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Report No: 24911

IMPLEMENTATION COMPLETION REPORT  
(TF-28452)

ON

GRANTS

IN THE AMOUNT OF SDR 4.66 million

TO THE

General Secretariat of the Organization of American States  
acting on behalf of the CARICOM parties to the Climate Change Convention (Governments of St. Lucia;  
Barbados; Bahamas; Dominica; Antigua and Barbuda; St. Kitts and Nevis; St. Vincent and the  
Grenadines; Grenada; Jamaica; Trinidad and Tobago; Guyana; and Belize)

FOR A

Planning for Adaptation to Global Climate Change Project (GEF)

08/22/2002

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective 06/01/02)

Currency Unit = Special Drawing Rights

1.29 = US\$ 1

US\$ 0.77 = 1 SDR

## FISCAL YEAR

Approved FY1997 Closed FY2002

## ABBREVIATIONS AND ACRONYMS

ACCC:	Adaptation to Caribbean Climate Change Project
CARICOM:	Caribbean Community
CAS:	Country Assistance Strategy
CC:	Climate Change
CCCCC:	Caribbean Community Climate Change Center
CIDA:	Canadian International Development Agency
CMIH:	Caribbean Institute for Meteorology and Hydrology
COP:	United Nations Framework Convention on Climate Change Conference of Parties
CPACC:	Caribbean Planning for Adaptation to Climate Change Project
CRIS:	Coastal Resources Inventory System\
FNC:	First National Communication
GCC:	Global Climate Change
GCOS:	Global Climate Observing System
GEF:	Global Environment Facility
GEFSEC:	Global Environment Facility Secretariat
GIS:	Geographic Information System
ICR:	Implementation Completion Report
IPCC:	Intergovernmental Panel on Climate Change
ICZM:	Integrated Coastal Zone Management
MACC:	Mainstreaming Adaptation to Climate Change Project
MTR:	Mid Term Review
NICU:	National Implementation Coordinating Unit
NFP:	National Focal Point
OAS:	Organization of American States
PAC:	Project Advisory Committee
PSR:	Project Status Report
RAC:	Regional Archiving Centre
RPIU:	Regional Project Implementation Unit
SDR:	Special Drawing Rights
SIDS:	Small Island Developing States
SVG:	St. Vincent and the Grenadines
UNFCCC:	United Nations Framework Convention on Climate Change
UNDP:	United Nations Development Program
UWI:	University of the West Indies
UWICED:	University of the West Indies Centre for Environment and Development

Vice President:	David de Ferranti
Country Manager/Director:	Orsalia Kalantzopoulos
Sector Manager/Director:	John Redwood
Task Team Leader/Task Manager:	Walter Vergara

**CARIBBEAN**  
**Planning for Adaptation to Global Climate Change Project (GEF)**

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<i>Project ID:</i> P040739	<i>Project Name:</i> Planning for Adaptation to Global Climate Change Project (GEF)
<i>Team Leader:</i> Walter Vergara	<i>TL Unit:</i> LCSSEN
<i>ICR Type:</i> Intensive Learning Model (ILM) of ICR	<i>Report Date:</i> October 1, 2002

## 1. Project Data

*Name:* Planning for Adaptation to Global Climate Change Project (GEF) *L/C/TF Number:* TF-28452

*Country/Department:* CARIBBEAN

*Region:* Latin America and Caribbean Region

*Sector/subsector:* Central government administration (100%)

### KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 11/06/1995	<i>Effective:</i> 04/30/1997	04/11/1997
<i>Appraisal:</i> 05/28/1996	<i>MTR:</i> 04/30/1999	09/17/1999
<i>Approval:</i> 03/04/1997	<i>Closing:</i> 12/31/2001	03/29/2002

*Borrower/Implementing Agency:* GOVT OF ALL CARICOM PARTIES/ORGANIZATION OF AMERICAN STATES

*Other Partners:*

STAFF	Current	At Appraisal
<i>Vice President:</i>	David de Ferranti	Gobind Nankani (acting)
<i>Country Manager:</i>	Orsalia Kalantzopoulos	Paul Isenman
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## 2. Principal Performance Ratings

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

*Outcome:* S

*Sustainability:* L

*Institutional Development Impact:* SU

*Bank Performance:* S

*Borrower Performance:* S

QAG (if available)

ICR

*Quality at Entry:*

S

*Project at Risk at Any Time:* No

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

### 3.1 Original Objective:

The project's overall objective was to support countries in the Caribbean in preparing to cope with the adverse effects of global climate change (GCC), particularly sea level rise in coastal and marine areas through vulnerability

assessment, adaptation planning and capacity building linked to adaptation planning. More specifically, the project was intended to assist national governments and the University of the West Indies Center for Environment and Development (UWICED) in: (i) strengthening regional capacity for monitoring and analyzing climate and sea level dynamics and trends, seeking to determine the immediate and potential impacts of GCC; (ii) identifying areas particularly vulnerable to the adverse effects of climate change and sea level rise; (iii) developing an integrated management and planning framework for cost-effective response and adaptation to the impacts of GCC on coastal and marine areas; (iv) enhancing regional and national capabilities for preparing for the advent of GCC through institutional strengthening and human resources development; and (v) identifying and assessing policy options and instruments to help initiate the implementation of a long-term program of adaptation to GCC in vulnerable coastal areas.

