation of subprojects in a majority of beneficiary communities.

A total of 100 subprojects were carried out for a total cost of US$1.98 million of which US$1.2 million (61%) was financed by the grant, US$0.6 (30%) by beneficiaries, and US$0.18 (9%) by others. The projects were carried out in 118 communities and benefited 13,000 families (34,856 persons). Forty-two agroforestry subprojects (7,702 beneficiaries) were financed, and 85 percent of all subprojects contained an agroforestry component. Other types of projects included: 15 handicrafts-agroforestry, 12 fish farming-agroforestry, 9 eco-tourism (involving the 15,940 beneficiaries), 9 agriculture-agroforestry-fish farming, 5 captive breeding-agroforestry, 4 natural resource management, 1 subproject of the Kuna Yala *comarca* to help protect their territory, 1 subproject for capacity building and environmental education focused on the harpy eagle carried out in 28 communities, 1 solid waste management and 1 renewal energy project. The involvement of indigenous communities was strong: 75 percent of the subprojects were carried out by indigenous communities, accounting for 70 percent of subproject funding. These included two innovative projects in the Kuna-Yala *comarca*: one for management of solid waste which was polluting the coastal waters, and one for solar energy to supply key community infrastructure such as health posts and schools. Nearly half the beneficiaries of subprojects were women. In evaluating the experience, many of the groups and participants recognized gains in their technical and organizational capacity. The motivation and commitment within the communities has been strengthened, as a result of the participatory process of planning and executing the subprojects. For those in buffer zones of protected areas, a growing understanding of environmental issues was evident. In other cases, improved agricultural techniques were being used successfully.(7)

There are a few aspects of the sub-component which could be improved in the next project, some of which are commonly found challenges in providing grants to communities. First, more systematic technical support was required, given the lack of experience of the majority of the communities. Second, given the high level of poverty in the PAMBC, the subprojects often combined longer-term environmental aspects with short-term actions to increase income. An issue that emerged repeatedly was that marketing and the financial sustainability of productive subprojects needed to be addressed at the design stage. Third, specific concerns arose concerning NGOs which were involved in three roles under this sub-component: (i) ANAM contracted two NGOs to help communities with the identification and preparation of subprojects in two “macro” regions; (ii) local NGOs (48) with legal recognition were contracted to administer subproject funds on behalf of the beneficiary organization; and (iii) NGOs were at times relied on to provide technical assistance during subproject implementation. In regard to the first role, several people commented to the ICR mission that, despite the good intentions of the project, the communities were not always at the origin of the subproject ideas. In regard to the second role, several individuals who were involved in implementing subprojects said that the NGOs that received and administered subproject funds for the communities, in some cases were not chosen by the community and/or did not provide adequate support for the subproject. In addition, the fact that each NGO was not allowed to manage funds for more than 3 subprojects meant that the best NGOs could not help all of the subprojects, and some of the NGOs that were consequently chosen were weak and needed training prior to assuming this responsibility. The positive aspect was that a number of the local NGOs were based in the communities and through the process

were eventually strengthened. In regard to the third role, ANAM needs to take on a much stronger role in the monitoring and technical support to subprojects, a role it began to play in the final stages of the project.

Similar to most GEF biodiversity conservation projects with a community-driven grants component, this project raises a generic issue of what cumulative impact the subprojects have had on conservation of globally important biodiversity. There does not appear to have been an effort to monitor impacts of a sample of the subprojects on biodiversity, and, in the case of certain types of subprojects, the conceptual model for how the subproject was meant to contribute to biodiversity conservation is weak or missing. Most of the people interviewed for the ICR responded to a question about biodiversity impact of the subprojects with general answers about the impact on communities, treating the subprojects as a tool for helping the communities get organized, or as a type of environmental education experience. The potential contribution of the sub-component to biodiversity conservation could have been increased in several respects: (i) by developing more fully the conservation logic for funding certain types of subprojects, which seemed in certain cases such as captive breeding to be more a hypothesis that needed to be tested than a proven fact; and (ii) by more precise geographic targeting of subprojects such as agroforestry within the project's relatively large priority area. For example, maintaining tree cover can be much more valuable in some areas than others, and it is particularly valuable when it is contiguous across farms. Defining in advance geographic areas where increased tree cover would have been highly desirable and preferentially financing subprojects in those areas might have greatly increased the biodiversity impact of these interventions.

- ***Sub-component 4.2 Investments in protected areas***. This sub-component strengthened the physical and operational capacity of the SINAP in the PAMBC, one of ANAM's core responsibilities. It supported useful investments in protected areas infrastructure, including regional offices in the Bocas del Toro province and the Kuna Yala *comarca*, a visitors' center in a national park where day-trips are possible from Panama City, 2 park shelters, the remodeling of existing infrastructure in 3 protected areas, and rehabilitation of nature trails in 3 protected areas. The effectiveness of ANAM's regional offices was improved by the provision of badly needed equipment, vehicles, and audiovisual and other supplies. In addition, park guards and volunteers were provided with basic equipment for their patrols, and firefighters were trained and equipped. An important achievement was the establishment and operation of a volunteer guard program in 3 indigenous reserves and 1 protected area which were under threat from colonists and activities such as logging and hunting: the borders of the Kuna Yala and Madungandi *comarcas*, the San San Pond Sak wetlands, and the overlapping area of the Ngobe Bugle *comarca* with the Protector Forest Palo Seco. Indigenous authorities were appreciative of these efforts, particularly when enforcement authority (police and MGJ) was mobilized as in the case of the Kuna-Yala *comarca.* The action plan being implemented in the overlapping area of the Ngobe-Buglé *comarca* and the Palo Seco Protector Forest, is cited by ANAM as an initial step in the shared administration of protected areas and indigenous territories.

Component 5—Project Management. This component is rated **Satisfactory**. The project was originally designed together with the Bank-financed Rural Poverty and Natural Resources project with one Project Coordination Unit (PCU) in the Ministry of Agricultural Development (MIDA), and a day-to-day operational Project Execution Unit (PEU) in ANAM. It quickly became apparent that this was an untenable arrangement which made it difficult for ANAM to efficiently carry out the project. The elimination of MIDA's oversight role for the PAMBC proved to be a good example of adaptive project management: while the Rural Poverty and Natural Resources project managed by MIDA continued to experience difficulties, ANAM was able to move its project forward at an acceptable pace and with good success.

4.3 Net Present Value/Economic rate of return:
N/A

4.4 Financial rate of return:
N/A

4.5 Institutional development impact:
The project's institutional development impact is rated **Substantial**. The project supported the transformation of environmental management and the implementation of the new institutional arrangements called for in the Environmental Law of 1998. Part of the reason it did so effectively was the determination of ANAM's General Administrator that all externally financed projects would support ANAM's program and the national environmental strategy, instead of simply operating on their own. This proved to be effective. An IDB-supported National Environmental Program financed core activities to put in place the new legal and institutional framework. The PAMBC complemented these efforts by focusing on putting in place the legal, institutional and operational mechanisms for the new approach to conservation and protected area management which included local stakeholders. Early on in the project, ANAM made a strategic choice to focus attention, funds and energy on local communities and on the ground work in the *comarcas* and protected areas. In hindsight, this proved to be important as this is where the critical change in institutional culture and modernization of protected areas management needed to take place in order to demonstrate that it could work and to generate pressure for change at the center. This was achieved through the participatory process for preparing the management plans and subprojects, the extensive training and communications outreach campaigns, as well as the establishment of 6 Consultative Environmental Commissions (CCA) at the provincial, municipal and *comarca* levels to promote citizen involvement and advice on environmental matters.

The project's work with indigenous authorities is probably its most important contribution to institutional development. During project preparation, indigenous authorities and institutions were treated with respect and a dialogue was initiated. This eventually resulted in formal agreements with each ethnic group/ *comarca* indicating: their wish to participate, the mechanisms for their involvement, and formal designation of a person or organization to serve as their regular link with the PAMBC. The project supported the establishment of a new *comarca* for the Naso Teribe territory (overlapping with an important protected area) which is now under consideration in the national Congress. It contributed to the consolidation of the existing *comarcas* through: financial support for their General Congresses, installation of the *comarca's* Consultative Environmental Commission which was a new mechanism for civil society participation, support for creation of volunteer patrols, full involvement in the development of the project's annual operating plans, of management plans for protected areas, and of action plans for overlapping areas of the *comarca* with protected areas. It also supported a more visible and active role of indigenous authorities at the national level, by financing the preparation of a proposal and the subsequent establishment of the National Council for Indigenous Development as a mechanism for the direct involvement of indigenous peoples in defining their own development strategy to be included in the national government's social agenda. ANAM also opened regional offices in the Kuna-Yala and Ngobe-Bugle *comarcas*.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:
The key factors outside the government's control which caused frustration and delays were: changes in Bank task team leaders; the Bank's requirement to adopt the Loan Administration Change Initiative (LACI) system of disbursements; conversion of the GEF grant from SDRs into U.S. dollars, which resulted in a

misunderstanding about the amount of undisbursed funds; and delays in the Bank's handling of procurement matters stemming from a reorganization of the procurement function in the Latin America and Caribbean Region. A major factor within the government's control, but outside the control of the implementing agency, was the two changes in presidential administrations which led to a one-year delay in project implementation due to changes in ANAM's leadership and the PEU's staff. In addition, changes in *comarca* leadership and lack of a handover process to the new leaders resulted in delays and an unmet need to invest in capacity building of the new leaders just as the project was closing.

