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United Nations Development Programme

GLOBAL ENVIRONMENT FACILITY (GEF)

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From: Richard Hosier
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Subject: **Submission of Nicaragua and Panama enabling activity proposals**

Please find attached the following Climate Change enabling activity proposals for your consideration and comments:

Nicaragua
Panama

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UNITED NATIONS DEVELOPMENT PROGRAMME
GLOBAL ENVIRONMENT FACILITY

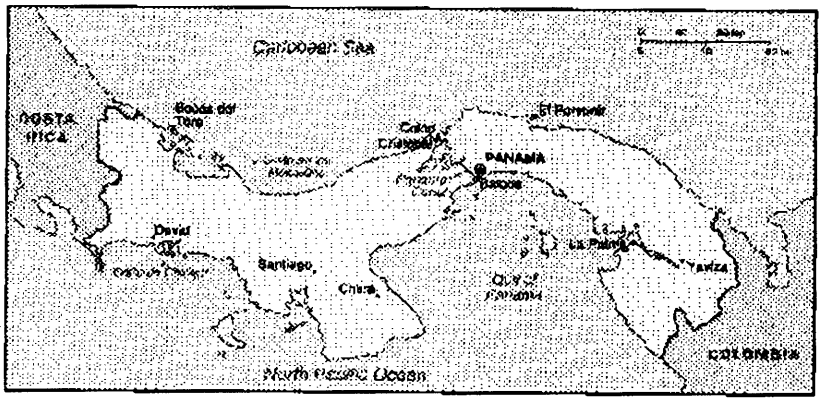
Proposal for Review

Country:	**Republic of Panama**
Project Title:	**Enabling Panama to Prepare its First National Communication in Response to its Commitments to the UNFCCC**
GEF Focal Area:	**Climate Change**
Panama Eligibility:	**[x] Eligible under a financial mechanism of the UNFCCC** **[ ] Eligible under paragraph nine (b) of the Instrument**
Date of Ratification:	**21 March 1994**
Total Costs:	**US $ 298,700**
GEF Financing:	**US $ 298,700**
Counterpart Financing:	**n. a.**
GEF Implementin Agency:	**UNDP**
Executing Agency:	**Government of Panama**
Local Counterpart Agency:	**Instituto Nacional de Recursos Naturales Renovables INRENARE**
Estimated Starting Date:	**15 August 1997**
Project Duration:	**24 months**

BACKGROUND AND PROJECT CONTEXT

Country Information

The Republic of Panama is the located in the southeastern end of Central America. It has the Caribbean Sea to the North and the Pacific Ocean to the South. It shares 225 km of border with Colombia to the East, and 330 km of borders with Costa Rica on the West. Panama is inside the tropics, with geographic coordinates: 9° N, 80° W . The country's total area is 78,200 sq. km, with 75,990 sq. km land area. It includes 1000 islands off of its 2,490 km of coastline.



The Isthmus forms a land bridge connecting North and South America. The Panama Canal forms a water bridge connecting North Atlantic Ocean via Caribbean Sea with North Pacific Ocean.

Natural resources include copper, mahogany forests, and shrimp.

Environment

Panama has a tropical climate: hot, humid and cloudy, with cooler temperatures on elevations. A prolonged rainy season running from May to December is interrupted by a short dry season from January to May. The terrain in the interior consists mostly of steep, rugged mountains and dissected, upland plains. A central mountain range runs almost the length of the country creating a backbone where important forest and mineral reserves lie. The backbone is broken on its lowest point, where the Panama Canal was built, creating one of the world's largest artificial lakes, Lago Gatun. Coastal areas are largely comprised of plains and rolling hills. The lowest points are located along the sea shores; and the highest point is Volcán Barú which rises 3,475 m from sea level.

The Republic of Panama maintains one the largest stands of primary forests in Central America. The largest national park is Darien Biosphere Reserve, located along the border with Colombia. A second park is the result of conservation efforts between Costa Rica and Panama, the *La Amistad* International Park. A third system of parks is of great interest to the country and the maritime community: Chagres, Soberanía, Camino de Cruces, Portobelo and others. These parks protect the forests and waterways that provide fresh water for the operation of the Panama Canal.

Panama's sizable coastal resources, including Caribbean and Pacific reefs and mangroves forests

are threatened by water pollution from urban sources and agricultural runoff. Dwindling fish capture, deforestation of tropical rain forest and land degradation are also issues of environmental concern. Tropical storms and flooding affect agriculture and populated areas in the months of July through November.