These objectives reflected the needs of the region in the climate change agenda and were relevant throughout the lifetime of the project. They were consistent with government priorities as the project was initiated by CARICOM countries as part of the Barbados Program of Action, and were developed through extensive consultation. They were consistent with CAS goals and responsively addressed the requirements for UNFCCC Stage I Adaptation activities.

The original objectives should be considered in the context of the conditions at appraisal, which included: (i) a region particularly vulnerable to the effects of climate change, especially sea level rise; (ii) weak institutional capacity in environment and very little exposure to climate change issues; (iii) political championing of the climate change agenda at the regional level with limited reach at the national level; (iv) limited environmental data in the region; (v) limited long term environmental planning and environmental policies; and (vi) the need to respond to the United Nations Framework Convention on Climate Change vision of Stage I Adaptation activities<sup>1</sup>.

### *3.2 Revised Objective:*

The original objective was not modified.

### *3.3 Original Components:*

The project was executed through the cooperative effort of all participating countries (St. Lucia; Barbados; Bahamas; Dominica; Antigua and Barbuda; St. Kitts and Nevis; St. Vincent and the Grenadines; Grenada; Jamaica; Trinidad and Tobago; Guyana; and Belize) using a combination of national pilot/demonstration actions and regional training and technology transfer. At appraisal there were four components for regional activities, four components for national pilot-based activities and two project management activities. These are described in the following pages (allocations reflect US\$ at appraisal).

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<sup>1</sup> The UNFCCC describes a Stage I Adaptation activity as planning, including studies of possible impacts of climate change to identify particularly vulnerable countries or regions and policy options for adaptation and appropriate capacity building. Stage II activities include medium-term measures that would enable particularly vulnerable countries or regions to develop policy options for adaptation, as well as further appropriate capacity-building which may be taken to prepare for adaptation.

## **Regional Components**

### **(1) Design and Establishment of Sea Level/Climate Monitoring Network (US\$823,900)**

The purpose of this component was to set up a sea level/sea surface temperature climate monitoring network, including 18 monitoring stations. This component envisioned the Caribbean Meteorological Institute (later renamed the Caribbean Institute for Meteorology and Hydrology) as the lead regional agency to serve as a Regional Archiving Center for oversight and maintenance of the network in coordination with local governments. A Tidal Gauge Replacement Fund was also to be established under this component (US\$50,000) as an earmarked account within CMI/CIMH for the maintenance and replacement, as needed, of the tidal gauges. Supplementary funding was to be provided through the collection of data user fees and other related contributions.

### **(2) Establishment of Databases and Information Systems (US\$392,000)**

This component was designed to set up an information system and support project training to allow key regional and national institutions to acquire, analyze, store and disseminate data on climate change and on the project activities.

(3) Inventory of Coastal Resources and Use (US\$690,100)

The objective of this component was to contribute to the development of each participating country's inventory of coastal resources so as to provide the necessary baseline data for the execution of other project activities. All participating countries would acquire Geographic Information System (GIS) capability and capacity for data compilation. A regional training course was envisioned to build capacity for preparation of resource inventories.

(4) Formulation of a Policy Framework for Integrated Coastal and Marine Management (US\$299,700)

This component was designed to support the development of a generic policy framework for the preparation of Integrated Coastal Zone Management (ICZM) legislation throughout the region. The generic framework was to be supplemented by consultations to assist in adapting the framework to meet specific country needs. Also, a public awareness and education program would be conducted.

**National Pilot Components**

(5) Coral Reef Monitoring for Climate Change (US\$405,900)

This component was designed to establish a long-term coral reef monitoring program in three countries (Bahamas, Belize and Jamaica) that, over time, would show the effects of global warming factors (increase in sea surface temperature, sea level rise, hurricanes and other factors such as irradiance) on coral reefs. The component included regional training and dissemination activities.

(6) Coastal Vulnerability and Risk Assessment (US\$433,400)

Under this component, three countries (Barbados, Grenada and Guyana) would participate in the development of vulnerability and risk assessments for their coastal areas. The preparation of the assessments would be supported by training, manual production and a public education program. A regional workshop to disseminate the results of the three case studies was also planned.

(7) Economic Valuation of Coastal and Marine Resources (US\$312,300)

This component included the design and implementation of pilot studies in Dominica, St. Lucia and Trinidad and Tobago on the economic valuation of resources in selected coastal ecosystems at risk from sea level rise. The pilot studies were designed to illustrate the use of valuation data in policy and decision making. The component also included a regional capacity building and dissemination program.

(8) Formulation of Economic/Regulatory Proposals (US\$189,000)

This component included pilot studies in Antigua and Barbuda; and St. Kitts and Nevis to demonstrate the design and use of economic, financial and regulatory approaches to environmental protection in response to threats from sea level rise. The component also included training and dissemination activities for the development of a region-wide policy framework.