5.2 Factors generally subject to government control:

Positive factors under the government's control that contributed to the project's impact were: (i) the relative stability of ANAM's leadership, and (ii) the procurement of additional external assistance from donors such as IDB and IFAD which complemented and reinforced efforts to achieve the project's objective. Negative factors included: (i) the scarcity of budget resources in 2003 which resulted in a 20 percent decrease in ANAM's budget and postponement or cancellation of certain project activities; and (ii) the pressure to carry out investment projects, such as the road through a protected area, which would negatively affect biodiversity conservation and ANAM's credibility. Fortunately, the road investment was cancelled due in part to public pressure.

5.3 Factors generally subject to implementing agency control:

ANAM implemented the project in a highly satisfactory manner. As part of project start-up, it put in place a good financial and administrative management system (SIFI). ANAM's leadership supported the PEU and promoted the integration of the project into ANAM's regular institutional structures which worked reasonably well. In some cases, this integration could have been strengthened; for example, ANAM staff observed that the staff of protected areas should have been more closely associated with the consultants who developed the four protected area management plans, so that they would then be in a better position to implement them. However, it should also be noted that frequent rotation of protected areas staff, presumably a factor under ANAM's control, undermined to some extent project efforts to build staff capacity. Another area where ANAM's performance could have been better is timely follow through on key activities, such as: design and implementation of the biodiversity monitoring system; setting up the monitoring and evaluation system of the project, and gathering baseline information; approving the four protected area management plans so that implementation could begin during the project; and developing a sustainable financing strategy for the SINAP, although one notes that important building blocks (i.e., individual park strategies) were developed. ANAM compensated for the lack of the project M&E system by good progress reports, and excellent mid-term review and completion reports prepared by independent evaluation teams.

5.4 Costs and financing:

Total actual project costs were US$10.3 million, 98% of the total project cost estimated at appraisal. Counterpart funds provided by the government were US$1.1, or 110% of the appraisal estimate. Beneficiaries of grants contributed US$0.6 million, which was less than estimated (55%); however, this estimate was based on a hypothesis concerning the type of subprojects to be financed (the beneficiary contribution varied by subproject type). Unexpected cofinancing of subprojects by third parties such as the U.S. National Fish and Wildlife Foundation amounted to US$0.18 million. At the government's request, the grant's closing date was extended by one year to June 30, 2005 in order to complete critical activities such as the updating of the vegetation map which were already underway.

6. Sustainability

6.1 Rationale for sustainability rating:

The project's sustainability is considered **Likely**. The project successfully set in motion a process towards a long-term goal. The evaluation report commissioned by the government concludes that: "it should be understood that more than a project, this was a program with a long-term vision that contemplated substantial changes at the individual level (attitudes and behavior) up to the level of national policies (change in strategies, and socio-economic and environmental policies) that could be achieved in the longer term. For those to be sustainable, the project at its creation should contemplate concrete actions for its sustainability and planning which would go beyond the life of the project for ANAM and local actors."(8) Sustainability would be highly likely, if such advance planning had taken place.

The prospects of sustainability at the local and regional levels seem highly likely given the already evident changes in ANAM's role and its relation with communities, the growing awareness of the relevance of conservation and sustainable use of natural resources to the livelihoods and heritage of individuals and communities, increased knowledge and involvement of children through their schools, the validation of the four protected areas management plans by the local communities and indigenous *comarcas*, and the linking up of this project's efforts with new investment projects in the PAMBC which can build on its achievements. Concrete actions to underpin this include: ANAM's continued and permanent communication with leaders of the *comarcas*; continued technical assistance to communities which carried out subprojects; a training plan in marketing for beneficiary groups; and provision of information to the beneficiary groups on public and private sources of funding and technical assistance so that they can continue to grow. At the national level, the new laws and mechanisms for conservation and environmental management supported by the project (such as the proposed modifications to the rules governing EIA to include among other aspects the MBC) make it likely that the project's achievements will be carried forward. Likewise, Panama's continued engagement as part of the Central American Commission on Environment and Development (*Commission Centroamericano de Ambiente y Desarrollo*, or CCAD) and the MBC, and its commitments under the Convention on Biological Diversity will continue to focus attention on the efforts in the PAMBC. Two of the main risks to sustainability are: (i) the relative importance of the PAMBC to the new presidential administration that assumed office in 2004, and (ii) ANAM's limited financial resources to take the concrete actions highlighted above.

6.2 Transition arrangement to regular operations:

The government of Panama expressed interest in a follow-up operation to consolidate the achievements of the PAMBC project, and has nearly completed project preparation. Unfortunately, project preparation has been delayed, because the government has decided to redesign the rural development components of the project which will be implemented by MIDA. Despite the delay, the completed preparation work provides a technical and operational roadmap to move forward towards the PAMBC's long-term goal. In addition, the government has requested from a Bank-financed Project Preparation Facility to move forward on the roadmap and has supported the development of investments within the PAMBC area aimed at balancing economic development needs and biodiversity conservation, including the on-going National Land Administration Program (PRONAT) financed by the Bank and the:

- Sustainable Development Program of the *Comarca* Ngöbe Buglé/Social Investment Fund-IFAD: This program, approved in June 2001, consists of a US$33 million portfolio to assist 30,000 people (75 percent Ngöbe Buglé indigenous people and 25 percent non-indigenous) who live in the provinces of Bocas del Toro, Chiriquí, and Veraguas. Its principal activities are formal and informal training, as well as the promotion of sustainable development activities (e.g., technical assistance, natural resources management, financing of productive activities, and business development).
- Multiphase Program for Sustainable Development of Bocas del Toro/Ministry of Economy and Finance-IDB approved in December 2002: Financing of US$16.9 million for an initial three-year execution phase. After this period, a second five-year phase of US$30 million is planned. Its beneficiaries are the entire province of Bocas del Toro and its activities are aimed at the construction of

infrastructure and environmental improvement, provision of services, strengthening of the province's local governments and public entities, and investments for productive development and natural resources management and conservation.

- Darien Sustainable Development Program-IDB/IFAD. An on-going program since 1997 in the case of IDB and 1995 in the case of IFAD which has been complemented by PAMBC-financed initiatives to fill program gaps.
- Sustainable Rural Development Project in the Provinces of Cocle, Colon and Panama West-IFAD which was approved in 1997 and has cooperated with the PAMBC in Cocle.

7. Bank and Borrower Performance

Bank

7.1 Lending:

The Bank's performance preparing and obtaining approval of the project is considered **Satisfactory**. Initially, the project was prepared as an integral part of the Rural Poverty and Natural Resources project. As the preparation of that project, which focused on the more densely-populated Pacific region, was more advanced, the Bank decided to proceed with the PAMBC as a separate but related operation (partially-blended, in GEF terminology) which focused on biodiversity conservation in the Atlantic region. Conceptually, the two projects were closely related. The Rural Poverty and Natural Resources project's sustainable rural development component aimed to address the root causes of migration from the Pacific coast (e.g., entrenched rural poverty, insufficient land, low returns to agricultural activities) to the less-populated Atlantic coast, which was a key threat to conservation of the PAMBC. The PAMBC's design built on the preparation work for the Rural Poverty and Natural Resources project, but undertook additional studies with funding from a GEF-financed grant of US$282,000. In view of the fact that this was a challenging preparation process since this was the second and largest GEF project in Panama, the additional time, effort and cost of preparation was warranted. The composition of the Bank team was excellent, and reliance on team members based in RUTA -- located in San Jose, Costa Rica -- was an advantage given the proximity to Panama.

This project was the third national project under the umbrella of the regional Mesoamerican Biological Corridor project which involves 7 countries in Central America, together with Mexico. The Bank took into account the lessons of national-level MBC projects in Honduras and Nicaragua, as highlighted above in Section 3.3, to improve the design of this one. One of the best practice aspects of the preparation process and design was the Indigenous People's Development Plan. Indigenous authorities were skeptical initially, so early approaches which were carried over to implementation were critical in establishing that their authority and decision-making mechanisms would be respected. Considering their importance in the biological corridor, this was fundamental to the achievement of the project's development objectives. While other aspects of the project's design could have been strengthened (see Section 3.5), this does not diminish the Bank's satisfactory performance.

