

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PANAMA

**MODERNIZATION OF ENVIRONMENTAL MANAGEMENT
FOR COMPETITIVENESS**

(PN-L1013)

LOAN PROPOSAL

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Electronic Links and References	
Basic socioeconomic data	http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata
Status of loans in execution and loans approved	http://ops/approvals/pdfs/PNen.pdf
Tentative lending program	http://opsgsl/ABSPRJ/tentativelending.ASP?S=PN&L=EN
Information available in the INE/RND technical files	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1173033
Annex II - Procurement plan	http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=1181905

ABBREVIATIONS

ANAM	Autoridad Nacional del Ambiente [National Environment Authority]
CEDESAM	Centro de Desarrollo Sostenible Ambiental [Center for Sustainable Environmental Development]
CESI	Committee on Environment and Social Impact
DIGICH	Dirección de Gestión Integrada de Cuencas Hidrográficas [Integrated Watershed Management Division]
EIA	environmental impact assessment
GDP	gross domestic product
ICB	international competitive bidding
JICA	Japan International Cooperation Agency
NCB	national competitive bidding
PAMA	Plan de Adecuación y Manejo Ambiental [Environmental Improvement and Management Plan]
PAN	Programa Ambiental Nacional [National Environment Program]
SEA	strategic environmental assessment
SIA	Sistema Interinstitucional del Ambiente [Interagency Environmental System]
SINIA	Sistema Nacional de Información Ambiental [National Environmental Information System]
OPU	Operational Planning Unit
USAID	United States Agency for International Development

PROJECT SUMMARY

PANAMA MODERNIZATION OF ENVIRONMENTAL MANAGEMENT FOR COMPETITIVENESS (PN-L1013)

Financial Terms and Conditions ¹				
Borrower: Republic of Panama			Amortization period:	20 years
Executing agency: National Environment Authority (ANAM)			Grace period:	5 years
			Disbursement period:	5 years
Source	Amount (in US\$ millions)	%	Interest rate:	Variable
IDB (Ordinary Capital)	US\$10.0	71%	Inspection and supervision fee:	0%
Local	US\$ 4.0	29%	Credit fee:	0.25%
Total	US\$14.0	100%	Currency:	U.S. dollars from the Single Currency Facility
Project at a Glance				
<p>Project objective: The purpose of the operation is to modernize the capacity of ANAM and of local governments to promptly address the growing environmental management challenges of competitiveness. The specific objectives include: (i) enhancing the effectiveness of the environmental management instruments needed to foster a business climate that will promote competitiveness, help integrate Panama into the global market, and make the country's major economic activities and megaprojects environmentally sustainable; (ii) strengthening the capacities of ANAM at the regional level, and those of local governments and communities, to carry out their environmental management responsibilities and support the government's current policy of decentralizing environmental management; and (iii) consolidating a water information system to enhance ANAM's performance as the agency in charge of administering the country's water resources, and to foster participatory management, particularly in watersheds selected for their central importance to competitiveness and their degree of water stress.</p> <p>Special contractual conditions:</p> <ul style="list-style-type: none"> (i) Conditions precedent to the first disbursement: evidence of ANAM's commitment to the borrower to fulfill its obligations as program executing agency (paragraph 3.1); and (ii) Execution conditions: submission of monitoring reports (paragraph 3.10) and midterm and final program evaluations (paragraph 3.11). <p>Exceptions to Bank policies: None.</p> <p>Project consistent with country strategy: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Project qualifies as: SEQ <input type="checkbox"/> PTI <input type="checkbox"/> Sector <input checked="" type="checkbox"/> Geographic <input type="checkbox"/> Headcount <input type="checkbox"/></p> <p>Procurement: Works, goods, and services will be procured and consultants selected and hired in accordance with the respective Bank policies and procedures, as set forth in documents GN-2349-7 and GN-2350-7.</p> <p>Verified by CESI on: CESI reviewed the project concept document on 13 April 2007, and had no comments.</p>				

¹ The interest rate, credit fee, and inspection and supervision fee mentioned in this document are established pursuant to document FN-568-3 Rev. and may be changed by the Board of Executive Directors, taking into account the available background information, as well as the respective Finance Department recommendations. In no case will the credit fee exceed 0.75%, or the inspection and supervision fee exceed 1% of the loan amount.*

* With regard to the inspection and supervision fee, in no case will the charge exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

I. FRAME OF REFERENCE

- 1.1 In light of rapid economic growth, and the particularly vigorous performance of certain key sectors such as tourism, energy, shipping, construction, and nontraditional exports of agricultural and marine products, the Government of Panama has made it a priority to ensure that this growth is environmentally sustainable. Recognizing that current management capacities are unable to keep pace, the government has resolved to modernize the country's institutions to make them more nimble and effective, building on progress made under the National Environment Program (PAN), financed by loan 1222/OC-PN, and to ensure that their activities will contribute to the Complementary Agenda for Competitiveness adopted by the government to help the country take maximum advantage of the opening of new markets.
- A. The environment–competitiveness link**
- 1.2 Panama's economy grew at an average rate of 7.5% (in terms of real GDP) between 2004 and 2006. Services account for 75% of GDP, dominated by the Panama Canal, offshore banking services, and the Colón Free Zone. The tourism industry generated US\$780 million in 2005, representing 7.4% of total goods and services produced. Construction grew strongly (17.4%) in 2006, especially in the provinces of Colón, Panamá, and Chiriquí. Although merchandise exports (excluding the Colón Free Zone) account for only 6.6% of GDP, they rose by 81% from January 2006 to January 2007, driven primarily by the agricultural sector.
- 1.3 **Natural resources critical for export industries.** The development of export industries has depended primarily on the comparative advantages provided by the country's geographic location, as well as the abundance and quality of its natural resources. Nevertheless, prolonged and extensive low-tech exploitation is taking its toll on the natural wealth of Panama's land and sea, threatening to deplete the natural capital that supports the country's productive sectors. Given the circumstances, one avenue for boosting Panama's competitiveness would be to develop its comparative advantages through initiatives to stimulate the sustainable use of natural resources. This will open attractive opportunities in sectors such as tourism and for new forms of agricultural production. The ability to seize these opportunities lies in the fact that the trade liberalization process launched in 1997 is now bearing fruit, as can be seen in the growing inflow of foreign direct investment (US\$2.6 billion in 2005), the increase in agricultural exports, and local investment in traditional and nontraditional sectors.
- 1.4 **Trade and the environment.** International trade, investment, and productivity growth are increasingly influenced by the rules of access to different markets, based primarily on trade agreements and import standards. Panama has recently negotiated and signed a series of trade agreements with a number of countries, and the scope of their markets and environmental regulations present both opportunities and challenges for its export sector. Panama has free trade agreements or preferential trade arrangements with the Central American countries, Taiwan, Singapore, Colombia, the United States (pending congressional ratification), and

Chile. Panama is also participating in negotiations for a trade agreement between Central America and the European Union. According to statistics from the Ministry of Industry and Commerce, Panama ships 40% of its exports to the U.S. market, 25% to the European Union, and 9% to Japan. Those markets tend to highly value the environmental aspects of the production and processing of food exports. Exports to the European Union are subject to harmonized standards relating to maximum permissible levels of pesticide, hormone, and medication residues in imported goods, and exports to the United States will have to meet domestic environmental standards. In this regard, the Free Trade Agreement between Panama and the U.S. will not only require adequate environmental legislation but will also oblige the national authority to enforce that legislation in the export sector.