People

The population of Panama was estimated to be 2,655,000 in 1996, and grows at a rate of 1.64%. About one third of the people are under 15 years of age, and 5% are 65 and above. Current life expectancy rests at 74 years of age.

Table 1
Demographic Information for Panama

Group	Structure	Male	Female
0-14 years	33%	445,382	426,111
15-64 years	62%	828,384	806,205
65 years and over	5%	71,823	77,189

July 1996 est.

Soon after the discovery of the Pacific Ocean by the Spanish *conquistadores* in the 1500's, Panama became a strategic crossing point. Spaniards and other Europeans mixed with the local Amerindian communities and now comprise over 66% of the population. With the construction of the intercontinental railroad, -the first one to cross the American continent, and later the Panama Canal, laborers came from all over the world. West Indians (14%), Caucasian (10%), and Indigenous people (6%) make up the other ethnic communities. Most of the people are Roman Catholic (85%), or Protestant (15%), but Jewish, Muslim and other religions are also present. Many Panamanians are bilingual and the literacy rate is over 90%.

Economy

Because of its key geographic location, Panama's economy is service-based, heavily weighted toward banking, commerce, and insurance. Tourism is also expected to continue to rise in importance. The manufacturing and agriculture sectors have historically been protected, and face important challenges with the globalization of markets. After fast growth during the early 1990's, the economy has slowed down in the last two years, with GDP growth at 2.8% in 1994 and in 1995. The slowdown has been due mostly to a reduction in construction activities and stagnation in the Free Zone and financial services, the three fastest growing sectors early in the decade.

To counter the slowdown, the Government of Panama (GoP) has launched an economic reform program designed to reverse unemployment, attract foreign investment, cut back the size of government, and modernize the economy. In 1995, Panama reached an agreement in principle to

reschedule its commercial debt - one of the highest in the world in per capita terms - which will allow the country to reenter international financial markets. Panama is still working out the details to join the World Trade Organization (WTO).

The nation's labor force reaches one million people. There is a shortage of skilled labor, but an oversupply of unskilled labor. In 1995, the open unemployment rate was estimated at 13.8%.

In 1995, the country exported $548 million (f.o.b.) in commodities such as bananas 43%, shrimp 11%, sugar 4%, clothing 5%, coffee 2%. Its main partners are the US 39%, and the European Union, Central America and Caribbean. Imports for the same year were $2.45 billion (c.i.f.) consisting mainly of capital goods 21%, crude oil 11%, foodstuffs 9%, consumer goods, and chemicals from the same partners countries plus Japan.

Table 2
Structure of the Economy of Panama

	Sector	
1	Agriculture	10.0%
2	Industry	16.0%
3	Mining	<0.1%[1]
4	Commerce and Services	74.0%0
5	Total	100.0%

Panama holds an exclusive economic zone measuring 200 nautical miles or to the edge of the continental shelf, where fishing and marine eco-tourism have the potential to be developed.

MAIN ECONOMIC SECTORS EMITTING GREENHOUSE GASES IN PANAMA

The Energy Sector

The energy sector is dominated by imported petroleum products. Local supply of primary energy consists of fuelwood, hydro power and bagasse. Fuelwood is the staple energy source for 15-20% of the population. A small amount is used by rural industries. Bagasse is recycled into the sugar cane production cycle as fuel. Hydropower provides 69% of the electricity generated, and the 31% is generated from fuel oil and diesel plants in steam and gas turbines. Table 3 provides a snapshot of the net energy consumption from statistics compiled annually as energy balances.

[1] Mining concessions and permits have increased significantly over the last five years. The Mining Chamber (Cámara Minera) estimates that mining royalties will become a significant portion of the countryÕs GDP in the next ten years.

Table 3
Net Consumption of Energy

	Fuel	Tcal	%
1	Electricity	2385	12.47%
2	Refinery Gas	264	1.38%
3	LPG	870	4.55%
4	Gasoline	2998	15.67%
5	Kerosene and Jet Fuel	115	0.60%
6	Diesel Oil	5137	26.86%
7	Fuel Oil	3117	16.30%
8	Fuelwood	3743	19.57%
9	Charcoal	24	0.13%
10	Bagasse, Biomass	475	2.48%
	Total[2]	19128	100.00%

Panama has one of the remaining refineries in Central America. It is owned by Texaco and operates by authority of the GoP, which protects it from direct imports by a system of surcharges applied to competitors. Other companies, such as Exxon and Shell operate as fuel distributors. IRHE, the electric utility has an operating capacity of 670 MW, and generated 3.4 Twh of energy in 1995. Losses in transmission and lost sales account for a net consumption of 2.8 Twh (2385 Tcal).