7.2 Supervision:

Bank supervision is considered **Moderately Satisfactory** with variation over time. The supervision by the Bank was good in the first phase of the project: start-up through the mid-term review (MTR). The Bank was flexible and when serious problems arose, they were addressed in a pragmatic and timely manner. For example, during the first year serious tensions arose between the PCU in the Ministry of Agricultural Development which was to handle certain core functions such as procurement and ANAM's PEU which was to handle day-to-day project management. The Bank team perceived this as a major risk and supported ANAM's proposal that the PEU have direct and full responsibility for project management. This proved to have been a good decision as the commitment and continuity of ANAM's management was a critical ingredient for the project's success. Likewise, the Bank team handled well and assisted ANAM to

address two critical threats to biodiversity conservation which arose unexpectedly: (i) a serious incident in the internationally recognized San San Pond Sak Wetlands due to the actions of a powerful individual, and (ii) a plan to build a road across a protected area. In the first case, a mitigation plan was developed with support from two reputable international NGOs and put into effect to limit the damage. In the second, the Bank's concerns were conveyed discretely to the Panamanian authorities. The quality of the MTR was excellent with a good team that made field visits to subprojects and carried out a special assessment of the implementation of the IPDP; useful recommendations were made.

After the MTR, the level of Bank attention to the project decreased, although the supervision of fiduciary and safeguard policies remained good. Due to unforeseen circumstances, the Task Team Leader (TTL) was changed suddenly shortly after the MTR and there was a period of instability which was perceived by the Panamanian project team as a lack of attention and responsiveness. Bank management reacted to this situation with a piecemeal approach which did not ensure adequate supervision. An interim team leader was named, but this person who had been involved with the project before was overburdened with other work. Another change was made, but the person had limited operational experience. Finally, a TTL with the requisite experience was designated, but he was also responsible for the Rural Poverty and Natural Resources project which was experiencing serious problems; most of his attention was focused on resolving those problems.

The consultant hired to evaluate the project on behalf of the government notes that the Bank failed to follow more closely and insist upon the preparation of: (i) a Project Implementation Plan (PIP) which would have provided an implementation roadmap; and (ii) the project M&E system. While she considers the participatory process introduced by ANAM for preparing the annual operating plans to be a highly positive one, she believes that the plans were responsive to immediate priorities and did not take into account the steps required to deliver the project's outputs and outcomes. The combination of the lack of a PIP and project M&E system and the changes in TTLs, exacerbated the difficulty of adequately supervising project implementation beyond the very basic level of activities in the annual plans. The last TTL reported that he had to spend most of his time in the first year reconstructing what the project was supposed to be doing, because of a lack of easily accessible guiding documentation. The Bank apparently failed to insist on the preparation of these documents, though it did promote the use of Microsoft Project in 2002 as a monitoring tool though this was considered insufficiently flexible to meet the PEU's needs. One result of this lack of an overarching planning document was apparently the dropping of several activities foreseen in the original project document, such as the policy work on mining, often for good reason, but apparently with no formal communication to the Bank.

The project design foresaw the MTR as an opportunity to review and refine the project outcome indicators. While the MTR looked carefully at work underway to design the biodiversity monitoring system and made important recommendations, the Bank team did not initiate a discussion of the adequacy of the project impact indicators both conceptually and in terms of the feasibility of measuring them. Likewise, while the implementation of certain MTR recommendations such as the need for a strategic plan for training were adopted, there was apparently no follow-up to certain critical ones concerning the monitoring of biodiversity and measuring the project's impact. For example, the independent consultants who prepared the government's contribution to the MTR found that: (i) ANAM's technical experience and personnel were limited vis-à-vis the requirements for promoting the biodiversity monitoring system; and (ii) important technical information and tools such as the vegetation map needed to be better disseminated, fully interpreted and widely used inside and outside ANAM. Bank technical supervision of the development of the biodiversity monitoring system was weak during the remainder of the project.

7.3 Overall Bank performance:

The Bank's overall performance is considered **Satisfactory**. The satisfactory performance in the lending stage and supervision process through the MTR in 2002, outweigh the moderately satisfactory supervision performance thereafter.

Borrower

7.4 Preparation:

The Borrower's performance in project preparation is considered **Satisfactory**. Preparation of this project was challenging, because it was only the second GEF project in Panama, the biological corridor concept was new as was the approach of involving communities in conservation efforts. The government assembled a strong technical team and managed the process well, taking full advantage of the support provided by RUTA's team in Panama.

7.5 Government implementation performance:

Government's performance during implementation is considered **Satisfactory**, despite a few weaknesses. Throughout the project period, important laws and policies related to conservation were adopted, and the government obtained additional financing for projects in the corridor which were consistent with and reinforced the project's development objective. Similar to experience in other countries, the two changes in presidential administrations led to changes in top level positions and project personnel which resulted in cumulative delay of about one year. The most serious weakness was the high-level push for construction of a road through one of the protected areas which would have been a serious blow to biodiversity conservation efforts. Fortunately, public pressure led to the shelving of this investment project. The PAMBC's active communication campaign raised public awareness of the importance of the MBC and government's international commitments to protect and conserve it, resulting in the creation of constituency to address potential threats to the national's biological diversity.

7.6 Implementing Agency:

The satisfactory implementation of this project is due in large part to a capable and determined management team of ANAM and the project unit which worked well together and was in place for the core period of project implementation. The insistence of ANAM's General Administrator that all projects should fit into and support the mandate of the newly-established entity and not operate as separate "islands" led to a synergy of actions and the project's broader contributions in a number of areas not foreseen in its design (e.g., first national water quality monitoring exercise). Sometimes, this led to decisions being taken (e.g., not to carry out certain activities) without consulting the Bank which were probably justified from ANAM's point of view, but were detrimental to completion of certain aspects of the project (e.g., establishing the biodiversity monitoring system). However, on the whole, the adjustments made in each component as circumstances and priorities changed were appropriate.

The project unit was supported by a capable staff and worked well with the various departments of ANAM. The participatory manner in which the annual operating plans were developed and monitored served as a vehicle for internal communication and for ensuring that the project served ANAM's broader mandate. ANAM did an excellent job preparing the MTR and the Borrower's contribution to the ICR which both involved a broad outreach through interviews and workshops with all stakeholders.

Local-level activities depended partially on the regional offices of ANAM, but coordination with those offices was variable across the project. In most cases, coordination was characterized as good, but in one case it was seen as quite poor. This seemed primarily to depend on the interest and willingness of each ANAM regional office to participate and the continuity of key staff. Integration with the regular management structures of ANAM is clearly an important ingredient in sustainability, so those areas with good coordination with the regional ANAM offices would be expected to have more sustainable outcomes.

One oversight during project implementation was the failure to establish the project's Administrative Committee, an advisory committee for project implementation. The external evaluator who carried out the final project evaluation could not ascertain why this committee was never established, but it resulted in, for example, the lack of a formal space in which project participants, in particular indigenous authorities, could directly interact with the Project Director and the General Administrator of ANAM.

7.7 Overall Borrower performance:

The overall performance of the Borrower is rated **Satisfactory**.

8. Lessons Learned

The project offers the following lessons:

- Due to various internal and external pressures, there is a common tendency to define overly ambitious project development objectives, relative to the project's starting point, time frame, and available resources. This problem is compounded if the indicators for measuring whether the objective has been achieved are broadly defined or difficult to measure. This project is an example of both. By their nature, GEF-financed biodiversity conservation projects have objectives for which measuring short-term impacts is extremely challenging. This reinforces the importance of carefully choosing measurable indicators and of identifying better indicators as early as possible during the implementation phase if the original indicators are inadequate.

- Strong leadership and continuity in the management of the implementing agency and project unit, if one exists, are critical ingredients for a project's success. Likewise, even if a project management unit is created, the natural tendency for the unit to work on its own outside the agency's regular institutional framework can be counteracted by the insistence of the implementing agency's leadership that the project contribute to its mandate and work effectively with the staff of relevant functional areas.

- It is wise to presume that there will be changes in the key persons leading the Bank and government teams during project implementation due to a variety of factors, including political changes. Therefore, it is important to build into the process means to make these transitions smooth and reasonably short. In this regard, written documentation is key including: translated versions of key project documents, preparation of a Project Implementation Plan, Annual Operating Plans and analysis of achievements under each plan, and *aide memoires* recording the findings of supervision missions. In addition, Bank management should take a proactive role in identifying suitable task team leaders so that an adequate level and quality of supervision and technical oversight is provided throughout the project's life.