- 1.5 **The business climate.** A number of studies have shown that developing countries can become more competitive and encourage foreign investment by upgrading their environmental systems and standards. The World Economic Forum's Global Competitiveness Index, based on a business opinion survey in Panama that included environmental issues as a competitiveness factor, ranked Panama 66th in a sample of 117 countries in 2005 with respect to its environmental and social performance. This means that the country's current environmental conditions place it at a disadvantage in global competition.

B. Progress in environmental management and the contribution of the National Environment Program

- 1.6 Panama adopted its Environment Act (Law 41) on 1 July 1998 as the overall regulatory framework for the country's environmental management. The key mandates in that Act were the creation of the Interagency Environmental System (SIA) and the qualitative transformation of the former National Institute of Renewable Natural Resources (INRENARE) into the National Environment Authority (ANAM). The SIA provides for a clear separation of functions: ANAM is the government's lead environmental agency, responsible for formulating environmental policies and preparing environmental quality standards, as well as for environmental supervision, control, and compliance. Environmental units in the various ministries and public institutions assist ANAM in reviewing environmental impact studies in their specific sector, but ANAM always has the final say when it comes to issuing environmental licenses. This separation of functions provides a solid framework for the country's environmental management. ANAM also administers the National System of Protected Areas, as well as water and forest resources. As it relates to decentralization, the law provides for the transfer to local authorities of those functions pertaining to the natural resources and environment within their jurisdictions, although the process is still at an early stage. To establish this institutional framework the government, with Bank support, formulated the National Environment Strategy (*Estrategia Nacional del Ambiente*) and launched the National Environment Program (PAN) (loan 1222/OC-PN) to implement it.
- 1.7 The environmental policy instruments created under the PAN include environmental impact assessments (EIAs), land-use planning, and permissible

levels of air, water, and soil pollution. In addition to these command and control instruments, the PAN has supported the development of economic instruments (e.g., dumping fees, payment for environmental services). The ANAM has identified the following three priority economic instruments, to be developed in coming years: (i) an environmental fee for the dumping of waste; (ii) payment for environmental services; and (iii) ecolabeling. To date, progress has been limited to technical and regulatory proposals, with some isolated instances of pilot experiments.

- 1.8 With specific regard to ANAM, the PAN has supported reengineering processes, reinforcement of its human resources, training at the central and regional levels, equipment, and the development of administrative and financial processes and systems. ANAM was the first public-sector entity to implement Panama's Integrated Financial Management System, and its staff are being accredited for the career civil service. There has been progress as well in structuring and strengthening the SIA and in laying the foundations for the National Environmental Information System (SINIA), including a national system of environmental indicators. Six draft environmental standards have been prepared relating to water, air, and soil quality; eight regulations relating to environmental assessment and compliance, consultation mechanisms, and the use of protected areas; and nine environmental policies (forestry; climate change; water resources; environmental information; environmental supervision, control, and compliance; cleaner production; decentralization of environmental management; integrated management of hazardous and nonhazardous waste and residues; and biodiversity).
- 1.9 In financial terms, the PAN has enabled the ANAM to systematically increase its ability to generate its own revenues. Administrative and financial improvements, together with the introduction of economic instruments, lifted ANAM's revenues to 37% of its budget in 2006, versus 20% in 1999. Its enhanced revenue-generating capacity has given ANAM greater financial security in terms of long-term cost recovery.
- 1.10 To build up local management capacities and foster interaction between ANAM and the communities, the PAN financed 22 community environmental initiatives (i.e. small-scale sanitation and environmental protection projects), which have helped to address specific community problems through simple measures and participatory management arrangements. The PAN has also begun decentralization of environmental management in three pilot districts of differing size—the District of Panama (large), David (midsized), and Océ (small)—where it has helped prepare strategic environmental and land-use plans, among other things. An indicative environmental land-use plan was also prepared at the national level, and integrated management projects have been launched in some of the country's most economically vital watersheds. A program was put in place to monitor water quality in 33 watersheds, and an inventory was compiled of pollution sources in the country's main industrial areas. Lastly, an environment component was successfully

introduced into the National Education Plan, and a wide range of environmental education initiatives have been carried out.

C. The main challenges to environmental management

- 1.11 The PAN and the complementary actions financed by the government and other development agencies have helped to establish an environmental management framework. This is a long-term process, however, that requires sustained investment in institutions to keep pace with rapid economic growth. The following sections discuss the principal challenges that must be addressed:

1. Improving the environmental licensing process in support of key productive sectors

- 1.12 During program preparation, a diagnostic assessment of the environmental licensing process produced the following findings:
- a. The law sets time limits of 10, 45, and 65 days for low-impact (category I), medium-impact (category II), and high-impact (category III) projects, respectively. Yet between August 2005 and September 2006, the average processing times at ANAM ranged from 8.8 to 15.4 days for category I, from 30.3 to 69.6 days for category II, and from 31 to 227 days for category III. Business and investment circles have found this variability disconcerting.
 - b. Between August 2005 and September 2006, of all EIAs filed with ANAM, 76% were in category I, 22% in category II, and only 2% in category III. Since the review requirements are roughly similar for all categories, the time that ANAM headquarters staff must devote to category I projects detracts attention from category III megaprojects, raising the risk of potentially adverse environmental impacts.
 - c. Of the EIAs filed for processing in the 2005–2006 period, 7% of projects in category I, 16% in category II, and 27% in category III were returned by ANAM to their sponsors for corrections. A contributing factor could be that ANAM has not thoroughly publicized requirements and good practices relating to environmental assessment. Moreover, only partial information is available online about ANAM services and functions, which hinders public access to information, limits the transparency of processes, and makes for more red tape for investors and users.
 - d. The sector environmental units of the institutions that make up the Interagency Environmental System spend varying amounts of time reviewing the EIAs, and this sometimes holds up the environmental licensing process, with the attendant negative impact on competitiveness.
- 1.13 With the entry into force of Law 5 (2005), which adds environmental offenses to the Criminal Code, the ANAM must now have staff certified under the law to conduct effective controls based on reliable and accurate scientific data and benchmarks for verifying and auditing compliance with environmental quality standards and investors' environmental management plans. Currently, ANAM's

environmental evaluators and auditors do not have the required certification, its environmental quality laboratory is not accredited to international standards, and it lacks the field equipment needed to measure and monitor environmental quality. Moreover, regulations and good practices guidelines have yet to be developed for priority issues and sectors for competitiveness, and for establishing contingency, environmental disaster-prevention, and cleanup plans.