Industry

The industrial sector consists mainly of manufacturing plants which have been hard hit by structural adjustments. The principal businesses are in construction, petroleum refining, brewing, cement and other construction materials, and sugar milling. Although it is a small component of the economy, it uses 22% of the energy consumed. Diesel oil is by far the most important fuel in this sector, followed by fuel oil.

Land Use, Agriculture and Livestock

Panama has a sizable forest cover. Most of the undisturbed forest cover is in the form is primary and scrub forests. Although most of the land best suited for forest cover, Panama's has an active agricultural sector which produces bananas, rice, corn, coffee, sugarcane, vegetables and

[2] Totals are to illustrate consumption from users perspective only. The table mixes primary and secondary energies. Electricity is generated from hydro 69% and fossil fuels 31%. Table does not reflect end use efficiencies.

livestock. Fishing, mainly for shrimp, is also an important business. Commercial crops use 8% of the land.

Table 4
Land Use

Category	%
Arable Land	6.0%
Permanent Crops	2.0%
Meadows and Pastures	15.0%
Forest and Woodland[3]	54.0%
Other	23.0%

Livestock production and the expansion of agricultural lands at the expense of the rainforests have expanded meadows and pastures to its current 15% share of the land. Heavy burning of disturbed forests and grassy plains, following a tradition of slash and burn agriculture, continue to inflict a heavy burden to the environment. The rich cover is reduced to ashes, which is later washed away under the pressure of the typical 2,000 mm of precipitation that fall on average. With less than one head of cattle per hectare, livestock productivity in Panama is low, but continues to compete in some export markets.

NATIONAL INSTITUTIONS DEALING WITH CLIMATE CHANGE RELATED ISSUES

To address environmental issues, Panama has a complex institutional setup. There are no Energy or Environment Ministries, per se. Instead, the responsibilities typically associated with these offices are distributed among other ministries and government offices, most of which are part of the climate change working group, under the alternating leadership of IRHE and INRENARE.

Law #6, ratified on February 3, 1997, set the basis for private power generation, distribution and sales, while the government retains transmission rights for another 5 years. The law mandated a regulatory body which is in the process of implementing this new law. This regulatory body will regulate electricity, telecommunications and water services. The law also defines an **Energy Policy Commission**, under the Ministry of Planning and Economic Policy (MIPPE). At present, the structure and functions of this commission are being examined, and it has yet to be created. Currently, energy policy is formulated in both the Planning Division of Institute of Hydraulic Resources and Electrification (IRHE), for electric power, as well as other conventional and renewable forms of energy, and the Hydrocarbon Department of the Ministry of Industry and Commerce.

[3] A 1995 INRENARE report states that forest cover in 1992 was 44.4%. INRENARE, Informe de Cobertura Boscosa 1992. Junio 1995. Direccion Nac de Cuencas.

In the last 3 years, the GoP has adopted other key legislative initiatives which have changed the power and forestry sectors, as well as incorporated land use planning in the former Panama Canal Zone. As mentioned before, IRHE, the state run electric utility, will see its structure, purpose and institutional arrangements totally redefined. These changes are modifying its leadership role in energy planning and hydro-meteorological studies. The forestry sector is also receiving an important boost. Fiscal, financial and migratory incentives have been put in place to promote reforestation as a business.

Table 5

Climate Change Working Group

Stakeholder	Name
Energy	IRHE - Dept. Of Energy Analysis, Development Division
	MICI - Ministry of Commerce and Industry - Hydrocarbon Division
	MIPPE - Ministry of Planning and Economic Policy / Energy Policy Commission
CC Political Focal Point	Ministry of Foreign Affairs, Division of International Agencies
CC Technical Focal Point	INRENARE - National Institute of Renewable Resources
Forestry	INRENARE - National Institute of Renewable Resources / Forestry Division
Economy	Ministry of Planning and Economic Development
Climate Office	IRHE - Environment Division, Office of Hydro-meteorology
Power Company	IRHE - Panama Electric Utility
Research	Technological University of Panama - School of Mechanical Engineering
	University of Panama - National Studies Institute (IDEN)
	University of Panama - Institute of Biodiversity and Environmental Studies
Environmental Health	Ministry of Health - Environmental Health Division
Sustainable Development Network	USMA - Catholic University
Independent Sectors - NGO	Technoserve, Panama.
Agriculture	MIDA - Ministry of Agricultural Development
Business	Chamber of Commerce, Industry and Agriculture
Panama Canal Region	Interoceanic Region Authority ARI

International Support	
CCAD	Consejo Centroamericano de Ambiente y Desarrollo (Central American Council on Environment and Development)
CRRH	Comité Regional de Recursos Hidráulicos (Regional Hydro Resource Committee)
US CSP	United States Country Studies Program

The National Renewable Resource Institute INRENARE is the government body responsible for the management of national parks, forestry and other natural resources. This Institute, which also

exists as an office of MIPPE, assigns mining, timber and water concessions; and is responsible for the implementation of the law to promote reforestation. This agency has been designated by the GoP to implement the enabling activities in the country.