- When the Bank decides to make changes in procedures and policies which affect clients, it needs to be aware of and minimize the cost for the Borrower. The notable example in this case was the Bank's requirement that all new projects adopt the Loan Administration Change Initiative (LACI) system of disbursements, which led to considerable time and expense to design such a system during the project's start-up phase. Less costly, though frustrating for the implementing agency were: the reorganization of the procurement function in the Latin America and Caribbean Region, and the conversion of GEF grants from SDRs into U.S. dollars.

- In many projects, considerable time and money are invested in tools and studies, but the full benefits of these investments are not realized. An example for this project is the initial development of the vegetation map and its updating in 2004. This was an important contribution to environmental knowledge and monitoring in Panama. The results would have been even better if the outputs had been

fully analyzed, the findings had been adequately disseminated, and more people had received training to use this tool.

- Integration of indigenous people in the design and implementation of project activities can have an appreciable impact on project success. Given the fact that in many regions of the world indigenous people occupy some of the best lands for biodiversity conservation, it is critical to ensure that they are full participants in determining how that biodiversity is best conserved.

- Community subprojects can help generate community support for biodiversity conservation. They can also transform the image of a protected areas agency from one focused on punitive actions to one that supports communities in looking for more sustainable alternatives. Perhaps as importantly, they can transform the self-image of protected areas staff into one more oriented toward positive engagement with surrounding communities. These changes, while largely intangible and difficult to measure, can build a stronger foundation for future conservation efforts that are carried out in partnership with local communities.

- The grants sub-component of this project raises a generic issue for GEF projects with a community driven development component: the potential and actual contribution of these subprojects to conservation of biodiversity of global importance needs to be better analyzed *ex-ante* and measured *ex-post*. In addition, the targeting of certain types of subprojects to locations where they could make the best contribution needs to be considered. This does not diminish the important contributions of the subprojects in other realms.

- A common weakness of projects providing small grants for productive investments is the lack of attention to marketing issues as part of subproject design, and of technical assistance to beneficiaries to address these challenges during implementation. Many of the organizations who carried out subprojects financed by this project are ill-equipped to face these challenges.

- Projects such as the PAMBC which are focusing on a long-term goal need to put in place the elements to support achievement of the goal once project funding is over. In this case, although sustainable financing of the protected areas system was an issue raised during project preparation and included as an issue to be worked on during the project, only limited progress was made before the grant was closed. This raises uncertainty about the sustainability of the project's achievements. Fortunately, the follow-up project has this as an important goal.

9. Partner Comments

(a) Borrower/implementing agency:

CR: Panama Atlantic Mesoamerican Biological Corridor, Partner's Comments

TRANSLATED VERSION OF THE COMMENTS FROM LETTER REF. AUTORIDAD NACIONAL DEL AMBIENTE, REPUBLIC OF PANAMA.

The General Administrator of ANAM conveyed to the Bank the Government's comments on the ICR in a letter to the Director of the Country Management Unit for Central America dated December 29, 2005. The following is a translated version of the comments. "Through this letter, we would like to greet you and inform you that we have read the ICR prepared by the Bank for the Atlantic Mesoamerican Biological Corridor Project which was implemented by ANAM in the context of the GEF Grant Agreement (TF020454) signed by the Government of the Republic of Panama and the World Bank.

It is very gratifying for us to recognize the success and postive impact that this project has had at the local and national levels. It has fulfilled the expected objectives which has contributed to the conservation and sustainable use of natural resources and at the same time promoted the improved quality of life in rural areas--both indigenous and non-indigenous--of the Atlantic region of the country. The connectivity of natural ecosystems which contain great biological diversity has been maintained.

We consider of particular importance the project's work with communities, indigenous authorities and local governments to strengthen their capacities in management, formation of human capital, environmental awareness as well as various aspects of sustainable management of natural resources and biological diversity inside and outside protected areas.

These actions were translated at the local level into opportunities for organization, strategic planning, community decision-making and management of financial resources which have promoted the development of rural areas. As a result, high levels of appropriation of participatory processes of planning, monitoring, evaluation and decentralized project administration have been achieved by the poorest rural communities in the project area. All this has been achieved with the participation of local governments, indigenous authorities and the institutions responsible for the project's implementation, as well as the World Bank.

I would like to take this opportunity to express my recognition of the World Bank and the project's management for the support and collaboration received in the development of this project and the achievement of our common objectives."

autoridad nacional del ambiente

Panamá, 30 de diciembre de 2005
AG-2423-2005

Señora
Jane Armitage
Directora de la División para Centroamérica
The World Bank
1818 H. Street, N.W.
Washington, D.C., 20433
U. S. A.

Estimada Sra. Armitage:

Por este medio, tenemos a bien saludarla y hacer de su conocimiento que hemos leído el Informe de Cierre de la Implementación (ICR, por sus siglas en inglés) elaborado por el Banco Mundial para el proyecto Corredor Biológico Mesoamericano del Atlántico Panameño (CBMAP), el cual fue ejecutado por la Autoridad Nacional del Ambiente (ANAM), en virtud del Convenio de Donación GEF 020454, firmado por el Gobierno de la República de Panamá y el Banco Mundial.

Es para nosotros grato reconocer el éxito e impacto positivo que este proyecto ha tenido en el ámbito local y nacional dado el cumplimiento de los objetivos previstos, por lo que se ha contribuido a la conservación y uso sostenible de los recursos naturales y promovido, al mismo tiempo, la mejora en la calidad de vida en las áreas rurales indígenas y no indígenas del sector atlántico del país, manteniendo la conectividad de ecosistemas naturales con una gran diversidad biológica.

Consideramos de particular importancia, el trabajo realizado con las comunidades, las autoridades indígenas y los gobiernos locales en el fortalecimiento de sus capacidades de gestión y manejo, formación de capital humano, concienciación ambiental, así como en los aspectos de manejo sostenible de los recursos naturales y la diversidad biológica dentro y fuera de las áreas protegidas.

Estas acciones se han traducido en el ámbito local en oportunidades de organización, planificación estratégica, toma de decisiones comunitarias y manejo de recursos financieros, que han promovido el desarrollo de las áreas rurales. Como resultado, se han alcanzado niveles altamente satisfactorios de apropiación de los procesos participativos de planificación, seguimiento, evaluación y administración descentralizada del proyecto, por parte de las comunidades rurales más pobres del área de acción de éste. Todo ello con la

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participación de los gobiernos locales, las autoridades indígenas y el apoyo de las instituciones responsables de la implementación del proyecto, así como del Banco Mundial.

Aprovecho la oportunidad para manifestar mi reconocimiento al Banco Mundial y a la Gerencia del Proyecto, por el apoyo y la colaboración recibida en el desarrollo del proyecto de referencia y el logro de nuestros objetivos comunes.

Atentamente,

Ligia Castro de Doens
Administradora General

autoridad nacional del ambiente
ADMINISTRACION GENERAL
República de Panamá

c.c. Dr. Ricaurte Vásquez M. – Ministerio de Economía y Finanzas,
Mark Austin – Gerente de CBMAP – Banco Mundial,
Ing. Eduardo Reyes – Gerente Encargado – Corredor Biológico Mesoamericano del Atlántico Panameño (CBMAP).

(b) Cofinanciers:
Not applicable.

(c) Other partners (NGOs/private sector):
Not applicable.

10. Additional Information

Footnotes

1. *Comarcas* are a legal recognition of indigenous people's rights to land and to self-governance provided for in the Panamanian constitution.
2. The impact indicator specified in the logical framework was: "by 2002, significant decline in new colonists in priority biodiversity areas of the NAPAS and indigenous *comarcas*." The population of the project area cited in the PAD was a guesstimate, and no baseline was established at project start-up which could be used as a benchmark for measuring changes.
3. It stated that "outreach activities will be targeted at locating and strengthening an appropriate interlocutor" which seems like wishful thinking.
4. This is a recently established *comarca* whose population is extremely poor, have lost much of their cultural heritage, have evolved into agricultural producers, and face serious pressures from colonists.
5. Catalogo de Plantas Vasculares de Panama, Catalogo de Anfibios del Museo de Vertebrados de la Universidad de Panama, Libro Arboles y Arbustos de Panama.
6. Veritas Data Corp., "Estudio de Opinion Publica Sobre El Corredor Biologico Centroamericano del Atlantico Panameno," Diciembre 2004-Enero 2005.
7. A financial and economic returns analysis of the Rural Poverty and Natural Resources project found that environmental subprojects generated economic returns similar to productive subprojects (ERR 17%). GEF Project Brief, Second Rural Poverty, Natural Resources Management and Consolidation of the Mesoamerican Biological Corridor Project, April 6, 2005, pg. 75.
8. Martinez, "Informe Final de Ejecucion Técnica y Financiera de la Actividades Propuestas por el Proyecto CBMAP," pg. 139 (translated from Spanish).