2. Improving the quality of megaproject environmental assessments

- 1.14 A number of massive investment projects are planned in the context of national policies for boosting the country's economic growth and competitiveness. These megaprojects include the widening of the Panama Canal, new ports, large-scale tourism projects, expansion of the primary road network, major mining developments, and biofuels-based energy development. The environmental impact analysis of those initiatives requires a strategic, ecosystem-based approach to identify the best ways to enhance the quality and capacity of structures, resources, and instruments available to ANAM for prevention, monitoring, and auditing of environmental improvement and management measures.
- 1.15 Executive Decree 209 of 6 September 2006 introduced the strategic environmental assessment (SEA) as a tool that must be used for the various sector development plans and programs included in the government's development plan. It also applies to public and private plans and programs in such sectors as energy, urban development, industry, mining, tourism, agroindustry, and infrastructure, as well as land-use planning at the local, regional, or national levels, that are of national or international importance and that would produce economic and social development patterns with an environmental impact on their areas of influence. The SEA is seen as a mechanism for streamlining the environmental decision-making and licensing process for projects, through indicators and guidelines that must be built into their environmental management plans. To date, however, no SEA has been conducted in Panama.

3. Deconcentration and decentralization of environmental oversight

- 1.16 ANAM's 13 regional offices, and local governments as well, must be capable of efficient environmental management in order to respond effectively to productive-sector demands and citizen needs. This means, first, building the capacity to allow for a gradual delegation of responsibility to the regional offices for: approving category I EIAs; monitoring environmental management plans and conducting environmental audits; handling environmental complaints; processing natural resource development permits; and supervising environmental land-use plans. Of the 13 regional offices, the government has plans to strategically strengthen those in **Bocas del Toro** (province of Bocas del Toro), so that it can oversee the impact that burgeoning tourism development is having on the region's fragile ecology; **David** (province of Chiriquí), where agriculture and residential tourism are booming, and where megaprojects are under way (a port and a refinery); and **Las Tablas**

(province of Los Santos), where tourism and agriculture are expanding in a fragile ecological setting.

- 1.17 While the regional offices do impose fines and penalties for noncompliance with environmental regulations, collection rates are minimal. Table I-1 illustrates the ineffective collection of these revenues, which could be used jointly by ANAM and local governments for environmental management.

Table I-1. Environmental fines levied by ANAM and effective collection (2006)

ANAM regional office	Fines levied (US\$)	% collected	Uncollected amount (US\$)
Bocas del Toro	27,388	5%	26,000
David (Chiriquí)	34,560	2%	33,870
Las Tablas (Los Santos)	11,290	2%	11,060

Source: ANAM 2005-2006 annual report

- 1.18 Both Law 41 and the National Policy for Environmental Management Decentralization (Executive Decree 82 of 9 April 2007) require ANAM to transfer to local authorities its functions relating to sustainable natural resource management. At the same time, legislation governing municipal affairs gives local governments broad powers in terms of natural-resource, land-use, and environmental management, but most of the municipios are not fulfilling these responsibilities because of institutional and financial constraints. ANAM has signed agreements with five of the country's 75 districts (Arraiján, David, Bocas del Toro, Las Tablas, and Santiago) to pilot a decentralized environmental management model. The process is just beginning, however, and needs to be reinforced and supported, as social organization and participation processes differ greatly, calling for different environmental management tools tailored to the local setting.

4. Fostering a culture of environmental sustainability

- 1.19 The last 20 years have seen a steady expansion in environmental education focused on conservation of natural resources. According to a survey conducted by ANAM in March 2006, 44% of the survey population of 2,243,249 believe that future generations will not enjoy a healthy environment, and 90% feel that environmental conservation has an impact on the quality of life. ANAM and the Ministry of Education have trained teachers in the use of environmental teaching guides, while nonformal environmental education has made the public much more inclined to participate in environmental management decision-making and oversight through partnerships with academic, scientific, environmental, business, and other circles. According to ANAM, 3% of people are members of a conservation group. Yet the challenges of the immediate future demand a greater effort to build on existing capacities so that they translate into social conduct, consumption patterns, and productive practices consistent with developing Panama's competitive advantages in the environmental area. It is in this context that ANAM is seeking to promote ecolabeling. At the same time, it is important to work more closely with

entrepreneurs, producers, and businesses to make environmentally and socially responsible behavior consistent with sound competitive practices. To this end, ANAM plans to reposition its national Center for Sustainable Environmental Development (CEDESAM) to take the lead in the country's comprehensive environmental awareness efforts.

5. Promoting efficient water use

- 1.20 To a large extent, Panama's competitiveness depends on the quality and abundance of its natural resources (water, forests, marine resources, soil, biodiversity), which it owes primarily to its geographic position and climate. Yet these resources, among which water is the most critical for competitiveness, are being degraded as they come under increasing pressure from uncontrolled economic growth. The availability of sufficient quality water in Panama is currently seriously threatened by water pollution problems in certain areas (as well as by water shortages in the so-called Azuero "dry arc" and by use conflicts), and these have a direct impact on people's health and quality of life and on the performance of key sectors such as farming, industry, power generation, and tourism.
- 1.21 ANAM is responsible for integrated management of the country's water resources, with the exception of the Panama Canal basin (which falls under the Panama Canal Authority). The increasingly urgent need to achieve a hydrological balance that will ensure a sufficient water supply for the public and for economic activities will necessitate more efficient use of water so as to keep extraction rates in line with availability. ANAM has the power under law to grant water use concessions, but it has neither the quantitative and qualitative water data nor the monthly supply-and-demand schedules needed to gauge the availability of water and how it is being used. ANAM keeps a national registry of water permits and concessions and has a nationwide program for legalizing water usage. Yet the lack of systematic information, the shortage of human, financial, institutional, and technological resources, and the absence of interagency coordination mechanisms have hampered these efforts.
- 1.22 The available quantitative and qualitative water resource data are scattered among various government agencies and decentralized entities and need to be centrally compiled and shared among all stakeholders in order to improve the decision-making process and the granting of permits and concessions. For instance, there is currently no adequate national system for measuring water flows, storage, and quality that could provide a basic understanding of the issue. To compile such data, ANAM needs measurement stations in different regions of the country, and a permanently operating hydrometric network for capturing the hydrological variables that are essential to water programming and planning, building hydraulic works, formalizing usage, forecasting water events, conducting hydrological simulations, preparing water risk maps, and developing early warning systems for managing droughts and floods.