Legislation

A myriad of complex laws have been approved attempting to address various social needs relating to the environment. Early work in health and sanitation (1940's) set the framework of environmental legislation. Newer laws, international conventions and agreements have lead many administrations to include updates, changes and new concepts.

Over time, the country has approved laws and conventions regarding Biodiversity, Endangered Species, Hazardous Wastes, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Wetlands, as well as Climate Change. The country has signed, and is working on the ratification of: Desertification, Law of the Sea, Marine Life Conservation, and Tropical Timber 94.

In 1994, a comprehensive Environmental Code was produced and proposed. It was approved by the Legislative Chamber, but vetoed by the President, and sent back for revision. The proposal was regarded as too rigid, inapplicable and inconsistent with other guidelines and strategies set forth by the GoP. A new proposal is under preparation.

CURRENT, PLANNED AND ONGOING PROJECT RELATED TO CLIMATE CHANGE

In spite of the imminent changes at IRHE, this institution remains at the forefront of the climate change practice in Panama. IRHE operates the most comprehensive meteorology office of the country, the largest thermal electric facilities, and the only comprehensive energy planning and accounting unit in the country. This unit is called the Energy Analysis Department of IRHE. Their current work is described in table 6.

Work is also underway in the expansion of the thermal power capacity of IRHE. The company has started the bidding process for the construction of another hydro power plant, Estí, in the western highlands of the country.

There is a second power company in Panama which operates under the provisions of the Panama Canal. The Panama Canal Company maintains hydro and thermal capacity which was built around the canal operations. These facilities are of strategic importance for the functioning of the canal, and provide an additional 10% of energy to this part of the country.

The forestry sector, lead by INRENARE, is pursuing various initiatives to encourage the sustainable use of the forest reserves. Between 1993 and 1996, 586 reforestation proposals were

approved for the reforestation of 16,000 hectares. While this is an important move forward, it is far from reversing the prevailing deforestation trends.

Table 6
Energy Related Projects: Planned and Work in Progress

	Name / Description	Dates	Counterparts
1	Strategies to Negotiate with Private Energy Provider / Training	June 97	
2	Fuelwood Consumption Survey	IV Quarter 97	INRENARE
3	Wind Resource Information System Proposal	no date[4]	Lahmeyer International
4	Wind Measurement Pilot Stations (2)	In progress	Self funded
5	Rural Photovoltaic Systems	In progress	Instituto de Investigaciones Electricas, Mexico
6	Efficient Energy Use Program (Air Conditioning and Refrigeration)	In progress	European Union Grant
7	Demand Side Management and Energy Efficiency (Refrigeration and Lighting)	In Progress	European Union

Source: IRHE, Development Division, Department of Energy Analysis.

Because of the unique nature of the Panama Canal and the body of law associated with its operation and transfer to the Republic in the year 2000, the government created the Interoceanic Regional Authority (ARI). ARI is responsible for the land use planning of the region, which encompasses the canal watershed along with thousands of hectares of relatively undisturbed land. This agency has produced a master plan which recommends reforestation and commercial management of forest resources. This places ARI alongside with INRENARE as the agencies which could work toward GHG sink enhancement in Panama.

It is also worth noting that the Panama Canal is an important export point for fossil fuel. Bunkering operations are an important collateral business of the canal. In 1992, the GoP gave a concession for the operation of the Gatun Tank farm located in the Caribbean exit of the canal. In 1996, a similar concession was structured for the Arraiján Tank Farm, located in the Pacific side of the canal. Each of these facilities was built during the Second World War and have a rated capacity of one million barrels of oil. They were a part of the United States Southern Command, and have been returned to Panama in compliance with the Panama Canal Treaty.

[4] Submitted to UNDP for consideration 10/96

Measures Undertaken

To address its national priorities and comply with its commitments, Panama has undertaken the following steps.

