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United Nations Development Programme GLOBAL ENVIRONMENT FACILITY (GEF)

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for comments by color
Date: 3 October 1997
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To: Mr. Avani Vaish, GEF
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Pages: (14 including this sheet)

From: *for* Richard Hosier *RH*
Principal Technical Adviser
Climate Change

Subject: Submission of Barbados enabling activity proposal

Please find attached for your consideration and comments the Climate Change enabling activity proposal for **Barbados**.

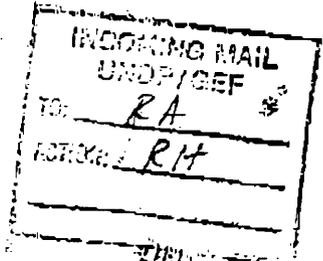


MINISTRY OF HEALTH AND THE ENVIRONMENT

ENVIRONMENT DIVISION

Ref. No: GEF/4

Date: 1996-11-20



Mr. Rafael Asenjo
Executive Coordinator
UNDP-GEF
304E 45th Street
New York 10017

Dear Sir,

NOV 24 1996
ET
A. Temple / I. Faganari

Guidelines For The Preparation Of Barbados' Initial Communication Under The Framework Convention On Climate Change

At the second meeting of the Conference of the Parties (COP 2) to the Framework Convention Climate Change (FCCC), a decision was adopted on "Communications from Parties not included in Annex I: Guidelines, Facilitation and Process for Consideration".

This decision was intended to allow non Annex I parties to meet their commitments under Article 12.1 of the FCCC.

Barbados is presently participating in the Global Environmental Facility (GEF) funded project; Caribbean Planning to Adaptation to Climate Change (CPACC), which is being implemented by the World Bank, with the Organisation of American States being the executing Agency. Unfortunately the decision made at COP 2 has not been incorporated in the National Communications component of CPACC. The consequence is that the National Communication component has been removed from the CPACC project.

In this regard, Barbados is therefore requesting GEF funding through UNDP-GEF, to meet the costs of implementing the new guidelines agreed to at COP 2.

The Ministry looks forward to your response as soon as possible.

Yours faithfully,

A. Haynes
A. HAYNES
Permanent Secretary
(Environment)

AH:cb

**UNITED NATIONS DEVELOPMENT PROGRAMME
GLOBAL ENVIRONMENT FACILITY**

Proposal for Review

Country	Barbados
Project Title	Enabling Barbados to Prepare its First National Communication in Response to its Commitments to the UNFCCC
GEF Focal Area	Climate Change
Country Eligibility:	[x] Eligible under financial mechanism of the UNFCCC [] Eligible under paragraph 9 (b) of the Instrument
Date of Ratification:	March 23, 1994
Total Costs:	US \$ 189,417
GEF Financing:	US \$ 189,417
Counterpart Financing:	n. a.
GEF Implementing Agency:	UNDP
Executing Agency:	The Government of Barbados
Local Counterpart Agency:	Ministry of Health and Environment
Estimated Starting Date:	1 December 1997
Project Duration:	18 months

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.

BACKGROUND AND PROJECT CONTEXT

Barbados is the easternmost island of the Caribbean, located northeast of Venezuela. It has a total land area of 430 square kilometers, with 97 km of coastline. The country maintains an exclusive economic zone of 200 nautical miles (nm) and a territorial sea of 12 nm surrounding the country.

Although the island's terrain is relatively flat, there is a central highland region that reaches 360 m above sea level. 42% of Barbados' total land area (18,000 hectares) is under cultivation, although 77% of its surface is arable. Approximately 67% of cultivated land is dedicated to sugar cane, with pastures on approximately 9%. The remainder is dedicated to cut-flowers, vegetables, fruit, and cotton. Forests and woodlands accounts for less than 1% of the surface area.

ENVIRONMENT

Barbados is located in the tropics, with a rainy season that lasts from June through October. Primary environmental concerns include pollution of coastal waters from waste disposal by ships and surface runoff, soil erosion, and illegal solid waste disposal which threatens contamination of aquifers. As with other Caribbean nations, the principal natural hazard is the potential occurrence of hurricanes (especially June to October) and other severe weather.