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
Significant decline in new colonists in priority biodiversity areas of the National Protected Area System and indigenous comarcas by 2002.	A consultancy has been arranged to measure this.	Evidence from outmigration areas of Pacific coast show that migration has been reduced in some provinces relative to the 1970s and 1980s. In specific sites, such as Santa Isabel on border of Kuna-Yala comarca, where joint actions were undertaken with support from the project, they have successfully reduced incursions of illegal colonists.
All environmental impact assessments for investments in the PAMBC to incorporate the biological corridor concept and mitigative measures to conserve biodiversity by 2000.	By Law 41 of 1998 and executive decrees 57 and 59 all EIA incorporate aspects of management, protection and sustainable use of natural resources.	Modification of decrees 57 and 59 to include this requirement and other improvements have been drafted, the public consultations took place, and the proposals are being reviewed by ANAM prior to submission to the Ministry of Economy and Finance who will submit them to the national Congress.
All donor and multilateral projects greater than US$2 million within PAMBC consistent with the biological corridor concept.	100% compliance. There has only been one such project, (Desarrollo Sustenible del Bocas del Toro), and it was fully consistent with the biological corridor concept.	100% compliance. There has only been one such project, (Desarrollo Sustenible del Bocas del Toro), and it was fully consistent with the biological corridor concept.

Output Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
By year 5: 1 national and 5 regional participatory corridor plans developed and officially adopted.	1 regional plan (Area Prioritaria de la Region Occidental de Panama) has been adopted. As a result of the biological corridor not existing as a legal entity and because of Law 41, these participatory (rest of this was cut off due to lack of room in PSR)	2 regional plans completed and officially adopted: the Land Use Plan for the Punta Pena-Almirante Road and Priority Area-Western Region Plan. In addition, management plans for 4 protected areas and several other participatory planning exercises supporting conservation in the PAMBC were completed under the project.
Monitoring reports with analysis regarding deforestation, ecosystem conditions and threats and indicator species, disseminated in years 2 and 5 of the project	Year 2000 vegetation map of Panama disseminated via ANAM's web page.	No regular monitoring reports issued. Vegetation map was updated, analyzed and disseminated in 2004. Maps of forest cover and ecosystems also completed, including establishment of deforestation rates. Marine turtles monitored as indicator species for 3 consecutive years. 4 management plans contain detailed baseline information and maps at scale of 1:50,000.
Production of ecosystem map for PAMBC.	Year 2000 ecosystem map of Panama (scale 1:250,000) produced.	Year 2000 ecosystem map of Panama (scale 1:250,000) produced.
30% of local populations and 50% of primary school teachers within the PAMBC and 25% of decisionmakers within Panama (e.g, members of Congress, business leaders, national and local NGOs, indigenous leaders, governors, mayors) know and understand PAMBC concept	82% of the local population of Bocas del Toro and 72% of the comarca Kuna Yala know and understand the PAMBC concept.	A independent survey in 2005 to evaluate the impact of communication campaigns found that the targets had been surpassed: 97% of local leaders, 92% of teachers, and 63% of the local population knew about the PAMBC concept. A majority had at least a basic understanding of the concept.
By year 5: Subprojects compatible with the aims of the PAMBC implemented in 100 communities.	100 subprojects implemented in more than 100 communities and are compatible with aims of PAMBC.	100 subprojects implemented in 118 communities, benefiting more than 38,000 persons.

By year 5: 120 local leaders received training on PAMBC objectives and project mechanisms and 500 local individuals received training in natural resources management techniques by year 5.	120 local leaders were trained in PAMBC objectives mechanisms, 9,259 local individuals received training in natural resource management.	These targets have all been exceeded with more than 10,000 persons having been trained in various subjects. 297 indigenous and 153 non-indigenous leaders have participated in training on the PAMBC and other subjects including environmental legislation. 1,500 local persons were trained in environmentally friendly technologies to be applied in subprojects.
By year 5: 295 kilometers of priority protected areas demarcated, with participatory management plans under implementation.	Nothing recorded in last PSR, because this indicator was removed as the responsibility for achieving it was officially transferred to the National Land Administration Program also funded by the Bank.	No longer applicable.
150 park guards and volunteers trained and equipped to effectively patrol priority protected areas.	150 park guards and volunteers trained and equipped.	175 park guards and volunteers were trained and equipped.
175 kilometers of comarca boundaries demarcated	Nothing recorded in last PSR, because this indicator was removed as the responsibility for achieving it was officially transferred to the National Land Administration Program also funded by the Bank.	No longer applicable.

[1] End of project

Annex 2. Project Costs and Financing

Project Cost by Component (in US$ million equivalent)

Component	Appraisal Estimate US$ million	Actual/Latest Estimate US$ million	Percentage of Appraisal
1. Corridor Planning and Biodiversity Monitoring	2.53	2.15	85
2. MBC Awareness and Promotion	1.15	1.41	123
3. Capacity Building for Conservation and Sustainable Use of Biodiversity	1.98	1.40	71
4. Investments in Priority Areas of PAMBC	6.04	3.08	51
5. Project Management	1.10	2.26	205
Total Baseline Cost	12.80	10.30	
Total Project Costs	12.80	10.30	
Total Financing Required	12.80	10.30	

Project Costs by Procurement Arrangements (Appraisal Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	0.00 (0.00)	0.45 (0.31)	0.80 (0.55)	0.00 (0.00)	1.25 (0.86)
2. Goods	0.00 (0.00)	0.34 (0.20)	0.88 (0.69)	0.00 (0.00)	1.22 (0.89)
3. Services	0.00 (0.00)	0.00 (0.00)	3.52 (3.09)	0.00 (0.00)	3.52 (3.09)
4. Miscellaneous	0.00 (0.00)	0.00 (0.00)	2.22 (1.57)	0.00 (0.00)	2.22 (1.57)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	3.20 (1.16)	0.00 (0.00)	3.20 (1.16)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	1.38 (0.83)	0.00 (0.00)	1.38 (0.83)
Total	0.00 (0.00)	0.79 (0.51)	12.00 (7.89)	0.00 (0.00)	12.79 (8.40)

Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	0.00 (0.00)	0.21 (0.18)	0.12 (0.08)	0.00 (0.00)	0.33 (0.26)
2. Goods	0.22 (0.22)	0.00 (0.00)	0.32 (0.22)	0.00 (0.00)	0.54 (0.44)
3. Services	0.73 (0.73)	0.00 (0.00)	4.07 (4.07)	0.00 (0.00)	4.80 (4.80)

4. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.80 (0.80)	0.00 (0.00)	0.80 (0.80)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	1.20 (1.20)	0.00 (0.00)	1.20 (1.20)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	1.80 (0.90)	0.00 (0.00)	1.80 (0.90)
Total	0.95 (0.95)	0.21 (0.18)	8.31 (7.27)	0.00 (0.00)	9.47 (8.40)

Category 4 is Training, Category 5 is Subgrants, and Category 6 is Recurrent Costs. Data supplied by ANAM.

[1/] Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies.

[2/] Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

Project Financing by Component (in US$ million equivalent)

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	Bank	Govt.	CoF.	Bank	Govt.	CoF.	Bank	Govt.	CoF.
1. Corridor Planning and Biodiversity Monitoring	2.07	0.01	0.45	2.10	0.05		101.4	500.0	0.0
2. MBC Awareness and Promotion	1.07	0.08	0.00	1.30	0.11		121.5	137.5	0.0
3. Capacity Building for Conservation and Sustainable Use of Biodiversity	1.18	0.80	0.00	1.40	0.00		118.6	0.0	0.0
4. Investments in Priority Areas of PAMBC	3.09	0.00	2.95	2.30	0.00	0.78	74.4	0.0	26.4
5. Project Management	0.99	0.11	0.00	1.30	0.96	0.00	131.3	872.7	0.0
Total	8.40	1.00	3.40	8.40	1.10	0.78	100.0	110.0	22.9

Annex 3. Economic Costs and Benefits

Not Applicable.