**Project Management Activities**

(a) Regional Project Implementation and Capacity Building (US\$2,037,700)

The project provided resources to support a Regional Project Implementation Unit (RPIU), designed to be established under UWICED, which was to be responsible for day to day management and coordination of all project regional and pilot activities; technical management and execution of specific project components; and financial administration. The RPIU was established as a regional office for the project under the aegis of the executing agency, the Organization of American States (OAS). National implementation was done by National Implementation Coordinating Units (NICUs) with cross-sectoral coordination by the National Focal Points (NFPs). A Project Advisory Committee (PAC) chaired by a CARICOM representative was also established to provide policy guidance, review implementation plans and evaluate project results. The project funded the RPIU, including

salaries of the core staff, technical assistance, operating costs and training for the RPIU/UWICED staff, as well as selected expenses of the PAC and the NICUs.

(b) Executing Agency Costs (estimated at US\$670,000)

The OAS, through its Unit of Sustainable Development and Environment, would execute the project under the supervision of the World Bank, and be responsible for the overall project management and technical supervision, and for funding the RPIU with the grant from the GEF Trust Fund. The project would fund technical supervision (salary of technical coordinator, administrative support, travel and communications), disbursement/transaction functions and management oversight.

The components were directly linked to the stated objectives. They accounted for the limited capacity in the region by using a regional implementation unit that would coordinate activities and capacity building at the regional and national levels. The components focused on the priority issues of planning, data collection, vulnerability assessment and policy development, and provided national pilots to pursue approaches that could be scaled up or replicated within the region. While the amount of components increased the complexity, this comprehensive approach was justified as the project needed to address a complex, broad reaching issue. The components were designed to allow cross-fertilization of activities and this was enhanced by the flexible approach taken to implementation through the RPIU.

*3.4 Revised Components:*

During implementation, the project design underwent three significant modifications with one necessitating Board approval. The modifications were:

(a) Addition of Component 9: A new Component 9 (add-on GEF Climate Change Enabling Activity for St. Vincent and the Grenadines) was designed after the project was initiated and was approved by the Bank Board in July 1998 as an amendment. Originally, St. Vincent and the Grenadines (SVG) was not eligible to join the project at its inception because it had not yet signed the UNFCCC; however, it signed the Convention after the project began and then requested to join the project. To accommodate this request, additional money was made available to allow SVG to participate fully in the regional components (including the location of a monitoring station in SVG) and for completion of their First National Communication to the UNFCCC. This component represented an exception to the region's policy of developing the communications to the UNFCCC through the UNDP. The component was entitled Greenhouse Gas Inventory/Agriculture and Water Resources Vulnerability Assessment (pilot- St. Vincent and the Grenadines) and was allocated an equivalent of US\$350,000 at the time of the amendment. Its focus was the production of the First National Communication, including a national greenhouse gas inventory, vulnerability assessment and plans for adaptation. This was supported by technical assistance, training and national workshops and funding for activities that allowed SVG to participate in the other components.

(b) Modification to Component 3: There was a shift in focus of this component from providing baseline data for use by other components, to developing a Coastal Resources Inventory System (CRIS) and to facilitating country access to GIS and other monitoring data for decision making. The reason for this modification was the realization of the enabling need to develop the information management tools prior to any other work in this area.

(b) Modification to Component 4: The focus of Component 4 was revised with resulting modifications to the outputs and a change in the title from "Formulation of a Policy Framework for Integrated Coastal Zone and Marine Management" to "Policy Framework for Integrated Adaptation Planning and Management." This was done in the Spring of 2001 as a result of the assessment made by the Bank as part of the mid-term review. As implied in the new title, the focus of the component changed from integrated coastal zone management to adaptation planning. The reason was that the proposed work on integrated coastal zone management had, for the most part, been completed by the countries on their own and in parallel during the initial period of the project and therefore, no additional funds were required for this task. The outputs of the revised component are shown in Annex 1.

*3.5 Quality at Entry:*

Overall, quality at entry was **satisfactory**. Many aspects were highly satisfactory and proved crucial to the success

of this complex regional project.

Project preparation and design was outstanding in several ways; the most important design aspects were that the project:

(i) Developed ownership among participating institutions. The project was born and prepared with significant participation of CARICOM countries. This provided strong project ownership at the regional level and the necessary engagement at the national level to build capacity and implement the pilots.

(ii) Was thoroughly prepared, recognizing most issues and assessing them through studies, consultations and technical reviews. This resulted in well-developed components and a workable institutional framework.

(iii) Was well harmonized with government priorities. The project design was consistent with the CASs of the countries involved<sup>2</sup>, which included objectives relating to strengthening of the public sector and improved environmental management. The project's consultation process was also effective in ensuring that the project design was well harmonized with government strategies. Additionally, the preparation of the First National Communications under separate funding but in parallel with the project provided a mechanism to harmonize national priorities with the CC agenda supported by the project.