THE PEOPLE

As of 1995, Barbados had a population of approximately 264,000 people, with the following age structure:

Table 1: Demographics

Age Group	%	Female	Male
0-14	24%	30,175	31,507
15-64	66%	86,103	82,727
65 +	10%	15,849	10,034
1995 estimate			

The population growth rate is less than 1% (0.24%), with a birth rate of 13.1 births/1,000 population. There is a net migration of -4.82 migrant(s)/1,000 people. Average life expectancy at birth is 75.7 years with males and females averaging 71.47 and 77.06 years, respectively.

Barbados is ranked 25 on the Human Development Index (highest in the LAC region) with an adult literacy rate of 97.1, and an adjusted real GDP per capita of US\$ 10,570. The labor force comprises 51% of total population with 7% in agriculture, 23 % in industry and 70 % in services.

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

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

THE ECONOMY

Gross Domestic Product in 1994 was US\$2.4 billion, with a real annual growth rate of 3%. Historically, Barbados' economy was based on the cultivation of sugarcane. In recent years, however, the economy has diversified into manufacturing and tourism. Nevertheless, the unemployment rate is estimated at 16%. A moderate recovery that began in late 1993 after 3 years of contraction is mainly due to increased tourism and expansion in the construction sector. Economic prospects for the coming years depend primarily on continued growth in the industrialized countries, especially Europe, which would spur further expansion in tourism.

In 1993, the country exported \$323 million in sugar and molasses, rum, other foods and beverages, chemicals, electrical components and clothing. Its main trade partners are: US 13%, UK 10%, Trinidad and Tobago 9%, and Windward Islands 8%. Barbadians imported \$1541.8 million in commodities, consumer goods, machinery, foodstuffs, construction materials, chemicals, fuel and electrical components. Import partners include US 36%, UK 11%, Trinidad and Tobago 11%, Japan 3%.

THE TRANSPORTATION SECTOR

A network of 1,570 km paved roads, 1,475 km unpaved and 95 km of gravel and earth serves surface transportation in Barbados. Although a railroad line once ran along the east coast, no rail service is available today. The primary port for maritime services is located in Bridgetown. The country maintains a ship registry. An international airport serves the country's aviation needs.

THE ENERGY SECTOR

Barbados currently produces oil and gas through Barbados National Oil Company Ltd (BNOCL), a Barbadian-owned company acquired from Mobil in 1983. The government holds 75% of the stock while the National Petroleum Corporation (NPC) - a publicly owned company - holds the remaining 25%. NPC distributes and sells natural gas to domestic, commercial and industrial users. Approximately 24% of national fossil fuel requirements are met through these local oil concerns.

The rest of fossil fuel requirements are met through imports from four companies engaged in marketing of petroleum products: Texaco; Esso Standard Oil; Shell Antilles and Guyana Ltd; and National Petroleum of Trinidad and Tobago. Mobil Oil Barbados owns a 5,000 bpd refinery in operation which distributes petroleum products.

The Barbados Light & Power has an installed capacity of 165 Megawatts in thermal electric power plants, with sales of approximately 591 Gwh in 1996. The per capita consumption of electricity is approximately 2,300 kWh/yr.

reflected in the proposal. The project recognizes the importance of exchange of information and experience at the national level, as well as regionally and internationally.

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 regional and local experts whenever possible.

PROJECT FINANCING AND BUDGET

As an enabling activity related to the communication obligations of Barbados 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 II.

Since the main focus of the work is the production of the inventory and the preparation of the national communication, most of the resources are allocated to those items. No funds are required for vulnerability or adaptation studies because these are already covered under the CPACC project.

INSTITUTIONAL FRAMEWORK AND PROJECT IMPLEMENTATION

The Executing Agency of the project will be the Environment Division of the Ministry of Health and Environment. The Project Steering Committee will be charged with overseeing and advising 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 Barbados, both through the Project Steering Committee and between research teams in order to enable effective information exchange between projects and full utilization of their results.

Regarding international collaboration, working links with relevant regional and international expert institutions will be created, and IPCC and UNEP, among others, 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 such as CC: TRAIN and the US Country Study Program to avoid duplication of efforts. As a means of identifying and disseminating information, the project will utilize, to the extent feasible, electronic networks such as the 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 by an expert with experience in these types of projects. The purpose of the review is to identify in the early stage of the project eventual gaps, overlaps and other risks to successful implementation, as well as to identify potential partners and sources of information which the project could benefit from.