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
Month/Year	Count	Specialty	Implementation Progress	Development Objective
Identification/Preparation				
11/1996	*2*	TASK TEAM LEADER (1); NATURAL RESOURCES ECONOMIST (1)		
1/21/1997	*3*	NATURAL RESOURCES SPECIALIST (1); BIODIVERSITY SPECIALIST (1); CONSULTANT (1)		
6/29/1997	*1*	TASK TEAM LEADER (1)		
Appraisal/Negotiation				
3/25/1998	*6*	TASK TEAM LEADER (1); ENVIRONMENTAL ECONOMIST (1); ENV. SPECIALIST (1); OPERATIONS ANALYST (1); NATURAL RESOURCES SPECIALIST (1); CONSULTANT (1)		
Supervision				
10/19/1998	*2*	TASK TEAM LEADER (1); AGRICULTURALIST(1)	S	S
11/09/1998	*3*	TASK TEAM LEADER (1); AGRICULTURALIST (1)	S	S
01/09/1999	*2*	TASK TEAM LEADER (1); NATURAL RESOURCES SPECIALIST (1)	S	S
03/01/1999	*4*	TASK TEAM LEADER (1); ENV SPECIALIST (1); AGRICULTURALIST (1); NATURAL RESOURCES SPECIALIST (1)	S	S
10/08/1999	*3*	TASK TEAM LEADER/ENV. ECONOMIST (1); SOCIAL SPECIALIST (1); AG. ECONOMIST (1)	S	S
03/03/2000	*2*	TASK TEAM LEADER/ENV ECONOMIST (1); SOCIOLOGIST (1)	S	S
12/02/2000	*3*	TASK TEAM LEADER (1); IUCN WETLANDS SPECIAL. (1); IUCN BIOLOGIST (1)	S	S
05/05/2001	*1*	TASK TEAM LEADER (1)	S	S
10/05/2001	*1*	TASK TEAM LEADER (1)	S	S
04/22/2002	*7*	TASK TEAM LEADER (1); GEF COORDINATOR (1);	S	S

			BIODIVERSITY SPECIALIST(1); INDIGENOUS SPECIALIST (1); PROCUREMENT (2); FINANCIAL SPECIALIST (1)		
	08/02/2002	*2*	TASK TEAM LEADER (1); ECONOMIST (1)	S	S
	06/27/2003	*4*	TASK TEAM LEADER (1); ENVIRONMENTAL ECONOMIST (1); ENV. SPECIALIST (1); OPERATIONS ANALYST (1)	S	S
	11/17/2003	*2*	TASK TEAM LEADER (1); CONSULTANT/ECONOMIST (1)	S	S
	08/20/2004	*4*	TASK TEAM LEADER (1); ENV. SPEC. (1); CONSULTANT (1); ECONOMIST FAO (1)	S	S
ICR	06/06/2005	*3*	TASK TEAM LEADER (1); SR. AGRIC. ECONOMIST (1); SR. BIODIVERSITY SPECIALIST (1)	S	S

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US$ ('000)
Identification/Preparation	91.9	198.7
Appraisal/Negotiation	5.0	13.5
Supervision	99.1	324.9
ICR	5.9	23.7
Total	201.9	560.8

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	Rating
☐ *Macro policies*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Sector Policies*	○ *H* ● *SU* ○ *M* ○ *N* ○ *NA*
☐ *Physical*	○ *H* ○ *SU* ● *M* ○ *N* ○ *NA*
☐ *Financial*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Institutional Development*	○ *H* ● *SU* ○ *M* ○ *N* ○ *NA*
☐ *Environmental*	○ *H* ● *SU* ○ *M* ○ *N* ○ *NA*
Social	
☐ *Poverty Reduction*	○ *H* ○ *SU* ● *M* ○ *N* ○ *NA*
☐ *Gender*	○ *H* ● *SU* ○ *M* ○ *N* ○ *NA*
☒ *Other (Please specify)*	● *H* ○ *SU* ○ *M* ○ *N* ○ *NA*
Indigenous Peoples	
☐ *Private sector development*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☐ *Public sector management*	○ *H* ● *SU* ○ *M* ○ *N* ○ *NA*
☐ *Other (Please specify)*	○ *H* ○ *SU* ○ *M* ○ *N* ○ *NA*

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance	*Rating*			
☐ *Lending*	○ *HS*	● *S*	○ *U*	○ *HU*
☐ *Supervision*	○ *HS*	● *S*	○ *U*	○ *HU*
☐ *Overall*	○ *HS*	● *S*	○ *U*	○ *HU*

6.2 Borrower performance	*Rating*			
☐ *Preparation*	○ *HS*	● *S*	○ *U*	○ *HU*
☐ *Government implementation performance*	○ *HS*	● *S*	○ *U*	○ *HU*
☐ *Implementation agency performance*	○ *HS*	● *S*	○ *U*	○ *HU*
☐ *Overall*	○ *HS*	● *S*	○ *U*	○ *HU*

Annex 7. List of Supporting Documents

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Republica de Panamá, ANAM (Martinez, Mirella con apoyo de Velasco, Margaliza y Camacho, Naira), "Informe final de Ejecución Técnica y Financiera de las Actividades Propuestas por el Proyecto CBMAP (3 tomos), Marzo 2005.

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Additional Annex 8. Borrower's Contribution

EXECUTIVE SUMMARY BORROWER'S REPORT (1)

This completion report presents the results of the implementation of the PAMBC Project, based on the results of the consultancy entitled, "*Informe Final de Ejecución Técnica y Financiera de las Actividades Propuestas por el Proyecto CBMAP*" (Final Report on the Technical and Financial Execution of Activities Proposed by the CBMAP Project), which was contracted in 2004.

In general, the implementation of the PAMBC Project and the development of activities under its various components have been evaluated as satisfactory. The project's achievements are evident, especially in terms of changes in people's attitude about the environment and the conservation of natural resources. In this regard, the PAMBC Project has received international recognition (CCAD, WB, Paris and Johannesburg Conferences), with a rating of "excellent" for its management.

The benefits derived from project management have aided 38,824 people with subprojects and it is estimated that a similar or larger number have benefited directly or indirectly from training, environmental education, and technical assistance activities**.**

In terms of physical execution, the project's benefits are evident in the improved infrastructure, human, technical, and operational resources of the National Protected Areas System (SINAP); the preparation of studies and management plans of critical protected areas for biodiversity conservation; regulations to improve the management of environmental issues (wildlife, co-management, EIA rules, etc.); the establishment of regulations for the preparation of management plans and for facilitating the participation of other stakeholders in the development of environmental tasks and issues.

From an environmental standpoint, the impact is considered to be between satisfactory and highly satisfactory (73%), especially because of its contribution to the management and conservation of natural resources and to the strengthening of ANAM. The weaknesses in terms of fulfilling this criterion were related to inter-institutional agreements on the modification of inter-sectoral policies or legislation.

The project's social impact is directly related to fulfilling the project's development objective and its contribution to the improvement of the population's socioeconomic conditions, as a consequence of the implementation of environmental and sustainable development subprojects. In this regard, the project's evaluation has been between satisfactory and highly satisfactory (80%). Among beneficiaries in priority areas, its principal achievements include a very good incorporation of the gender focus, of respect for the customs of key stakeholders, and an improvement in beneficiaries' quality of life, through the productive activities it financed. 42 local organizations including NGOs participated in subproject execution, and a similar number assisted in administering funds.

The sustainability of actions developed by the PAMBC Project is considered good if we look at it in terms of its principal goals which, according to the objective, were: *to contribute to the long-term conservation and sustainable use of biodiversity in the Panamanian portion of the Mesoamerican Biological Corridor.* This is due to a high percentage of completion of the activities at the local level, the promotion of participation by women and families, the consolidation of alliances with indigenous communities, the establishment of productive systems as alternatives to sustainable development, the promotion of community participation and strengthening while respecting cultural and social values, ANAM's level of commitment throughout the project, the consolidation of alliances with local actors, and the project's good

financial and administrative management.

1.This text has been translated into English and includes excerpts of key sections of the longer report submitted by ANAM.

1. Project Evaluation

This completion report has been prepared mainly on the basis of the results of the consultancy entitled, , " *Informe Final de Ejecución Técnica y Financiera de las Actividades Propuestas por el Proyecto CBMAP* ," which was contracted in 2004. In addition, project achievements that took place after the period documented by the consultancy were taken into account. In some cases, these modify the results presented by the external evaluation**.**

The project was appraised by an external consultant, using as a reference the compliance with activities planned in the annual operating plans (POAs), the objectives outlined by the project, by component and subcomponent, based on indicators in the project's logical framework, and the analysis of environmental impact, sustainability, and synergy indicators established for this purpose. The following scale of values was used for this assessment:

- Highly satisfactory (beyond that planned in the project design or over 100% compliance) · 5
- Satisfactory (full compliance with that planned in the project design or with ·75%–100% compliance) · 4
- Moderately satisfactory (partial compliance with that planned in the project design or with · 50%–>75% compliance) · 3
- Unsatisfactory (minimum results achieved in relation to that planned in the project design or with · 25% to >50% compliance) · 2
- Highly unsatisfactory (no activity performed to achieve compliance with that planned in the project design or with < 25% compliance) · 1

2. Achievement of project's development objective

The scope of project objectives is considered satisfactory. Actions are carried out aimed at strengthening institutional capacities, particularly those of ANAM, with regard to the implementation of national environmental policies, as established in the National Environmental Strategy, especially in the context of protected areas and zones overlapping the *comarcas*, biodiversity conservation, and environmental awareness.