- 1.23 With Bank support under technical-cooperation program ATN/WP-10040-PN, ANAM has begun to prepare supply and demand schedules in 10 priority watersheds. That same operation also involves formulation of a National Plan for Integrated Water Resource Management, and effective implementation of that plan will depend heavily on sound water data. The 10 priority watersheds are Chiriquí Viejo, Chiriquí and the Río Chico de Alanje subwatershed, Santa María, La Villa, the watershed of the rivers between Tonosí and La Villa (Guarare), Río Grande, Río Antón, Bayano, Río Indio, and Miguel de La Borda. They were selected using the following criteria: (i) perceived demand from competing uses and potential conflicts over use and quality; (ii) the importance of their water in terms of the country's competitiveness; (iii) the degree of pollution from domestic, municipal, agrochemical, and other sources adversely affecting people's health, efficient water use, and the competitiveness of agricultural output; (iv) the existence of studies or watershed management activities that could be built upon; and (v) vulnerability to natural hazards. These 10 watersheds cover approximately 26% of Panama's territory. In them, ANAM plans to promote integrated watershed management, which will include strengthening the newly formed watershed management committees and introducing management tools (including economic instruments).

D. Bank strategy with Panama

- 1.24 The chief objective of the Bank's country strategy with Panama for the 2005-2009 period (document GN-2385-1) is to support sustainable economic growth and poverty reduction. The strategy focuses Bank programs on two strategic objectives: (i) boosting the economy's competitiveness; and (ii) building human and productive capital. It also incorporates the crosscutting objective of strengthening governance and transparency as a necessary condition for progress in these two areas. The proposed operation is consistent with these strategic objectives, in particular the one relating to economic competitiveness, in that it will foster a healthy business climate through improved environmental management and the sustainable husbandry of natural resources.¹
- 1.25 The proposed operation is also consistent with the Bank's Environment and Safeguards Compliance Policy (document GN-2208-18), which aims to strengthen good governance by developing effective and transparent environmental management frameworks and to improve competitiveness by promoting the conservation of the region's natural capital, enhancing the value of environmental goods and services, and facilitating private sector participation and investments in environment-related activities. Finally, the operation fits with the Bank's Subnational Development Strategy (document GN-2125-3), which seeks to strengthen governments and institutions at the subnational level so that they can play a leading role in strengthening governance and enhancing citizen participation.

¹ The program will complement activities to enhance the overall business climate, which will be funded by a competitiveness and trade program (PN-L1014) as part of Panama's Complementary Agenda for Competitiveness.

E. The government's environmental strategy

- 1.26 Panama's "**Strategic Vision of Economic Development and Employment for the Year 2009**" has five basic pillars: (i) reducing poverty and improving income distribution; (ii) pursuing an economic growth policy for job creation; (iii) rehabilitating public finances; (iv) developing human capital; and (v) reforming and modernizing the State. The medium-term challenges include: (i) embracing alternative production methods to accelerate sustainable growth; (ii) making economic development sustainable and socially inclusive by making domestic industry more competitive and creating and maintaining an enabling environment for private investment; (iii) sustainably safeguarding the country's natural resources and cultural heritage; and (iv) achieving efficiency in the production of public goods.
- 1.27 ANAM has begun the process of updating Panama's **National Environment Strategy** to embrace both a short-term and a long-term vision. The "**Conservation Strategy for Sustainable Development: 2004-2009 Policy Guidelines**" sets out four main objectives: (i) strengthen ANAM's capacity for environmental policymaking, regulation, and oversight and to help Panamanian society successfully transition toward sustainable patterns of development; (ii) work closely with other State agencies, local governments, the private sector, academia, and civil society on promoting initiatives essential to enhancing Panama's environmental competitive advantages; (iii) give priority attention to those components of the conservation strategy for sustainable development of greatest interest for public wellbeing, job creation, and the valuation of natural resources; and (iv) promote a culture of environmental sustainability that includes practices and behavior capable of rising to the major global environmental challenges.

F. Experience and lessons learned

- 1.28 The program incorporates in its design the following lessons from experience with the National Environment Program (PAN) as reflected in the project performance monitoring report and the final evaluation of the PAN conducted in 2007:
- a. **Consensus is required in preparing rules and regulations to mitigate and control environmental impacts.** A reasonable amount of time (at least 12 months) must be allowed for social stakeholders to reach agreements. Steps have therefore been taken to ensure that the terms of reference under the program have the necessary scope and timeframes.
 - b. **It is important to measure the impact of training and the retention rate among trained staff.** The ANAM will include these items in its monitoring system, and the Bank's evaluations will also pay particular attention to them.
 - c. **Local governments must first have the minimum capabilities for environmental management instruments to be transferred successfully to the local level.** The proposed program has selected districts that already have

the basic capacities required to use the environmental management instruments to be introduced.

G. Coordination with other donors

- 1.29 The identification phase of this operation included a review of related programs financed by other donors, to ensure proper coordination. In particular, a coordination meeting was held with key donors (World Bank, United Nations Development Programme, United Nations Environment Programme, U.S. Agency for International Development, Japan International Cooperation Agency, and Spanish Agency for International Cooperation). The projects of greatest relevance to this operation include: (i) a Global Environment Facility/World Bank project (US\$6 million) that will focus on strengthening the protected areas system, biodiversity management, and forestry resources in the Atlantic Biological Corridor, as well as strengthening local government capacities in these areas; (ii) the project for management of the Panama Canal basin financed by USAID (US\$1.2 million); (iii) a project now in preparation for the management of 10 priority watersheds to generate biomass and biofuel, financed by the Andean Development Corporation (estimated at US\$14 million); and (iv) a project to improve water quality monitoring capacities, financed by the JICA (US\$3 million), including support for ANAM's environmental quality laboratory.

H. Design of the proposed operation

- 1.30 The proposed operation builds on the progress achieved under the PAN, and complements the efforts funded by other donors. It falls under the *Complementary Agenda* in that it seeks to consolidate institutional capacities for addressing the environmental challenges relating to competitiveness, to compliance with the environmental regulation and oversight commitments assumed under the free trade agreement between Panama and the United States, and to integrating Panama into the global market. It fosters environmental sustainability both in the principal exporting sectors and in the megaprojects needed for the country's economic growth, and will also help to transform the country's environmental culture. It will promote better targeting, streamlining, and credibility in the environmental assessment, licensing, and enforcement systems, including the use of strategic environmental analyses and broader use of economic instruments to encourage the application of environmental standards and good practices in the sectors driving the economy.
- 1.31 In institutional terms, the program will help develop a decentralized environmental management model, with priority given to building capacities and developing instruments in specific spheres of environmental management that are important for sustainable competitiveness in those parts of the country of greatest environmental value and with the highest concentration of production and expected investment. Together with steps to strengthen ANAM's information management systems, the program will give environmental management a greater field presence and make it more transparent. The program will also strengthen ANAM's capacities for

integrated water management, with an emphasis on watersheds selected on the basis of economic and water stress criteria.

- 1.32 The Bank has financed a number of operations that are serving, directly or indirectly, to strengthen capacities for environmental management and for protecting natural resources. Those operations have their own territorial and thematic areas in which they are seeking to mainstream environmental issues. The program was therefore designed to build on progress to date, reflecting the specific requirements under Law 41. Specifically, the proposed operation will complement regional sustainable development programs now in preparation or execution with Bank financing. It will generate synergies with efforts to strengthen ANAM's regional offices and the local governments, so that regional sustainable development programs can focus on basic needs (facilities, equipment, and operating resources), while the proposed operation strengthens the strategic environmental management capacities needed to deal with the challenges of competitiveness (i.e. environmental assessment, monitoring, and compliance).