(iv) Most importantly, project preparation served as a forum for a wide discussion on adaptation issues, which, in many ways, anticipated decisions taken at the Conference of Parties of the UNFCCC. CPACC was the first ever regional project on adaptation to be funded as an enabling activity through the UNFCCC financing mechanism (GEF).

A few aspects of project design were not fully satisfactory. Specifically, the project: (i) failed to adequately account for limited execution capacity, which led to project delays; (ii) provided inadequate cost contingencies (less than 10%), given the lack of capacity in the region, project complexity and potential for currency fluctuations. (iii) did not recognize the challenge of setting up the RPIU and the limitations of using UWI as the host, insofar as the time needed for staffing and the incompatibilities of operating a project management unit in an existing institution with a research and teaching mandate were not recognized; (iv) failed to take into account the progress being made on coastal zone management and therefore did not adjust the scope of the related component at the time of approval.

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<sup>2</sup> CASs effective at project appraisal included: Organization of Eastern Caribbean States (April 1995); Trinidad and Tobago (March 1995); Belize (November 1993); Guyana (December 1993); Jamaica (March 1993). Barbados and Bahamas did not have CASs.

## **4. Achievement of Objective and Outputs**

### **4.1 Outcome/achievement of objective:**

As a Stage I Adaptation activity, the overall objective of the project was to support Caribbean countries in preparing to cope with the adverse effects of GCC, particularly sea level rise in coastal and marine areas through vulnerability assessment, adaptation planning and capacity building linked to adaptation planning. This objective was achieved **satisfactorily** based on the outcomes of the project (shown in table on following page), the ratings of the sub-objectives (shown below), the indicators of project impact (Annex I) and the results of the Stakeholder Workshop (see text after table and Annex 9). Most importantly, the CPACC project is the first adaptation stage I project successfully completed through the Bank (as part of the enabling activities of the GEF) and as such provides important insights into the challenges arising from adaptation needs. The importance of adaptation initiatives in the region has been further highlighted by recent statements at the Convention identifying island states as among the most vulnerable to the impacts of climate change and emphasizing the need for adaptation as a major thrust of activities under the convention.

Sub-objective (i): Strengthening the regional capacity for monitoring and analyzing climate and sea-level dynamics and trends The achievement of this sub-objective was rated **moderately satisfactory** insofar as a sea level /climate monitoring network was established and the data produced has been used in at least five studies in



the region. The key achievement is to have gone from zero capabilities and installed capacity to a network that today delivers data to the region. Also, for the first time, the region is contributing to the global monitoring effort by making data available to the Global Climate Observing System (GCOS). Additionally, Component 5, which focused on monitoring the effects of climate on coral reefs, is regularly reporting data from three countries. On the other hand, close to half of all the stations have had maintenance problems and their availability online is less than the minimum required. The sporadic availability of data from the sea level/climate monitoring stations in certain countries and the lack of counterpart resources to ensure routine operation for some stations reduced the amount of data available but did not prevent achievement of the sub-objective. Further, the regional archiving center has been established and is now operational. Important improvements are, however, required in the overall maintenance and upkeep of the network to ensure the full realization of its intended capabilities. Any future activities with the network require strong commitments from all participating countries to ensure the availability of all stations.

Sub-objective (ii): Identifying areas particularly vulnerable to the adverse effects of CC and sea-level rise. This sub-objective was achieved, but not as well as the project had envisioned and therefore is rated **moderately satisfactory**. Vulnerabilities were identified as part of the adaptation planning undertaken in Component 4 and in the pilot countries under Component 6. The information developed was also helpful in the preparation of the First National Communications in several of the participating countries and has been referenced in those Communications. However, the assessments were not done at the level of detail envisioned under the project due to the delay in implementation of Component 3 and limitations in data in the region.

Sub-objective (iii): Developing an integrated planning framework for cost-effective response and adaptation to the impacts of GCC. This sub-objective is rated **satisfactory**. The planning infrastructure was set up in all countries (focal agencies were identified to deal with planning for climate change issues in all participating countries) through Components 3 and 4, and planning based on vulnerability assessments was undertaken in three countries under Component 6. While it is not technically the focus of a Stage I activity such as CPACC, it should be noted that the established framework for management and planning has yet to have a significant impact on policy and will need to be better streamlined with government processes.

Sub-objective (iv): Enhancing regional and national capabilities for preparing for the advent of GCC through institutional strengthening and human resource development. This sub-objective was achieved with the greatest success and was rated **highly satisfactory**. The rating reflects the fact that at start-up of the project, little institutional capacity on climate change was available. The expectations were low. The project created an institutional framework and capacity at the national and regional level for adaptation to climate change (see institutional development impact: for example National Focal Points were organized in all participating countries and National Climate Change Committees were established in most, providing the basis for future institutional work. While through these institutions, the basic institutional capacity at a National level has been established, much work remains to be done ). The RPIU catalyzed the establishment of a regional network of institutions and individuals working on a coordinated manner on climate change. The only shortcoming was that the budget cuts reduced the impact marginally due to the cancellation of the final regional workshop for dissemination of the results of the pilot components. However, the network of NICUs and NFPs was effectively used to compensate for the absence of workshops and most of the information and feedbacks were shared electronically and at several meetings during the life of the project.