In this regard, the consolidation of institutional strategies which go beyond the project's scope has been achieved, by adhering to principles of respect and recognition of cultural traditions, with gender equity, and through the broad participation of numerous actors. This has made it possible to improve the quality of life of the local population through the sustainable use and conservation of cultural and biological diversity within the PAMBC. For example, because PAMBC's activities include nearly all indigenous populations (almost 50% of the biological corridor's rural population), accords and agreements were established between ANAM and the respective authorities and congresses to ensure coordination with each of the PAMBC's indigenous peoples, thereby achieving effective participation at all levels and in all phases of project execution.

Greater awareness has been raised about the environment and the conservation of natural resources. This is an action that demonstrates one of the PAMBC Project's major impacts, with the implementation of training and awareness efforts in planning, preparation of subprojects, environmentally friendly techniques and methods, natural resources management, and gender equity, among others, in which over 15,000 people

participated. Specifically, in terms of the benefits stemming from the execution of the subproject portfolio, there are 34,856 direct beneficiaries of project actions.

3. Achievements of the project's components and subcomponents (2)

Component	Subcomponent	Rating
1. **Corridor Planning and Biodiversity Monitoring**		**Satisfactory**
	1.1 National Planning and Intersectoral Coordination	Moderately Satisfactory
	1.2 Local and Regional Planning in Priority Areas	Satisfactory
	1.3 Biodiversity Monitoring	Satisfactory
2. **Mesoamerican Biological Corridor Awareness and Promotion**		**Satisfactory**
	2.1 National Awareness	Highly Satisfactory
	2.2 International Promotion	Moderately Satisfactory
3. **Capacity Building for the Conservation and Sustainable Use of Biodiversity**		**Satisfactory**
	3.1 Strengthening at the Community Level	Highly Satisfactory
	3.2 Training in Environmental Management	Satisfactory
	3.3 Modernization of SINAP	Satisfactory
4. **Investments in Priority Areas of the PAMBC**		**Satisfactory**
	4.1 Support for Conservation and Sustainable Use of Biodiversity: Subprojects	Satisfactory
	4.2 Investments in Protected Areas	Satisfactory
5. **Project Management**		**Satisfactory**

4. Project impact and sustainability

4.1 Impacts

The project's impacts have generally been satisfactory.

From an environmental standpoint, the impact is between satisfactory and highly satisfactory (73%), mainly because of its significant contribution to the management and conservation of natural resources and the strengthening of ANAM to achieve its objectives as the country's leading environmental management agency. Weaknesses in fulfilling this criterion were related to inter-institutional agreements and the adoption of the PAMBC concept, all related to the modification of intersectoral policies or legislation.

2. In order to reduce this summary to 10 pages, this section has been condensed into a table which presents the summary ratings of the components and sub-components. Much of the detail from the Borrower's contribution has been included in the main body of the ICR.

The project's social impact is between satisfactory and highly satisfactory (80%) and is directly related to fulfillment of the project's development objective and its contribution to the improvement in the population's socioeconomic conditions as a consequence of environmental and sustainable development subprojects. Some of the key achievements of this social impact among beneficiaries in priority areas are the incorporation of a gender focus, respect for stakeholders' customs, and an improvement in the quality of life of beneficiaries through the productive activities that were financed.

The project's organizational impact is considered 100% satisfactory and is linked to the strengthening of beneficiary organizations (local stakeholders). Like the social impact, this is also related to fulfillment of the project's development objective. This coincides with results of the components and sub-components; it was identified that by project completion, communities had a higher level of environmental awareness, greater management capacity, a high level of participation in the execution of subprojects and in other PAMBC activities, including the preparation and validation of protected area management plans and of land use planning for Punta Peña-Almirante. In addition, the objectives of the indigenous peoples development plan were achieved; this had a direct, positive impact on the indigenous communities. It is also associated with support to the formation of Consultative Environmental Commissions (CCAs).

6.2 Sustainability

The sustainability of actions developed by the PAMBC Project is considered good if we look at it in terms of its principal goals which, according to the objective, were: *to contribute to the conservation and long-term sustainable use of the Panamanian portion of the Mesoamerican Biological Corridor*. According to the results, the project's major impacts were mostly in the environmental, social, and organizational areas. It may thus be inferred that the project, through its execution by ANAM, had a significant impact on biological resources and on the quality of life of local stakeholders. Fulfillment of the Project's proposed objectives and targets is considered between satisfactory and highly satisfactory.

These results are due to the high percentage of compliance in the execution of activities at the local level, in the promotion of participation by women and families, in the consolidation of alliances with indigenous communities, in the establishment of productive systems as alternatives to sustainable development, and in the promotion of community participation and strengthening while respecting cultural and social values, ANAM's level of commitment through the project in consolidating alliances with local stakeholders, and the project's good financial and administrative management.

7. Lessons Learned

7.1 General Aspects

- The human aspect has been a key factor in the success of the project from its planning to its sustainability. Human relations play a predominant role in the success or failure of any activity, and in the adoption, internalization, or rejection of a process. For example, the success of an activity, in light of other variables such as the availability of funds, the group's level of education or of organization, will vary depending on whether or not a "leader" is identified, i.e., a person who is not only committed to the execution of a subproject but is also trusted and respected by and communicates effectively with

the group. This example also applies to ANAM staff since those Regional Administrations that were recognized as successful with regard to the project, were those that had a person who was committed and had the characteristics of a "leader," acting as a liaison for the execution of project activities.

- The establishment of coordination with other actors such as national and international agencies, projects and government institutions, promotes synergies and complementarity, helps to maximize the use of human and financial resources, and improves the level of impact and sustainability of the actions implemented. For example, coordination between the PAMBC and the Bocas del Toro Sustainable Development Program made it possible to ensure that the actions proposed by this new project were compatible with the PAMBC concept and complemented biodiversity conservation efforts. This is also the case of the work carried out in conjunction with the MBC regional project in Panama.

- The processes of change sought by environmental and development projects are sometimes subject to factors beyond the scope of the Borrower. For this reason it is important, as in the case of the PAMBC, to include a strong component of inter-institutional/inter-sectoral coordination with the formulation of inter-institutional policies and programs to promote their inclusion as a State issue. It should also be kept in mind that the project's duration is not long enough to measure in-depth changes in behavior and in the environment. Thus, these projects should always be part of a national program or policy, such as the National Environmental Strategy, prepared by ANAM and adopted by the State in 1998. The administrative weaknesses of institutions, both of ANAM and of other participating institutions, should also be considered, and alternatives should be sought in order to strengthen institutional capacity; in turn, there should be greater involvement in state and inter-sectoral policies.

- It is important to have indicators of a project's output, impact, sustainability, and synergies. However, these should be formulated to measure a project's achievements, clearly establishing the appropriate methods for measuring performance. Precise and concise indicators, directly associated with project execution, should also be selected, and their measurement should not be affected by factors external to the project. In practice, indicators and their level of fulfillment are also associated with factors beyond the project's control. Time should be allotted midway through the project to evaluate and modify indicators, if necessary.

- Having a baseline or initial status of the different aspects related to the project is crucial to measure the impact and/or the change the project has made, and to achieve an adequate, realistic design of the activities that have been carried out.

7.2 Design and planning of environmental and development projects

- In the design and planning of an environmental and development project, concrete actions for its long-term sustainability must be considered. Thus, conditions within the institution should be created so that it can actually provide continuity to the project and its activities. This means that when a project of this nature is proposed, the institution's limitations and resources should be known, as well as an estimate of what the institution will have in the long term.

- The active and participatory involvement of key actors at the community level, from the project planning stage onward, has a multiplying and highly positive effect on development programs.

7.3 Subproject execution

- The time allocated to reaching agreement with the community on a subproject initiative will result in a

better proposal. It was observed that in those communities where there was a greater sharing of ideas between those requesting subprojects and PAMBC technicians or NGOs promoting subprojects, better designed subprojects, in line with the real needs of beneficiaries, were obtained. In contrast, a very superficial assessment by advisers of problems and mechanisms to resolve them resulted in the design of deficient projects, in which communities expressed their disagreement or in which many of the initial beneficiaries dropped out. This means that sufficient time must be allocated to gather information in a participatory manner, to allow the community to fully recognize its real needs and its opportunities to resolve them, the project's benefits, and its commitment to effectively manage natural resources in the long term.