II. THE PROGRAM

A. Purpose

- 2.1 The purpose of the operation is to modernize the capacity of the National Environment Authority (ANAM) and of local governments to promptly address the growing environmental management challenges of competitiveness. The program comprises three interrelated components: (i) consolidation of the national environmental management framework; (ii) strategic subnational institution-strengthening; and (iii) integrated water resource management. The expected impacts, outcomes, and outputs of the program are described in the logical framework (Annex I). Following is a description of the three components.

B. Description

- 1. Consolidation of the environmental management framework (US\$2.9 million)**
- 2.2 This component will make environmental management instruments more effective in promoting a business climate that will foster competitiveness, help Panama to penetrate global markets and fulfill the commitments made under its free trade agreements, and promote the environmental sustainability of the country's main economic activities and the megaprojects needed for its socioeconomic development. The following activities will be financed:
- 2.3 **Updating of environmental management instruments.** The instruments that ANAM needs for effective and transparent environmental assessment, monitoring, and compliance will be updated and deployed. These include:
- a. **Strategic environmental assessment (SEA).** Technical assistance will be provided for: (i) defining the SEA concept and scope for use in the country and preparing a manual of SEA operating procedures applicable to programs,

plans, policies, and megaprojects; (ii) preparing three pilot SEAs and disseminating the lessons learned from the process; and (iii) carrying out a training program for public officials in the application and use of the SEA instrument in Panama.

- b. **Environmental impact assessment (EIA).** Technical assistance and training will be provided for: (i) compiling and publicizing good EIA practices, including the design and implementation of an international experience and good practices resource center; (ii) updating the EIA procedures manual, and optimizing the process through an analysis of fees and the distribution of functions; (iii) preparation and publication of guides to good environmental practices for priority sectors; and (iv) accreditation and training for EIA reviewers at ANAM headquarters and regional offices and in the sector environmental units. Technical assistance and equipment will also be provided to design and implement an online system for managing the interagency environmental licensing system for the benefit of public and private users.
 - c. **Environmental quality.** The environmental regulatory framework will be completed and ANAM's environmental control capacities strengthened through technical assistance for preparing new environmental quality standards (relating to noise, vibrations, and hazardous waste) as well as regulations for environmental disaster and accident prevention, response, and cleanup, with training also provided for actors in individual sectors. Technical assistance is included as well for strengthening ANAM's capacities for environmental monitoring, control, and compliance, covering the certification of evaluators and auditors, accreditation of the environmental quality laboratory, and the purchase of equipment for measuring and monitoring environmental quality in the field.
- 2.4 **Strengthening of the Interagency Environmental System (SIA).** This includes support for: (i) preparation and publication of a manual on SIA administrative structures and procedures and user training for staff of the various institutions; (ii) a study of existing environmental capacities in the SIA institutions and recommendations regarding procedural improvements for using them most efficiently; and (iii) training for the environmental staff of the SIA institutions in strategic issues, including putting environmental indicators and accounts to use in decision-making.
- 2.5 **Promotion of economic and financial tools for environmental management.** This covers technical assistance in the technical, legal, and operational formalization and implementation of economic and financial tools for environmental management, procedures for validation and acceptance by all sectors, public awareness, and training for decision-makers and professionals.
- 2. Strategic subnational institution-strengthening (US\$1.9 million)**
- 2.6 This component will support a gradual process of institution-strengthening in at least three regional offices of ANAM, and in at least five local governments and

communities organized to perform their environmental management responsibilities in three areas: (i) environmental control and compliance and use of natural resources; (ii) land-use management and local environmental information processing; and (iii) a culture of environmental sustainability.

- 2.7 **Environmental control and compliance and use of natural resources.** Technical assistance and equipment will be provided for (i) reinforcing regional capacities to review and approve category I EIAs; (ii) strengthening regional and local capacities to enforce environmental regulations, and to improve the fine collection rate through revenue-sharing arrangements between ANAM and the municipios; and (iii) dealing effectively with environmental complaints.
- 2.8 **Land-use management and information processing.** Technical assistance will be given for implementing land-use plans and related instruments, as well as for recording data and generating, managing, and analyzing environmental information and producing and monitoring environmental indicators.
- 2.9 **Culture of environmental sustainability.** In this area, the component includes regional participatory forums with representative segments of society and productive sectors to address environmental issues of priority for competitiveness; interactive environmental education initiatives; and publication of teaching materials and environmental management training for the municipal Environmental Advisory Commissions. At the strategic level, the subcomponent will support capacity-building in the Environmental Culture Division and the national Center for Sustainable Environmental Development (CEDESAM) under ANAM so that they can optimally meet the country's environmental awareness needs. Finally, a general training package will be prepared for technical and managerial staff of the ANAM regional offices, to ensure that they all have a basic level of environmental management know-how.

3. Integrated water resource management (US\$5.0 million)

- 2.10 Taking as a basis the priorities established for the National Plan for Integrated Water Resource Management, this component will finance the initial steps for its implementation, in particular in the watersheds selected because of their high levels of economic pressure and water stress (see paragraph 1.23). Activities will be financed in the following areas:
- 2.11 **Implementation of a water information system.** Technical assistance and equipment will be provided for: (i) design, rehabilitation, implementation, and initial operation² of priority hydrometric stations, the meteorological network, and the surface and ground-water quality sampling network; (ii) updating of the inventory of water users and classification of wells; and (iii) design and implementation of a comprehensive information system to facilitate decision-making by ANAM and other institutions, and to allow users to apply for permits

² Operating costs will be covered by the local counterpart contribution.

online. The counterpart contribution will also finance basic equipment for ANAM's Integrated Watershed Management Division (DIGICH).

- 2.12 **Sustainability strategies and management instruments for priority watersheds and areas.** Technical assistance will be provided for: (i) participatory development of sustainability strategies and management instruments in at least five of the 10 priority watersheds and areas; and (ii) identification of at-risk aquifer recharge zones (i.e. the Azuero "dry arc") and a plan to protect them.
- 2.13 **Water governance in selected watersheds.** Technical assistance will support the establishment and operation of watershed committees in at least five of the 10 priority watersheds. The component will also finance water management training for key stakeholders in these areas (institutions, local governments, economic players in the private sector, watershed committee members).

C. Cost and financing

- 2.14 The proposed operation has an estimated cost of US\$14.0 million, and will be executed over five years from the effective date of the loan contract. Table II-1 shows the preliminary cost estimates by category of investment and source of financing. The Bank will finance US\$10 million from its Ordinary Capital, and the Government of Panama will contribute US\$4.0 million.