Sub-objective (v): Identifying and assessing policy options and instruments to help initiate the implementation of a long term program of adaptation to GCC in vulnerable coastal areas. The achievement of this sub-objective was rated **satisfactory**, as Component 4 was able to assess and identify policy options for all participating countries (issues papers were prepared in all countries that identified key policy aspects, and Components 7 and 8 made additional progress by assessing regulatory and economic instruments in pilot countries). Although the options are not in all cases immediately applicable to government programs, it has, as envisioned under the project and as a Stage I activity(\*), provided the basis for implementation of a long-term program.

(\*) A decision of the 1st UNFCCC COP (1995, Berlin) said the following in its decision (11/CP.1) regarding

guidance to GEF:

"1(d) Regarding adaptation, the following policies, program priorities and eligibility criteria should apply:

i) Adaptation to the adverse effects of climate change, as defined by the Convention, will require short, medium and long-term strategies which should be cost effective, take into account important socio-economic implications, and should be implemented on a stage by stage basis in developing countries that are parties to the convention. In the short term, the following stage is envisaged:

Stage I: Planning, which includes studies of possible impacts of climate change, to identify particularly vulnerable countries or regions and policy options for adaptation and appropriate capacity-building;

(ii) In the medium and long term, the following stages are envisaged for the particularly vulnerable countries or regions identified in Stage I:

Stage II: Measures, including further capacity-building, which may be taken to prepare for adaptation, as envisaged by Article 4.1

Stage III: Measures to facilitate adequate adaptation, including insurance, and other adaptation measures as envisaged by Article 4.1(b) and Article 4.4"

*Article 4.1 of the UNFCCC characterizes what adaptation measures may consist of by stating that all parties shall "cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods.";*

*Article 4.1 (b) requires all Parties to: "Formulate, implement, publish and update national, and as appropriate, regional, programs containing measures (...) to facilitate adequate adaptation to climate change."*

*For developing countries that are particularly vulnerable, Article 4.4 provides that Annex II Parties shall "assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.";*

Stage I focuses on activities that can be undertaken in the short term, namely "planning", which includes studies of possible climate change impacts in order to identify particularly vulnerable countries or regions and policy options for adaptation and appropriate capacity-building. Stage II has a longer term horizon and focuses on measures, including further capacity-building, which may be taken to prepare for adaptation in particularly vulnerable countries or regions identified in Stage I. Finally, Stage III includes measures to facilitate adequate adaptation, including insurance, but does not encompass investments in concrete measures.

### Summary of Project Outcomes

Project Sub-objective	(i): Strengthening monitoring and analysis of climate and sea level trends.	(ii): Identifying vulnerable areas.	(iii): Developing an integrated management and planning framework.	(iv) Enhancing regional and national capacities.	(v): Identifying and assessing policy options and instruments.
Component					
C1: Climate Change Mon. Network	Monitoring established in region and undertaken regularly with the data being used in global networks and in over 5 projects in region. Lack of a workable mechanism to	Baseline data for evaluating future vulnerabilities has been and continues to be generated.	Protocols for management of the stations and for the archiving of data for common planning purposes were established and have been recognized by GCOS.	RAC established and functioning. Training of responsible national agencies, with approximately half demonstrating capacity through proper operation and maintenance.	Not applicable