- Panama signed and ratified the UNFCCC in 23 May 1995. It came into force in August, 1995.
- Representatives from Panama are participating in the COP meetings as well as local and regional meetings which address climate change in its agenda. These include the CoP meeting in Geneva, Switzerland in July, 1996; and the preparatory round for this meeting, held in Guatemala, June, 1996.
- Panama is participating in regional efforts to articulate a common agenda regarding climate change along with other Central American nations. Two meetings are scheduled for May, 1997 in Costa Rica; and September 1977 in Panama City. Both are preparatory sessions for meetings to be held in Bonn, in June and October, 1997. The country is also scheduled to participate in the third CoP meeting in Japan.
- The Interoceanic Regional Authority of the Government of Panama has produced a Regional Land Use Plan for the Panama Canal Watershed, which contemplates various types of forest related land use types consistent with enhancing sustainable forestry and sink enhancement.

PROJECT OBJECTIVES

The immediate objective of the project is to facilitate the preparation of the first national communication of Panama to the Conference of the Parties (CoP) in accordance with the Article 12 of the UN Framework Convention on Climate Change.

Besides meeting the communication obligations, the project can be seen as an essential exercise to enhance general awareness and knowledge of climate change related issues in Panama thus enabling the country to take those issues into account in general planning and strategy formulation for different economical and technical sectors, and also to strengthen its role in the international scientific forums and negotiation processes related to climate change. A part of this task is to facilitate the dialogue, information exchange and cooperation among all the relevant players in the field including governmental, non-governmental, academic, private and "grassroots" sectors.

The project will strengthen an institutional framework, and build endogenous capacity preparing ground for eventual additional communication obligations, and for further development and implementation of identified response measures addressing climate change and its adverse impacts.

PROJECT DESCRIPTION

During the project preparation the following components have been identified to respond to the objectives of the project and to implement the project successfully:

1. Organize the work by establishing a Project Steering Committee, and by organizing a project initiation workshop with participants from all the relevant sectors to present the objectives of the project, to clarify links to other relevant ongoing national and international activities, and to clarify the institutional and other practical arrangements to facilitate a successful implementation of the project. The Steering Committee will identify and hire a competent project manager to serve on a part time basis.

2. Generate a project time line describing all of steps in the project with full detail, integrating the components described in this proposal with other Climate Change efforts in the country or abroad.

3. Strengthen the links to both national and international sources of information, and eventually establish an information center/network with adequate equipment and personnel to facilitate an effective exchange of information between the participating institutions at the national level, as well as to assist them in gaining internationally available information on climate change related issues (e.g., from the United States Country Studies Program and other bilateral programs, UNEP, IPCC, CC: TRAIN, international research institutes, ongoing enabling activities in other countries etc.). The potential to use Internet/World Wide Web is evaluated and, to the extent feasible, will be used to save travel costs and enhance the geographical coverage of available information. It is foreseen that the network will continue to operate after the project, thus facilitating interested parties in Panama to learn about other national or international activities, and facilitating interested individuals and institutions outside Panama to get information regarding ongoing, planned or finalized climate change related activities in Panama. In this context, the project will cooperate with the UNFCCC Secretariat's CC: INFO/Web initiative.

4. Provide information on national circumstances.

5. Organize and undertake a national inventory of anthropogenic emissions by sources and removals by sinks of the following greenhouse gases: carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), to the extent the country's capacities permit. Other greenhouse gases may be included at the discretion of the country. The guidelines and simplified default methodologies adopted by the IPCC should be used to the extent possible, and the best available data should be provided, being either for the year 1994 or alternatively for the year 1990. A two part workshop will be executed under the direction of an expert. The first workshop will concentrate in methodological aspects so local technicians may undertake the calculations. A second workshop will review, correct and

improve results, as well as discuss policy implications. The expert(s) will oversee the production of the national GHG Inventory.

6. Undertake, as appropriate, the general description of steps taken or envisaged by Panama to implement the Convention including, as appropriate: (i) programs related to sustainable development, research and systematic observation, education and public awareness, training, etc.; (ii) policy options for adequate monitoring systems and response strategies for climate change impacts on terrestrial and marine ecosystems; (iii) policy frameworks for implementing adaptation measures and response strategies in the context of coastal zone management, disaster preparedness, agriculture, fisheries and forestry, with a view to integrate climate change impact information, as appropriate, into national planning processes; (iv) in the context of undertaking national communications, building of national, regional and/or sub-regional capacity, as appropriate, to integrate climate change concerns in medium and long term planning; and (v) programs containing measures Panama believes contribute to addressing climate change and its adverse impacts, including the abatement of increase in greenhouse gas emissions and enhancement of removals by sinks.