Table II-1. Costs and financing (in thousands of US\$)

Item	IDB	Local	Total	%
I. Administration & supervision	200	900	1,100	7.8
1. Operational Planning Unit (OPU)		900	900	6.4
2. Audit and evaluation	200		200	1.4
II. Direct costs	9,800	2,950	12,750	91.1
1: Consolidation of the environmental management framework	2,900	400	3,300	23.6
2: Strategic subnational institution-strengthening	1,900	1,450	3,350	23.9
3: Integrated water resource management	5,000	1,100	6,100	43.6
III. Financing costs	0	150	150	1.1
Credit fee	0	150	150	1.1
Total	10,000	4,000	14,000	100.0

- 2.15 Administrative costs include US\$900,000 from the local counterpart and US\$200,000 from the Bank. The local counterpart contribution will finance OPU operations for the five years of the program: this will include the costs of a coordinator, the minimum technical and administrative support staff, as well as basic equipment for the unit and operating costs (travel, logistics, communications). Bank funds will cover the costs of financial audits and the midterm and final evaluations.

III. PROGRAM EXECUTION

A. Borrower and executing agency

- 3.1 The borrower will be the Republic of Panama and the executing agency will be ANAM, which will have overall administrative, financial, and coordination responsibility and will manage program execution. ANAM was created as an autonomous government agency with lead responsibility for natural resource and environmental issues. It has a permanent institutional structure, 13 regional offices, and its own budget. Its legal representative is the Administrator-General for the Environment. **As a special condition precedent to the first disbursement, ANAM will provide evidence of its commitment to the borrower to fulfill its obligations as the program executing agency in accordance with the terms and conditions of the loan contract.**

B. Execution and administration

- 3.2 ANAM will use its existing political, technical, and administrative structure to execute the program, with support from its Operational Planning Unit (OPU), which performed well during implementation of the National Environment Program (PAN). The OPU will be answerable to the Bank for all aspects of program execution. To properly discharge its duties, it will draw on support of ANAM's line units; for procurement and accounting/financial management, the OPU will be assisted by the Administration and Finance Division, which has a suitable goods and services administration system (see paragraph 4.1).
- 3.3 For monitoring purposes, the OPU will actively involve the following technical divisions in preparing terms of reference and bidding documents for consulting services and procurement called for under the program, and for technical supervision of the corresponding contracts. **Component 1** will involve the following ANAM divisions: the National Division of Environmental Evaluation and Planning, the Environmental Information Systems Administration Division, and the Environmental Quality Protection Division. The Environmental Policy Planning Office will be involved in activities to strengthen the Interagency Environmental System (SIA). **Component 2** will involve the ANAM regional offices, local governments in participating districts, the Environmental Policy Planning Office, and the Environmental Culture Division of ANAM. **Component 3** will involve the Integrated Watershed Management Division and the ANAM regional offices. The broad range of training activities included in the program will need to be coordinated through the national Center for Sustainable Environmental Development (CEDESAM). In addition, the ANAM Environmental Policy Planning Office will monitor program execution closely, through the directors of the corresponding technical divisions, to ensure compliance with the agency's integration and policy guidelines. Close communication will be maintained with the Council of Ministers for the Complementary Agenda, as well as with all institutions participating in the SIA.

- 3.4 Because its technical responsibilities will be delegated to ANAM line units with sufficient human resources, the OPU (which will be financed from the local counterpart contribution) will have only a general coordinator and a support team comprising one coordinator per component and three administrative, financial, and accounting assistants.

C. Execution mechanism for the Strategic subnational institution-strengthening component

- 3.5 Activities in support of deconcentration will focus on the ANAM regional offices in Chiriquí, Bocas del Toro, and Los Santos. These offices were selected based on the following technical criteria: (i) pressure on environmental management services and use of natural resources critical for competitiveness; and (ii) dynamic economic sectors important for competitiveness.
- 3.6 Local activities under the component will support the governments of the David and Las Tablas districts, as well as the league of municipios (*mancomunidad*) of the province of Bocas del Toro, consisting of the districts of Bocas del Toro, Chiriquí Grande, and Changuinola.³ These municipios were selected because they have signed framework agreements for cooperation with ANAM to promote decentralized environmental management. If circumstances should change and there is a preference to extend technical assistance to other local governments, they will be required to have similar agreements in place with ANAM.
- 3.7 Technical assistance under this component for the ANAM regional offices and local governments will be provided in three packages, each covering one regional office and the neighboring local governments. These packages will have three essential elements: (i) detailed design of specific environmental management instruments and/or procedures for each ANAM office and for local governments; (ii) specialized advisory services during their implementation; and (iii) training programs for regional office and local government staff in applying them. In all cases the emphasis will be on finding sustainable mechanisms for financing interventions in keeping with the existing provisions of environmental and municipal legislation. The terms of reference will give priority to creating incentives for districts to participate with ANAM in shared environmental management, through arrangements for sharing the revenues from fines and environmental service licenses, natural resource development permits and/or concessions, the comanagement of protected areas of interest and their incorporation into the economic system, and the granting of “conforming use” status by the municipios, consistent with the land-use plans and their instruments. The terms of reference will also encourage municipal agreements relating to environmental land-use plans, systems of payment for environmental services, capacity-building for partnerships with the private sector, and the potential application of economic instruments.

³ The lead municipio in this league is Changuinola.

D. Execution period and disbursement schedule

- 3.8 Table III-1 outlines the estimated disbursement schedule for the five-year execution period.

Table III-1. Tentative disbursement schedule (US\$ millions)

Source	Year 1	Year 2	Year 3	Year 4	Year 5
IDB (OC)	1.9	2.6	2.3	2.0	1.2
Percentage	19%	26%	23%	20%	12%

E. Monitoring and evaluation

- 3.9 The OPU will monitor the program through the system used in ANAM's Information Systems Administration Division. That system will have specific modules for reliably and securely measuring the quality and traceability of the program's financial management and goods and services administration processes. The indicators, targets, and baselines in the program's logical framework (Annex 1) will be fed into the system so it can provide the OPU with accurate information for regularly measuring expected outputs, outcomes, and impacts. This information will allow for timely evaluation of program achievements.
- 3.10 During program execution, ANAM will, to the Bank's satisfaction, submit semiannual monitoring reports: (i) on 31 May for the 1 October–31 March period; and (ii) on 30 November for the 1 April–30 September period. These reports will include a detailed account of progress toward targets pursuant to the logical framework indicators, an analysis of problems encountered and corrective measures adopted, and (for year-end reports) the annual work plan for the next calendar year. That work plan will include activities programmed for that year, projected disbursements, and the updated procurement plan. Any program adjustments resulting from discussion of these reports will be agreed on with the Bank. Once accepted by the Bank, the monitoring reports will be made available to the public on the ANAM website.
- 3.11 As part of program evaluation, ANAM will prepare and deliver to the Bank a midterm evaluation report within 90 days after 50% of the loan proceeds have been disbursed, and a final evaluation report when 80% have been disbursed. Those evaluations will measure program outcomes and impact against the logical framework indicators (see Annex I). They will pay special attention to the impact of training, the financial sustainability of interventions, the effective implementation of the new instruments to be introduced (i.e. SEA, economic instruments), and users' perceptions of the services provided by ANAM. The evaluations will be performed by consulting firms contracted by ANAM and financed out of the loan proceeds. Once the two evaluation reports have been accepted by the Bank, they will be made available to the public on the ANAM website. The reports, including their supporting documentation and statistical data, will be kept available for an ex

post evaluation in case the government or the Bank should decide to have one done after the program ends.