	ensure operation and maintenance limited network to approximately 9-12 consistent and reliable stations.				
C2: Databases and information systems	Data collection supported by computer network.	Not applicable	Data has contributed to various aspects of integrated planning.	Regional website and CC internet network established and active. The website has been instrumental in disseminating information on project outputs and maintaining an active stakeholder network based on the NFPs and NICUS.	Not applicable
C3: Inv of coastal Resources	Not applicable	Data has contributed to the identification of vulnerable areas.	Tools for inventory of coastal resources were developed (CRIS) and have been demonstrated in most countries and used extensively in the actual inventory in 1 country.	Active network of GIS users established. Qualified govt staff in each country. Regional institution and some national govts have advanced expertise and now providing training.	Not applicable
C4: Policy Framework for Adaptation planning	Not applicable	Identified key issues based on existing studies and consultation process	Developed approaches and methods to look systematically at policy making from an adaptation to climate change perspective. Contributed to the development of institutional capacity at key sector agencies in all countries (through the engagement of the NICUS and NFPs)	Methods for addressing multi-sector CC planning were developed. Establishment of national climate change committees that are trained in CC planning with demonstration of capacity through completed plans.	Background material developed, in the form of country-based issues papers, that can be used as an initial basis for developing a long-term program of adaptation of climate change.
C5: Coral Reef Monitoring for CC	Monitoring established and undertaken regularly in 3 countries and a total of 11 sites.	Baseline data for evaluating future vulnerabilities.	Developed protocols for coral data (bleaching and coral cover) as a tool for regional planning.	Methodologies developed and qualified govt. staff established in 3 countries. Group of professionals trained and active in region.	Not applicable
C6: Coastal Vuln. And Risk Assess	Not applicable	Vulnerabilities based on screening assessments were determined for 3 countries.	3 countries developed a methodology and drafted options for adaptation.	Methodology developed and qualified govt. staff established in 3 countries.	Developed draft policy options based on screening assessments.
C7: Economic Valuation of Coastal and Marine Resources	Not applicable	Identified several vulnerable areas in 3 pilot countries. Contributed to the development of methodology to value natural resources in order to determine vulnerability.	Not applicable	Qualified government staff are now in place in 3 countries. This staff is now working on for methodology development and data collection. Capacity building for analysis and interpretation of data was limited.	Examples of trade-offs were developed.
C8: Formulation of Econ/Reg proposals	Not applicable	Identified several vulnerable areas in 2 countries that are economically vulnerable.	Provided demonstrations of application of integrated planning to address CC adaptation.	Qualified govt staff established in 2 countries for design and use of economic instruments.	Not applicable
C9: FNC for St. Vincent and the Grenadines	Not applicable	Vulnerability screening assessment was conducted for St. Vincent and the Grenadines.	Identification of adaptation options for St. Vincent and the Grenadines.	Qualified govt staff established in SVG to develop communications to UNEFCCC.	Not applicable
Non-component outcomes	Replication of sea-level / climate monitoring stations in project in Central America.	Not applicable	Not applicable	RPIU has established rapport with national counterparts as a responsive regional coordinator and support mechanism. Developed capacity among regional representatives for communication of regional CC issues to international bodies. CC courses and degree programs at UWI established with teaching support by RPIU. Encouraged development of CC activities in private sector (oil industry) and in regional institutions.	CC now a permanent agenda item at CARICOM mtgs. More cohesive representation of region at international meetings.
Rating	Satisfactory	Moderately Satisfactory	Satisfactory	Satisfactory	Satisfactory

#### Stakeholder Workshop and Beneficiary Survey

The stakeholder workshop (Annex 9) concluded that the project was successful and met its objectives in light of its intention, as a Stage I activity, to set the baseline for adaptation. The Beneficiary Survey (Annex 8) and related discussions in the stakeholder workshop, however, revealed that while it was felt that much was accomplished under the project, the objective would have been more effectively achieved and the project more successful if there was more political buy-in and subsequently greater progress in the implementation of adaptation plans and policies. While implementation of adaptation was not the objective the project, these comments are important in that they reveal the perceived limitations of Stage I adaptation activities at the local level.

#### *4.2 Outputs by components:*

The project achieved most of its outputs. However, a tight schedule at the end of the project (due to initial delays in implementation) and capacity constraints plus reduced budget allocations (due to SDR fluctuations) combined together to prevent full completion of a few outputs scheduled at the end of the project (see Annex 1 for detailed accounting of outputs). It should be noted that despite these constraints, the project was able to reach its objectives and constitutes a very solid base on which to build future adaptation activities at a regional activity. This project is also the first GEF adaptation project to be completed in any region, and therefore constitutes by itself a valuable resource for future activities elsewhere.

(1) Design and Establishment of Sea Level/Climate Monitoring Network: Under this component the major outputs were achieved satisfactorily. Eighteen monitoring stations were established in collaboration with regional and national institutions, who were trained in its use and maintenance. The stations routinely measure and report data on sea surface temperature, sea level and some meteorological observations. The data is screened at the Regional Archiving Center (RAC- website: [www.cpaccrac.org](http://www.cpaccrac.org)) that was established under the project, and thereafter provided to national and regional institutions, and other interested users such as universities. The data has been used in at least five research projects and is now included in global databases, such as GCOS and GLOSS, which by itself is a major output. The responsibility for assisting countries with routine maintenance and instrument trouble shooting has been transferred to CIMH; however, the arrangements are not fully effective as approximately 6-8 stations are inconsistent -- not 100% on line. The trust fund for maintenance of the network has been established and is operational independent of project support and therefore constitutes a sound basis for addressing major maintenance issues, which still require full participation of the member countries. The build up of the network by itself constitutes a major achievement and represents the larger network of its type worldwide, in terms of geographical coverage. At the end of the project, the network has been linked with a corresponding network funded independently in Central America, further enhancing the coverage and contribution of the data generated in the Caribbean for global use.

(2) Establishment of Databases and Information Systems: All of the activities under this component were completed satisfactorily. A computer based network including a local area network, a website ([www.cpacc.org](http://www.cpacc.org)), and internet communication infrastructure at the national level were established to enable better communication on project activities. The network was utilized internally by the RPIU, enabled more effective communication with the NICUs and allowed e-groups to be used in the implementation of several components. The website use increased steadily upon its introduction and throughout the project. The component training activities successfully encouraged internet use in CPACC and in other projects (SIDSnet) and provided training in GIS to support Component 3 implementation.