7. Integrate the work produced under the auspices of the Central American Climate Change Program (the United States Country Studies Program), as well as benefit from the expertise gained from those parties that collaborated in the production of the reports on Coastal Erosion, Impacts on Agriculture, and Impacts on Hydro Resources. These reports studied the impacts of climate change in pilot sites throughout the country considering specific geographical and climatological characteristics of Panama. The work will enhance ongoing or finalized national and international studies, and will use, as appropriate, existing methodologies and "tools ", and results of other ongoing studies. Panama is requesting moneys from UNDP / GEF to address components of vulnerability not encompassed in the USCSP.

8. Prepare a national strategy for effective response measures to climate change.

9. Provide other information that the country considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication. This may include: proposals for projects for financing, including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects, along with, if possible, an estimate of all incremental costs, of the reductions of emissions and increments of removals of greenhouse gases, as well as an estimate of the consequent benefits; material relevant for calculation of global emission trends; constraints and obstacles; etc.

10. Organize a workshop (with wide local participation and relevant international partners) to present the results of this project, together with results or status of other ongoing national projects relevant to the issue, and to discuss the results with the objective

of formulating a national action plan for effective response measures to climate change (focusing on a win-win mitigation and adaptation measures).

11. Use the outputs of this project as well as results of other ongoing projects to prepare the First National Communication of Panama to the Conference of the Parties.

The activities will be carried out in sequence so that tasks building on the results of prior activities are only undertaken if these prior steps have been completed. For instance, the Abatement considerations will build on the results of the inventory. Adaptation considerations will build on results of the vulnerability assessments from the USCSP project, plus new work produced as part of the enabling activities.

With these activities the project is expected to cover all the steps needed to prepare the first national communication of Panama to the CoP.

RATIONALE FOR GEF SUPPORT

The project is consistent with the GEF Operational Strategy and the GEF Operational Criteria for Enabling Activities to provide coordinated and timely assistance to countries to fulfil their commitments to the UNFCCC. The project responds to such objectives by implementing an activity needed to enable The Republic of Panama to prepare its first national communication to the CoP.

SUSTAINABILITY AND PARTICIPATION

The Government of Panama fully supports the objectives of this project and gives a high priority to it. The Government has also endorsed that the output of the project will be the national communication in compliance with the UN Framework Convention on Climate Change.

In financial terms, the Government is covering costs for government experts and senior staff in the Steering Committee, non-dedicated local technical work and other matching contributions such as office space and limited project support staff.

To ensure wide participation a Project Steering Committee will be established on the basis of the existing Climate Change Working Group with representatives from the government, private development organizations and the business sectors listed in Table 5 above. The Steering Committee will have no more than ten members, and will attempt to include all the interested sectors.

It is expected that after successful completion of the Project, the Project Steering Committee will continue to deal with UNFCCC related matters on a permanent basis. As already mentioned,

specific attention will be paid to the dissemination of, and public access to the information generated.

LESSONS LEARNED

The importance of involvement and cooperation of all the relevant stakeholders including key government ministries, NGO's, academic institutions and private sector has been noted and duly reflected in the proposal. The project recognizes the importance of exchange of information and experience at the national level, as well as regional and international exchanges.

In implementing the different activities, the project will follow the internationally adopted guidelines and use the existing methodologies and tools whenever available. Technical assistance will be provided by local, regional and international experts when required.

PROJECT FINANCING AND BUDGET

As an enabling activity related to the communication obligations of Panama under the UNFCCC, the agreed full costs of the project will be funded by GEF. A detailed budget presented in the format consistent with the cost norms of the GEF Operational Criteria for Enabling Activities is presented as Annex III.

This proposal covers activities required in the initial communication. This includes: the inventory, abatement analysis, limited vulnerability, adaptation, policy issues related to climate change and the production of the initial communication itself. This proposal undertakes tasks not included in the regional United States Country Studies Program *(USCSP)*, which emphasized three vulnerability issues: agriculture, coastal zone erosion and water resources. Reduced allocations are assigned to vulnerability studies in recognition of earlier work under the USCSP. Information from these studies will be included into the national communication to the UNFCCC.

INSTITUTIONAL FRAMEWORK AND PROJECT IMPLEMENTATION

The Executing Agency of the project will be the Institute of Renewable Natural Resources (INRENARE), which will chair the Project Steering Committee (PSC). The PSC will be charged with establishing linkages to sources of information, overseeing and advising the project execution and will have decision making power over all aspects of the project. The project will also collaborate closely with all the other relevant ongoing projects in Panama, both through the PSC and between the research teams in order to enable an effective information exchange between the projects and full utilization of their results.