F. Accounting and financial management and audit

- 3.12 ANAM will handle the program's accounting and financial management, for which it will: (i) keep specific and separate accounting and budget records for loan, grant, and local counterpart resources; (ii) have in place effective internal control structures; (iii) have a detailed accounting and accountability system for the administration, recording, and payment of works contracts and for the procurement of goods and consulting services; (iv) submit timely consolidated program financial statements and make accounting information and other documentation available to the external auditors and the Bank, as required; (v) keep appropriate records for disbursement requests; and (vi) maintain a proper filing system for documentation supporting eligible expenses, for verification by the Bank and the external auditors.
- 3.13 A revolving fund of 5% will be set up. ANAM will submit annual program financial statements to the Bank within 120 days after the close of the fiscal year, and a final report within 120 days after the date of the last program disbursement. These financial statements will be audited by an independent firm of external auditors acceptable to the Bank, under terms of reference previously approved by the Bank (document AF-400), and using standard Bank procedures for the selection of external audit services (document AF-200).

G. Procurement

- 3.14 Works, goods, and services will be procured and consultants selected and hired in accordance with Bank policies and procedures, as set out in documents GN-2349-7 and GN-2350-7. Table III-2 outlines the procurement methods to be used under the program.

Table III-2. Program procurement thresholds (US\$)

	ICB	NCB	Shopping
Works	≥ 3,000,000	250,000–3,000,000	< 250,000
Goods	≥ 250,000	50,000–250,000	< 50,000
Consulting services	≥ 200,000		

- 3.15 Consistent with Bank policies, the borrower has agreed with the Bank on a procurement plan for the first 18 months of execution (see technical files). The borrower will update the procurement plan annually as part of the year-end monitoring report, as required or when there are any significant changes. Any proposed revision to the plan must be submitted for the Bank's approval. The current version of the procurement plan will be available at all times.

IV. FEASIBILITY

A. Institutional feasibility

- 4.1 The Bank's Institutional Capacity Assessment System, when applied to ANAM, produced a very satisfactory rating of 92% and found a low level of risk. ANAM has in place systematic programming and execution procedures; solid organization and procedures for financial, personnel, and goods and services management; and satisfactory internal and external control systems. According to the evaluation of the PAN (loan 1222/OC-PN) and the Bank's project performance monitoring report, ANAM implemented that program satisfactorily. This program, however, will be implemented pursuant to the Bank's new procurement policies, and procurement personnel will need to be trained accordingly. Another issue relating to institutional capacity is that many staff at the Environmental Evaluation and Planning Division responsible for the EIA system have left for the private sector, where salaries are three times as high. The new program will help ANAM develop incentives for retaining personnel in these divisions. With respect to component 2, ANAM has already signed cooperation agreements with the program's target municipios.

B. Socioeconomic feasibility

- 4.2 The operation was conceived and designed to bring greater efficiency and effectiveness to environmental management. The potential economic and social benefits have not been quantified, but the expectations in qualitative terms include: (i) lower transaction costs and shorter turnaround times for environmental processes and permits, while effective environmental controls are maintained; (ii) enhanced early response capacity to reduce risks to major infrastructure works and promote public and private investment; (iii) high-quality and readily accessible information for better decision-making, especially in relation to water resources; (iv) improvements in the use and quality of natural resources as a result of introducing economic signals and incentives; and (v) increased levels of professional capacity and specialized knowledge. These achievements are expected to position Panama more competitively as it becomes integrated into the global economy, and to enhance the country's social and economic sustainability.

C. Financial feasibility

- 4.3 Environmental management demands a major public funding commitment. In this respect, ANAM, with the support of the PAN, has achieved significant results. Table IV-1 shows its stable record of self-financing.

Table IV-1. ANAM self-financing (in thousands of US\$)

	2003	2004	2005	2006
Expenditures	7,402	7,591	8,721	10,415
Revenues	2,666	3,000	3,473	3,834
Self-financing (%)	36	40	40	37

- 4.4 This program is expected to strengthen ANAM's self-financing capacity by lowering operating costs at headquarters while increasing potential sources of revenue. With respect to the latter, ANAM's regional offices currently collect only 9% of fines levied, a rate that should rise with the stronger monitoring and compliance functions that will be developed at the decentralized and regional levels, and the joint arrangements between ANAM and the local governments to increase effective collection. ANAM has indicated its readiness to share revenues with local governments as a function of their contributions to environmental management. ANAM currently has an arrangement of this kind in place with local governments in Metropolitan Panama City. The introduction of economic instruments such as environmental fees for dumping waste and payment for environmental services holds the potential for creating a sustainable source of revenues for environmental protection and management. These economic instruments will be developed through close collaboration between ANAM and the Ministry of Economy and Finance, in order to ensure consistency with national fiscal policies. From this perspective, it is reasonable to assume that, once the program is over, ANAM will have the necessary resources at hand to continue the activities initiated by the program.

D. Environmental impact

- 4.5 The proposed operation will help to modernize environmental management in Panama, and its environmental impact will be positive. Given the nature of the investments and the activities to be financed, no adverse environmental impacts are expected. The program has been classified as a Category C operation.

V. BENEFITS AND BENEFICIARIES

- 5.1 The program is expected to strengthen institutional capacities for environmental management at the national and local levels, and thereby to enhance the country's competitiveness. The program seeks to: (i) make public environmental management more effective and efficient so as to improve the business climate; (ii) promote better environmental governance at the subnational level; (iii) expand the range of management instruments and environmental regulations so as to enhance the capacity to respond to the country's main environmental challenges; (iv) improve capacities to conserve and value the country's natural wealth, in particular its water resources; and (v) make environmental management more participatory. No adverse environmental or social impacts are anticipated.
- 5.2 The program beneficiaries will, in general terms, be the country's economic and social sectors that depend on sound environmental management and the sustainable use of natural resources. These include investors, entrepreneurs, and the general public. The program will provide direct support for ANAM staff at the central and regional levels, for local governments and stakeholders involved in the

Environmental Advisory Commissions, and for the agencies belonging to the Interagency Environmental System.

VI. RISKS

- 6.1 The new environmental management instruments to be introduced by the program, such as the SEA and economic instruments (dumping fees), are of vital importance for the social and environmental sustainability of the country's development plans and the investments it is currently promoting. Nevertheless, economic players could view those instruments as portending additional costs, and reject them, so highly participatory methods will be used to promote greater public acceptance.