INDUSTRY, LAND USE, FORESTRY AND AGRICULTURE

Barbados exploits petroleum, fishing, and natural gas. The country encourages investors to establish manufacturing concerns within the country. Barbados' industrial sector contributes 10% of total GDP. It produces bottled beverages, basic processed food products and sugar.

With extensive human settlement and agricultural use, the country has limited forest cover. Sugar cane is the principal export crop, requiring 12,000 hectares of arable land. In spite of its historical relevance, agriculture only accounts for 7% of GDP. The country is not self-sufficient in food production.

PROJECTS RELATED TO CLIMATE CHANGE

The Government of Barbados has signed a contract with CONOCO oil company for offshore oil and gas exploration along the northeastern coast of the country. The agreement, signed on September 1996, establishes the terms of exploration and production of fossil fuel. The Government is also contemplating increased its land production of oil and gas. The Energy Division of the Ministry of Economic Affairs manages the contract.

The Inter-American Development Bank is funding a sanitary landfill expected to serve Barbados for 25 years. Construction started during the last quarter of 1996. The project will be built in stages. Methane recovery is being considered as part of the project.

The Government of Barbados instituted a solar water heater initiative in 1974. This program included tax incentives, financial mechanisms and technical assistance to promote solar units. Currently four companies produce the units, which are also exported to countries in the region. This program is considered successful and has received widespread support from the users.

An experimental wind turbine was erected in the 1980's in St. Lucy (the northern parish of Barbados), but this is no longer operational. The Government of Barbados and Barbados Light and Power are looking at renewable forms of energy. An island wide air quality network will hopefully be launched soon.

The Coastal Zone Mangement Unit of the Ministry of Environment has been participating in the GLOSS program and contributing to the tidal level monitoring data to the PSML since 1992. Dr. Leonard Nurse of the Coastal Zone Mangement Unit is a member and a lead author for the International Panel on Climate Change (IPCC).

CIACC?

LEGISLATION

The Ministry of Health and Environment is currently preparing an inventory of all legislation which relates to environmental matters. Many aspects regarding environmental quality have become

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

RATIONALE FOR GEF SUPPORT

The project is consistent with the GEF Operational Strategy and the GEF Operational Criteria for Enabling Activities in providing 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 Barbados to prepare its first national communication to the CoP.

This proposal covers activities required in the initial communication. This includes: the inventory, mitigation analysis, policy issues related to climate change and the production of the initial communication itself. This proposal undertakes tasks which have not been included in the regional GEF funded, *Caribbean: Planning for Adaptation to Global Climate Change (CPACC)*, which emphasizes vulnerability and adaptation issues and has a four-year time frame. This complementary project is scheduled to start in the first quarter of 1997. Early results from policy issues derived from the CPACC project will be included in the national communication to the UNFCCC.

SUSTAINABILITY AND PARTICIPATION

The Government of Barbados fully supports the objectives of this Project and gives a very 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 local technical work and other in kind contributions such as office costs and limited project support staff.

To ensure wide participation, a Project Steering Committee will be established on the basis of the existing National Climate Change Committee with representatives from government, private development organizations and the business sectors listed in Table 2 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. Also, as already mentioned, specific attention will be paid to the dissemination of, and public access to the available information.

LESSONS LEARNED

The importance of involvement and cooperation of all the relevant stakeholders including key government ministries, NGOs, academic institutions and private sector has been noted and duly

regulated. As time has progressed, the body of law has become more complex and less integrated. A compendium of the legislation will be complete by the time this project is scheduled to begin.

NATIONAL INSTITUTIONS DEALING WITH CLIMATE CHANGE RELATED ISSUES

In response to the importance of climate change-related issues in Barbados, the country has undertaken several initiatives, described below. The broad scope of the implications of climate change have also brought together representatives from all sectors of society. Table 2 provides an overview of the institutions and contact persons engaged or contributing to the country's climate change studies.