Regarding the international collaboration, working links with relevant regional and international expert institutions will be created or reinforced, and among others IPCC and UNEP will be consulted when selecting the methodologies and implementing the specific activities of the project. The project will also utilize results and lessons learned from other ongoing or finalized

international projects like CC: TRAIN. As means of identifying and disseminating information, the project will utilize, electronic networks such as Internet and cooperate with the CC: INFO initiatives of the UNFCCC Secretariat.

MONITORING AND EVALUATION

After the detailed work plan has been prepared, an external review will be undertaken. The purpose of the review is to identify, in the early stage of the project, the eventual gaps, overlaps and other risks of successful implementation. It is also designed to identify potential partners and sources of information from which the project could benefit.

The executing agency together with the PSC will be responsible for monitoring the project on a continuous basis. In order to do this, the project manager, with the help of the leaders of the research teams, will prepare regular reports on the progress of the project as a whole and the different sub-tasks under it.

For the remaining part, the project will rely on common UNDP monitoring and evaluation practices including a midterm evaluation and a tripartite review to be held within the first 12 months of the start of the full implementation of the project.

Annex I

Coverage of Activities To Prepare the Initial National Communication

Panama		Type of activity [1]		
Information to be included into the national communication	Enabling activity to produce the information needed	Planning [2] and Execution	Capacity Building	
			Institutional	Human
1 National Circumstances	Compilation of information from existing sources	x	x	x
2 Greenhouse Gas Inventory (incl. CO_2, CH_4, and NO_2) for	Data gathering and inventory of GHG emissions			
-all energy sources	-all energy sources	x	x	x
-industrial processes	-industrial processes	x	x	x
-agricultural processes	-agricultural processes	x	x	x
-land use change and forestry	-land use change and forestry	x	x	x
-other sources	-other sources	x	x	x
3 General Description of Steps				
a) programs related to sustainable development, research, public awareness, etc.	An assessment of potential impacts of climate change in the country	x/USCSP	x/USCSP	x/USCSP
b) policy options for monitoring systems and response strategies for impacts.	An analysis of potential options to adapt to the impacts of	x	x	x
c) policy frameworks for implementing adaptation measures and response strategies.	climate change			
d) building capacity to integrate climate change concerns into planning.	An analysis of potential measures to abate the increase in GHG emissions and enhancement of sinks	x	x	x
e) programs to address climate change and its adverse impacts, including the abatement and enhancement of sinks	Formulation of programs for implementation of the identified GHG abatement measures	x	x	x
4 Other information including, as appropriate				
a) Financial and technological needs and constraints associated with the implementation of the Convention under art. 4 and 12.	Based on the results of the studies compilation of additional information	x	x	x
b) Projects for financing	that the country wants to present			
c) Materials relevant for calculation of global emission trends	in its national communication			
5 Compilation and production of national communication	Based on the results of the studies compiled for the national communication (incl. translation and prep. of an executive summary).	x	x	x

1 X Activities covered by the proposed project

USCSP - United States Country Studies Program

2 including data gathering and research related to the preparation of the national communication

Annex II

*Project endorsement by the **GEF operational focal point** in the country acknowledging project goal of sufficient capability in areas covered by the project.*

CC:INFO

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Contact Person: Mr./Ms.
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Job Title: DIRECTOR EJECUTIVO Telephone(s): (507) 232-4416/4678
Fax number: (507) 232-4317 E-mail: INRENARE @ PA. INRENARE.ing. ANC. AL. GEN

Assistance requested in: (Tick cells below as appropriate)