MODERNIZATION OF ENVIRONMENTAL MANAGEMENT FOR COMPETITIVENESS (PN-L1013)

PRELIMINARY LOGICAL FRAMEWORK

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
GOAL: To improve the country's business climate by enhancing the framework for environmental management and the husbandry of natural resources	<ul style="list-style-type: none"> Three years after program completion, Panama's environmental performance according to the World Economic Forum's Global Competitiveness Index is 10% higher than for 2005 (baseline: Panama ranked 66th out of 117 countries in 2005) 	<ul style="list-style-type: none"> Global Competitiveness Report (World Economic Forum) 	
PURPOSE: To modernize the capacity of ANAM and of local governments to promptly address the growing environmental management challenges of competitiveness.	<ul style="list-style-type: none"> By program end, ANAM is meeting statutory deadlines for processing EIAs. <i>(Baseline: For EIA categories I, II, and III the time limits set by law are 10, 45, and 65 days. Between August 2005 and September 2006 the average processing times at ANAM ranged from 8.81 to 15.4 days for category I, 30.3 to 69.6 days for category II, and 31 to 227 days for category III.)</i> By program end, ANAM has raised the complaint resolution rate to 50% <i>(baseline: 30% in 2006)</i>. ANAM's regional offices improve their efficiency in collecting fines to 30% <i>(baseline: 10% in 2006)</i>. By program end, 80% of ANAM's services and functions relating to EIA and water resources are publicly available <i>(baseline: only partial information was available online in 2007)</i>. By the end of year 4, ANAM has the capacity for environmental analysis of plans, policies, 	<ul style="list-style-type: none"> ANAM environmental information system ANAM records on companies and approved environmental improvement and management plans (PAMAs) ANAM statistics on average processing times Project reports Municipal reports Midterm program evaluation report 	<ul style="list-style-type: none"> The government maintains its policy of decentralizing environmental management. The agreements between local governments, decentralized entities, and civil society on economic and financial instruments for promoting environmental sustainability are implemented.

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	<p>and major infrastructure projects and has performed at least two strategic environmental assessments (SEAs) (<i>baseline: no SEA had been conducted as of 2007</i>).</p> <ul style="list-style-type: none"> • By program end, at least three districts in priority areas for competitiveness have capacities for environmental planning, monitoring, control, and compliance in their territory (<i>baseline: only Panama City had this capacity in 2007</i>). • By the end of year 4, at least one watershed of economic priority has at least one economic/financial instrument in place for promoting environmental sustainability (<i>baseline: no concrete examples in 2007</i>). 		
<p>COMPONENT 1: To make environmental management instruments more effective in promoting a business climate that will foster competitiveness, help Panama to penetrate global markets and fulfill the commitments made under its free trade agreements, and promote environmental sustainability in the country's main economic activities and the megaprojects needed for its socioeconomic development.</p>	<ul style="list-style-type: none"> • After 18 months, the legal and institutional framework and the SEA instruments are in place, and by program end at least two SEAs have been produced (<i>baseline: no such framework or instruments existed in 2007, at project start</i>). • After two years, the EIA process has been streamlined and the EIA manual and good practice guidelines for priority competitiveness sectors have been updated (<i>baseline: the EIA manual had not been updated as of 2007</i>). • By program end, at least two new environmental quality standards have been adopted (<i>baseline: in 2007 there were no regulations for noise, vibrations, or hazardous waste</i>). • By program end, the SIA has useful information available for decision-making and clear operating procedures (<i>baseline: in 2007 information was scattered and the SIA operated ad hoc</i>). 	<ul style="list-style-type: none"> • ANAM records on companies and PAMAs approved • ANAM statistics on PAMA audits • Midterm program evaluation report • SINIA 	<ul style="list-style-type: none"> • Agreements are reached on economic and financial instruments for promoting environmental sustainability. • Agreements are reached on new environmental regulations to be developed.

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	<ul style="list-style-type: none"> By the end of year 3, ANAM has the capacity to post its central and regional services and work relating to EIAs and water online (<i>baseline: EIA and water services were not online in 2007</i>). By the end of year 3, the environmental quality laboratory is accredited and 80% of environmental inspectors are certified to ISO17025 standards (<i>baseline: in 2007 the laboratory was not accredited and no inspectors were certified</i>). By program end the government has introduced a least one economic instrument to encourage environmental investments in the productive sector (<i>baseline: in 2007 there were no such instruments</i>). 		
<p>COMPONENT 2: To strengthen the capacities of ANAM at the regional level and those of local governments and communities to carry out their environmental management responsibilities and support the government's policy of decentralizing environmental management.</p>	<ul style="list-style-type: none"> By the end of year 5, at least three ANAM regional offices have received training and have the essential management tools and operating resources (communications, computer systems) for environmental monitoring, control, and compliance for the main economic activities in their territory (<i>baseline to be established in 2007</i>). By program end, at least three districts have signed agreements with ANAM for the gradual decentralization of environmental management, and are performing at least two key functions of environmental control and compliance and land use management (<i>baseline: only Panama City was performing these functions in 2007</i>). By the end of year 4, environmental awareness forums have been held in the program's target regions, and the Environmental Advisory Commissions (CCAs) and their members have received 	<ul style="list-style-type: none"> Municipal agreements Municipal Council and Community Board minutes Reports of the ANAM regional offices Semiannual program reports Public opinion surveys and field visits by ANAM Midterm program evaluation report SINIA 	<ul style="list-style-type: none"> ANAM's regional offices are strengthened and the municipal environmental units are created. The policy of promoting decentralization of environmental management is maintained.

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
	environmental management training (baseline: in 2007, the level of training was minimal).		
<p>COMPONENT 3: To address social and environmental requirements and the needs of the main economic sectors in terms of the quantity and quality of available water, through strategic investments in watersheds showing high levels of economic pressure and water stress.</p>	<ul style="list-style-type: none"> • By program end, the hydrometric networks and water quantity and quality monitoring systems have been rehabilitated and completed in at least 10 watersheds of priority owing to their economic activity or water stress (baseline: the network was not complete in 2007). • By program end, there are at least three years of records from the rehabilitated hydrometric network (baseline: the network was not complete in 2007). • By the end of year 4 the water users inventory has been compiled in the 10 priority watersheds (baseline: no watershed had a water user inventory in 2007). • By program end, ANAM has an integrated digital registry of water availability, users, permits, and concessions available on the web (baseline: this registry was not complete or posted on the web in 2007). • By program end, ANAM is evaluating the impact of water developments in at least 10 priority watersheds (baseline: ANAM was not assessing the impact of water uses in 2007). • By program end, sustainability strategies have been formulated in at least five of the 10 priority watersheds, the watershed committees have been established and trained, and the priority management instruments are in place (including economic instruments) (baseline: all are currently lacking in the 10 watersheds). 	<ul style="list-style-type: none"> • Program reports • Midterm program evaluation report • SINIA 	<ul style="list-style-type: none"> • ANAM maintains its policy of promoting watershed management. • ANAM establishes effective collaboration with other institutions involved in water resource management.