Table 2: Organizations Working in Climate Change Related Activities

Stakeholder Sector	Name	Resource Person
Private Business & Industry	Barbados Chamber of Commerce and Industry	Mr. Rolph Jordan
NGO	Future Center Trust	Dr. Colin Hudson
Sugar Industry	BADMC Barbados Agric Mgt Co	Dr. Atlee Brathwaite
University	CERMES Center for Env Resource Mgt Studies, UWI	Prof Oliver O. Headley
Agriculture/Forestry	Ministry of Agriculture and Rural Development	Permanent Secretary
Energy	Min of Econ Affairs, Energy Division	Permanent Secretary
GEF Political Focal Point	MFA Min of Foreign Affairs	Permanent Secretary
Climate Change Focal Point	MHE(E) Environment Div, Ministry of Health and Env	Permanent Secretary
Industrial Sector, Government	MIC Min of Industry and Commerce	Permanent Secretary
Meteorological Institute	MARD Barbados Meteorological Service, Min. of Agri. Caribbean Meteorological Institute	Permanent Secretary Dr. Colin Depradine
Power Company	BL&P Barbados Light and Power	Mr. Frank McConney
Engineering Association	BAPE Barbados Assoc of Professional Engineers	
Manufacturing Sector	BMA Barbados Manufacturers Assoc	Mr. Clifton Maynard
Environmental Engineering	EED Ministry of Health	Mr. Jeff Headley
Coastal Zone Management Unit	CZMU Ministry of Environment	Dr. Leonard Nurse

MEASURES UNDERTAKEN

Recognizing the potentially high impact that climate change may generate on small island states such as Barbados, the country has undertaken the following steps:

- Barbados ratified the UNFCCC on March 24, 1994.
- Representatives from Barbados are participating in CoP meetings as well as local and regional meetings which address climate change in its agenda.

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) programmes containing measures the Party believes contribute to addressing climate change and its adverse impacts, including the abatement of increases in greenhouse gas emissions and enhancement of removals by sinks.

7. Integrate and coordinate the production of the Initial Communication with the CPACC project. Both efforts respond to national priorities, and will be carried out by similar institutions and technicians. These will organize and undertake a study of the impacts of climate change and adaptation to it with respect to the specific geographical and climatological characteristics of Barbados. This study will build on ongoing or finalized national and international studies, and will use, as appropriate, existing methodologies and "tools", and results of other ongoing studies. Barbados is not requesting funds from UNDP / GEF for vulnerability and adaptation issues.
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 Barbados to the Conference of the Parties.

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 taken. For instance, the mitigation analysis will build on the results of the inventory. Any mitigation plan will build on the results of the mitigation analysis. Adaptation considerations will build on early results of the vulnerability assessments from the CPACC project.

- Barbados is one of the eleven countries participating in the regional project entitled *Caribbean Planning for Adaptation to Global Climate Change (CPACC)*. This initiative is funded by the Global Environment Facility. Early results from this project will be inserted in the Initial National Communication on Climate Change.
- Barbados has assigned staff and resources from the Environment Division, Ministry of Health and Environment to implement the Climate Change Work Programme for 1997.

PROJECT OBJECTIVES

The immediate objective of this project is to facilitate the preparation of the first national communication of Barbados to the Conference of the Parties (CoP) in accordance with 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 Barbados, thus enabling the country to take those issues into account in general planning and strategy formulation for different economic and technical sectors, and also to strengthen its role in international scientific forums and negotiation processes related to climate change. A part of this task is to facilitate dialogue, information exchange and cooperation among all relevant players in the field including governmental, non-governmental, academic, private and "grassroots" sectors.

The project will strengthen an existing institutional framework, and build endogenous capacity, thereby preparing the 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 project preparation, the following components were 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 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 successful implementation of the project. The Steering Committee will identify and hire a project assistant/manager to serve on a part time basis. Discussions are underway to establish terms

- of collaboration with neighboring countries to address the management of this initiative as a regional effort.
2. Generate a project time line describing all of the 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 has been 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 also after the project, thus permitting interested parties in Barbados to learn about other national or international activities, and also allowing interested individuals and institutions outside Barbados to get information on ongoing, planned or finalized climate change-related activities in Barbados. In this context, the project will cooperate with the UNFCCC Secretariat's CC: INFO/Web initiative.
 4. Provide information on national circumstances.
 5. Facilitate and undertake a national inventory of anthropogenic emissions by sources and removals by sinks of the following greenhouse gases: carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), to the extent the Party's capacities permit (Other greenhouse gases may be included at the discretion of the Parties). 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 the Party to implement the Convention including, as appropriate: (i) programmes 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 the aim of integrating climate