Area of Activity	Output	Capacity: Individual	Capacity: Institutional
Inventories			
Inventory Emissions			
Inventory CO2 - Energy	✓	✓	✓
Inventory CO2 - Land Use			
Inventory CH4 - Energy			
Inventory CH4 - Other			
Inventory N2O			
Inventory Other Gases			
Inventory Sinks			
Vulnerability Assessment			
Vulnerability Assessment - Agriculture		✓	✓
Vulnerability Assessment - Forestry			
Vulnerability Assessment - Coastal Zone			
Vulnerability Assessment - Water Resources			
Vulnerability Assessment - Health Impacts			
Vulnerability Assessment - Natural Ecosystems			
[illegible]			
Identification/Assessment of Options			
Identification/Assessment of Options Mitigation			
Ident./Assess. Options Mit. - Energy			
Ident./Assess. Options Mit. - Energy - Industry			
Ident./Assess. Options Mit. - Energy - Transport			
Ident./Assess. Options Mit. - Energy - Energy Supply			
Ident./Assess. Options Mit. - Energy - Residential			
Ident./Assess. Options Mit. - Non-Energy			
Ident./Assess. Options Mit. - Non-Energy - Agriculture			
Ident./Assess. Options Mit. - Non-Energy - Forestry			
Ident./Assess. Options Mit. - Non-Energy - Waste			
Ident./Assess. Options Mit. - Non-Energy - Other			
Ident./Assess. Options Mit. - Sink Enhancement			
Identification/Assessment Options Adaptation (Stage I)			
National Strategies/CC Action Plans			
National Strategies/CC Action Plan - Mitigation		✓	✓
National Strategies/CC Action Plan - Adaptation		✓	✓
National Communication	✓	✓	✓
Implementation of Options			
Implem. Options Mitigation			
Implem. Options Mitigation - Energy			
Implem. Options Mitigation - Energy - Industry			
Implem. Options Mitigation - Energy - Transport			
Implem. Options Mitigation - Energy - Energy Supply			
Implem. Options Mitigation - Energy - Residential			
Implem. Options Mitigation - Non-Energy			
Implem. Options Mitigation - Non-Energy - Agriculture			
Implem. Options Mitigation - Non-Energy - Forestry			
Implem. Options Mitigation - Non-Energy - Waste			
Implem. Options Mitigation - Non-Energy - Other			
Implem. Options Mitigation - Sink Enhancement			
Implementation Options Adaptation			
Public Awareness			
Monitoring of Plans			

UNFCCC SECRETARIAT
DATE: 3 MAR 1997
LOG No: 2666
CC: INFO

Comments:

Explanations:
- Output assistance is requested to carry out a study or to produce the appropriate output in the selected area(s) of activity.
- Capacity assistance is requested to build or strengthen institutional and/or human (e.g. through training) capacities, so as to ensure the sustainability of the activity beyond project end.

Date: 13/02/97

Signature:

Compiled

New address as of 17 August 1996
CLIMATE CHANGE SECRETARIAT (UNFCCC)
Mailing Address: P.O.Box 260124, D-53153 Bonn, Germany
Office Location: Haus Carstanjen, Martin-Luther-King-Strasse 8, D-53175 Bonn
Telephone: (Switchboard): (49-228) 815-1000 Fax (49-228) 815-1999 Email: secretariat@unfccc.de

Annex III

Budget for Expedited Processing of The Enabling Activity Proposal For Preparing the Initial National Communication

Panama		Type of activity			Cost in US$
Information to be included into the national communication	Enabling activity to produce the information needed	Planning and Execution	Capacity Building		
			Institutional	Human	
1 National Circumstances	Compilation of information from existing sources	$ -	$ -	$ -	$ -
2 Greenhouse Gas Inventory	Data gathering and Inventory of GHG emissions	$52,300	$17,000	$30,000	$99,300
3 General Description of Steps					
a) programs related to sustainable development, research, public awareness, etc.	An assessment of potential impacts of climate change in the country	$ 5,000	$2,000	$3,000	$10,000
b) policy options for monitoring systems and response strategies for impacts. c) policy frameworks for implementing adaptation measures and response strategies.	An analysis of potential options to adapt to the impacts of climate change	$10,000	$5,000	$5,000	$20,000
d) building capacity to integrate climate change concerns into planning.	An analysis of potential measures to abate the increase in GHG emissions and enhancement of sinks	$11,700	$5,700	$8,600	$26,000
e) programs to address climate change and its adverse impacts, including the abatement and enhancement of sinks	Formulation of programs for implementation of the identified GHG abatement measures	$15,700	$7,700	$11,500	$34,900
4 Other information including, as appropriate					
a) Financial and technological needs and constraints associated with the implementation of the Convention under art. 4 and 12. b) Projects for financing c) Materials relevant for calculation of global emission trends.	Based on the results of the studies compilation of additional information that the country wants to present in its national communication	$10,000	$-	$-	$10,000
5 Compilation and production of national communication	Based on the results of the studies compiled for the national communication (incl. translation and prep. of an executive summary).	$7,600	$3,700	$5,500	$16,800
Project management		$26,100	$12,800	$19,100	$58,000
Monitoring / Evaluation		$15,000	$ -	$-	$15,000
Subtotal		153,400	53,900	82,700	290,000
Percentage of total budget		53%	17%	28%	
Project support services 3%					$8,700
GRAND TOTAL					**$298,700**