(3) Inventory of Coastal Resources and Use: This component completed its major activities, however, they did not serve the function originally envisioned under the project. The initiation of this component was delayed by over one year as a result of the longer than anticipated process of contracting the Coastal Resources Management Specialist. As a result, the focus was changed, although the outputs remained the same. Instead of its original goal of providing baseline data for other components in the project, the component focused on developing an application that would allow the countries to have greater access to GIS and monitoring data for decision making. This approach served two purposes: it provided the national agencies the background necessary to develop and adapt their system to their own countries' context, and it responded to the high demand for training in GIS related applications. The component achieved most of its outputs. A Coastal Resources Inventory System (CRIS) was established in each country and national data was consolidated in 11 of the 12 countries. The capacity building was able to develop skills in at least one agency in each country with a couple of countries assuming the lead role as regional experts that catalyzed further training in the countries that were slower to develop the application. The promotion program was undertaken; however, as the countries have only just set up the system, its impact has thus far been limited to one country (Guyana) which has begun adopting the CRIS for application in national projects. The satellite imagery was partially delivered due to time limitations, the lack of clear weather needed to acquire the images and the budget cuts made in reaction to the SDR exchange rate devaluation. Overall however, the component satisfactorily completed the methodological tools (CRIS), was able to test the CRIS and thus constitutes

a very solid base for further work in this area, under stage II activities, which places the Caribbean in a pioneering position vis a vis other vulnerable areas.

(4) Policy Framework for Integrated Adaptation Planning and Management: The objective of this component was adjusted from developing a generic policy framework for Integrated Coastal Zone Management (ICZM) that would include measures for adaptation to climate change, to assisting countries to identify national climate change issues and implementation plans. Under the restructured component, the major outputs were produced successfully. National issues papers were developed in 12 countries (two of which have been approved and two are ready for cabinet review) and public education campaigns were implemented in 11 countries. More importantly though, this exercise demonstrated and institutionalized an approach to assessing and addressing climate change issues. The process featured the establishment of multi-sectoral national climate change committees and the development of a methodology, through the identification of vulnerabilities, to analyze climate change policy options that is functional in the context of the limited modeling and scientific data in the Caribbean. Overall, the preparation of climate change issues papers is a solid first step toward the internalization of climate change issues into national planning, a process that should be picked up by stage II activities in the region. The preparation of this documents is judged to be a major outcome of the project. The issues papers were prepared by the national focal points and NICUS and therefore are grounded in the local policy making process.

(5) Coral Reef Monitoring for Climate Change: This component was designed to establish, in three countries, a long term program to monitor the effects of global climate change impacts (temperature stress, sea level rise and hurricanes) on coral reefs. The main outputs, including the baseline studies and the establishment of the monitoring network were completed with success. The baseline studies, were instrumental in the design of the monitoring system in terms of ensuring compatibility with the ongoing regional program on coral reef monitoring. Sites for monitoring were chosen by each country based on the agreed considerations of economic and ecological importance and the inclusion of both less and more impacted sites as well as remote and accessible sites. Monitoring involved the collection of video images along predefined transects (lines) of the reef which were then used to quantitatively assess the health of the reef (ie., using measures such as live coral cover or percentage of coral bleached). The methodology adopted constitutes a valuable tool that proved successful and can now be applied widely in the region. The component has produced and analyzed two years worth of data for 11 sites in the three countries, and established the protocols for generating and analyzing the information. In support of this work, training of national counterpart staff was undertaken along with a dissemination campaign that included an internet group, a documentary, and a promotional CD. Videos of the data collected are also available in the project files. The data collected offers substantial evidence of major bleaching and other manifestations of stress that will serve to justify future surveys. Finally, this is the first time a comprehensive and cohesive monitoring program has been tried in the region using a scientifically designed approach and should be of use to researchers in academia and to other users. This by itself constitutes a major achievement. Data generated through the project is now available in video format and digital form of use to the scientific community. The advances and data generated by the project make this component of true global value.

(6) Coastal Vulnerability and Risk Assessment: This component was designed to prepare coastal vulnerability assessments in three pilot countries. With the restructuring of Component 4 to include adaptation strategies and policies, it was changed to focus on vulnerability analysis and adaptation options. This approach was useful and of great interest to countries in the region as it provided tangible information on risks from which practical adaptation options could be developed. The vulnerability assessments were able to train a core group of technical experts to respond to the regional demand for this type of analysis. In terms of outputs, a methodology for coastal vulnerability assessment that can be applied throughout the Caribbean was successfully developed; the next step for the adaptation strategies is for further dissemination to ensure that methods and analytical tools developed can be reviewed and used by the wider global community.

(7) Economic Valuation of Coastal and Marine Resources: This component was designed to demonstrate the economic valuation of resources vulnerable to sea level rise in three pilot countries. It achieved most of its outputs but was limited in its final analysis. A review of economic valuation methodologies was undertaken. Most of the effort was focused on developing pilot studies with the participation of various country ministries. The studies included an industrial area (Trinidad and Tobago), a new tourism destination (St. Lucia) and a hurricane affected

area (Dominica). The pilots successfully built capacity and demonstrated the economic effects of, for example, beach quality (to tourism revenues) and major storm damage (to tourism revenues and property values) and the cost of non-action. Dissemination of these results was made to all countries through the National Focal Points.