- The degree of community organization is the key to developing successful proposals. In communities where groups were already formed and had experience in project execution, there was a higher level of participation and motivation among members. The development of activities was in line with the established schedule, there was greater participation in the selection of activities, and better results were achieved. These communities had full decision-making power on proposed projects and the local organization to implement them, thus strengthening their management capacity. In contrast, in communities with a low level of organization, even if subprojects were carried out, these subprojects were executed at a much slower pace, many more beneficiaries dropped out, or individual means of implementing the subprojects were adopted.

- The community's direct participation throughout the subproject process contributed to the creation of local self-management capacity. The granting of funds in the form of community property, in which the community must make its own decisions on fund execution, was a relatively new and positive modality in the areas where the PAMBC was executed. A similar experience took place with the Rural Poverty and Natural Resources Project in the Pacific region for which ANAM was responsible for a component. This allowed for decision-making concerning the organization to implement subprojects and motivated local organizations to obtain legal recognition to order to administer their own funds. Although this was highly positive, it should be kept in mind that in some cases these relatively young organizations lacked techniques and prior experience in managing funds. In this case, it was necessary to provide them with the necessary technical assistance and greater supervision and monitoring by the UEP and the corresponding ANAM Regional Administration.

- One of the PAMBC's major achievements is that it reached communities in hard-to-reach areas, in regions that had previously received little or no technical assistance, information, or support for direct initiatives. Over 85% of the subprojects that have been financed are located in mountainous or coastal regions that take considerable time, effort, and money to reach. These are usually communities with a minimum level of organizational and economic development, and with major economic needs. The development of subprojects gives them a new outlook on participating in the regional economy. This demonstrated the degree of local participation and indicates that, in general terms, project dissemination and management were correctly targeted.

- The active participation of women in decision-making and in the execution of activities contributes to the group's unity. One highly positive aspect was the active participation of women in the various subprojects and in all regions of the PAMBC, not only in the execution of activities but also in decision-making. Although there is still a certain bias in some indigenous communities with regard to the inclusion of women in traditional activities such as handicrafts, in other communities women were directly involved in productive, reforestation, and ecotourism activities, thus reinforcing the productive role of women.

- Regardless of whether or not subprojects respond to an environmental management proposal, market aspects must be included as a key element for their sustainability. These aspects must be considered so that beneficiaries can visualize the concrete benefits to be attained and how these benefits will be distributed among the group.

- There was a better working relationship among NGOs in charge of administering funds that were in the community or that were part of a local management process, than among those outside the community and with no direct interests in the area. Nevertheless, local NGOs have limited capacity to technically and financially administer subprojects and thus should receive ongoing training and monitoring.

- An area's idiosyncrasy and culture play an important role in community participation. Thus, when we speak of "communities" in relation to community participation in subprojects, for example, we should explain whether we are speaking of complete communities or of groups within a community. Some communities are not willing to work "in a community manner" per se; instead, the interpretation of their level and modality of community participation varies significantly: from individual or family work to share in a subproject's resources, to the full integration of a group in carrying out a specific activity.

8. RECOMMENDATIONS

8.1 Overall

- The PAMBC concept should be proposed from the outset as a State policy that complies with regional and international environmental agreements. Therefore, this concept should be proposed as an ecoregion planning system that promotes biodiversity conservation, the quality of life of all residents, and the sustainable development of the country. This in turn implies greater inter-institutional and inter-sectoral coordination.

- The PAMBC Project needs continuity, because it has established the groundwork, at institutional, local, and regional levels, for the conservation of natural resources and for development that promotes a better quality of life with an environmental focus.

- Future projects should include activities related to the promotion of inter-institutional policies and programs leading to the inclusion of the PAMBC in inter-sectoral policies at various levels. Some possibilities include the formation of an inter-institutional committee whose purpose would be to coordinate inter-sectoral policies and strategies that affect the environment or specific activities to analyze policies and programs related to resources or concrete issues. This implies strengthening inter-institutional relations through periodic coordination and meetings in order to reach agreements and carry out joint actions.

- Productive subprojects for sustainable development should include production, marketing, and distribution processes because communities lack the tools for this purpose. In most cases, they lack access to markets to sell their products and also lack the installed capacity to take their products to market.

- Support should continue to be given to the program to monitor biological species and other relevant parameters such as water quality in the PAMBC, but also incorporating other critical parts of the country. Water quality is an indicator of the impact and degree of human intervention in a region.

8.2 Design of environmental and development projects and their objectives

- The preparation of the Integrated Administrative and Financial Management (SIAF), of the operational manual for subprojects, and the procedural manual served substantially as guidelines for the project's technical and financial administration. These tools were helpful to UEP staff. It is therefore recommended that a Monitoring and Evaluation System, an Implementation Plan, and a series of training courses in project administration, tools and manuals, donor procedures, the context under which the project is prepared, and on the project itself, be included among the project's prerequisites in the future, during the months of project planning, or during the first months of its implementation.

8.3 Project implementation/execution

- It is recommended that there be a baseline with regard to installed local capacity and later a training strategy from which would stem a training plan for various levels (national, regional, and local; institutional, and social stakeholders; ANAM and UEP staff) on project administration, rural development, extension, community work, etc. This should be done prior to the initiation and planning of any type of training to ensure better use of this important resource. Likewise, a training plan for local stakeholders should be carried out from the project's outset, especially if it is related to the strengthening of local capacities, and be ongoing throughout the project. Tools should also be available to monitor and evaluate the quality and effectiveness of training courses so that they can be adjusted along the way.

8.4 Coordination with other donors, NGOs, and key inter-sectoral actors

- We believe that, to enrich this process with synergies in terms of financial and human resources, the project's effectiveness and sustainability, and the capacity of local stakeholders to assume leading roles, inter-sectoral and inter-governmental entities should be involved from the project planning stage as key actors with clear and explicit commitments within the project, in order to ensure their active participation and the adoption of the PAMBC concept in their sectoral policies, as was done in the highly successful example of indigenous *comarcas*. Activities planned in this manner have a greater probability of success in terms of fulfillment of pre-established output indicators. It is recommended that this structure of inclusion and participation be maintained in the future in order to achieve even greater inter-sectoral coordination and greater positive impact in relation to the acceptance of the PAMBC concept at the inter-institutional level.

- Because ANAM utilized two local-level project management models—Sustainable Rural Development Committees (CDSs) in the Rural Poverty project and local NGOs in the PAMBC—it is recommended that the strengths and weaknesses of each be critically analyzed in order to propose, in subsequent projects, improved models of subproject administration. This is an excellent opportunity for ANAM, because the UEP administered both models.

8.5 Regional and local actors

- If NGOs are used to administer subprojects, it is suggested that more training and advisory services be provided to local NGOs and subproject beneficiaries to reduce errors, problems, or negative situations stemming from a lack of understanding of the processes. It would also be good to review the roles of NGOs and their benefits and those of beneficiaries to ensure that resources are distributed fairly and that the latter are the principal beneficiaries, thereby guaranteeing them the best possible subproject administration and technical assistance. This requires a diagnostic of NGOs in charge of administering

funds, to identify their strengths, weaknesses, threats, and opportunities.

- With regard to strengthening through training and technical assistance, subproject beneficiaries need to be strengthened in appropriate production technologies, so that later they can consider a microfinance program that would allow them to enter the local or regional market.

- An in-depth study is needed of agricultural products with greater potential for local, regional, and/or national markets and for processing; product marketing circuits should be established to allow collection of larger quantities and to keep this process from becoming too costly. This study should be focused on specific areas which have specific opportunities/ strengths. For example, the zone of Bocas del Toro could emphasize ecotourism, and the zone of Chiriquí could focus on ecotourism and small-scale processing of various permanent crops.

- With regard to the participation of ANAM staff at the regional level, the recommendations are for ANAM to promote greater participation and responsibility for project execution at the regional level, and a greater flow of information to Regional Administrations and mid-level management.

- To the extent possible, regional actors recommend strengthening protected areas with qualified, trained human resources (at least four technicians per protected area), as well as improving equipment and the construction of infrastructure in these areas, and an on-going training program in proper management of natural resources.

- Based on the experiences of subprojects dealing with banana and coffee plantations, interviewees recommended exploring the preparation of a macro project for specific, identified productive activities (such as coffee, bananas, etc.) that might involve different communities, as an alternative to a series of small subprojects, for the purpose of: (i) evaluating their cost-benefit to optimize resources, (ii) achieving an attractive product for an individual market, (iii) promoting the association of small-scale and ecological producers, and (iv) optimizing resources in terms of technical assistance and administrative management.

- Improve the methodology used to ensure the active participation of beneficiaries and thus include their proposals and needs, in preference to those of outside actors. This would also ensure that difficulties in the field and local experiences are considered in the design. Emphasis must be placed on the strategic planning of activities and on ensuring that it is participatory.