(8) Formulation of Economic/Regulatory Proposals: The major outputs of this component, two pilot studies demonstrating economic and regulatory approaches to environmental conservation in response to threats in sea level rise, were completed successfully. The pilot study in Antigua and Barbuda focused on sand conservation and provided recommendations including introducing legislation for the regulation of sand resources, restructuring commercial sales of sand while promoting alternative aggregates for the construction industry and promoting high value retail sales of sand for household markets. An implementation plan was also developed. A similar study was undertaken in St. Kitts and Nevis on the topic of sustainable development of beach resources, focusing on the hotel sector. In addition to this study, training was also completed, although the regional dissemination workshop was eliminated due to the budget cuts resulting from the SDR shortfall.

(9) Greenhouse Gas Inventory/Agriculture and Water Resources Vulnerability Assessment (pilot- St. Vincent and the Grenadines): All activities under this component were completed successfully. This included the preparation of a greenhouse gas inventory, a vulnerability assessment including agriculture and water resources sectors and the First National Communication to the UNFCCC for St Vincent and the Grenadines. The First National Communication was submitted at the Conference of Parties to the UNFCCC in 1999.

Project restructuring in reaction to the shortfall in the SDR allocation: In May 2001 the project activities and resource allocation were restructured in reaction to a CPACC funding shortfall caused by a depreciation of the SDR exchange rate relative to the US\$. The cumulative losses were estimated at US\$434,500 or 7% of the total project costs. After exhausting all options for sources of financing, cuts were made to the project activities. The cuts included many activities that were scheduled for completion as well as some activities that were unlikely to be completed due to project delays. These are shown on the following table along with the output modifications:

**Changes in Project Component Expenditures Due to Budget Shortfall**

Component	Changes in Expenditures due to Restructuring	Effects on component outputs
1	Minor cuts were made in travel expenditures	Outputs remained unchanged.
3	Reduction in budget for promotion and installation of the coastal resources information system and training on its use. Additionally, there was a reduction in the amount of remote imagery acquired for these activities.	Final training was scaled back.
4	Elimination of the budget for a workshop to develop a regional adaptation policy. Reduction of budget for public consultations.	Development of a regional adaptation policy was dropped. The tools and methodologies were not affected as were not the issuance of country specific issues papers.
5	Elimination of the budget for some dissemination activities in participating countries.	Dissemination of information and methodology was limited to NFPs and NICUs.
6	Reduction of budgets for regional workshops and study tours. Budget reduction for vulnerability assessments and adaptation analysis activities including consultation activities and public awareness.	Study tours were dropped.
7	Elimination of a regional workshop, some data collection activities and software purchase. Reduction in the budget for materials and public awareness.	The regional workshop to discuss results of the pilot studies was dropped as an output, instead results and feedbacks were shared via email.
Project Management	Eliminated some travel budget.	Outputs remained unchanged.

#### 4.3 Net Present Value/Economic rate of return:

See Annex 3 for economic analysis

#### 4.4 Financial rate of return:

Not applicable

#### 4.5 Institutional development impact:

The institutional development impact was **substantial** as a functional institutional framework for climate change

was established and capacity was built in the region. This framework is now made of NICUS and NFPs in all countries and the National Climate Change Committees in five countries. The RPIU was established as a regional coordinating mechanism and, although UWICED was unable to absorb the project activities, the RPIU was effective both politically and technically. This success led to the decision by the CARICOM Heads of States to more formally institutionalize its functions into a regional climate change center. At the national level, the NICUs, National Focal Points and national climate change committees were established and provided a mechanism for planning, coordinating and implementing adaptation measures. In addition, the capacity building through the project (detailed in outcomes table in section 4.1, especially under Objective iv) took the region from having little to no capacity in climate change to having a technically, politically and administratively competent institution for regional coordination and national staff in several countries with well developed expertise for implementation of climate change monitoring, planning and policy. National capacity was better developed in the pilot countries while in other countries the impact was less significant but provided the initial capacity enhancement necessary for participation in regional and national climate change issues.

The impact of the GEF investment in institutional capacity building can also be demonstrated by the highly visible and effective participation of the region at the COPs and SBSTA meetings. During the course of the project, RPIU staff increasingly assisted and in many occasions represented the region at global and regional meetings and provided key technical inputs to support the position of the regions, thus effectively guiding its agenda. This is a major development impact for the project.

## **5. Major Factors Affecting Implementation and Outcome**

### *5.1 Factors outside the control of government or implementing agency:*

#### Delay in Establishment of Long-Term Housing of RPIU

UWICED was responsible for providing the RPIU with working space and basic supporting services throughout the project and was originally envisioned to absorb the RPIU in the long term. The housing originally provided was not ready until five months into the project and was not adequate in terms of size. After two years of discussions with UWI, the RPIU moved to housing provided by the Government of Barbados. In addition, the computer linkage to UWICED was delayed which affected the development of the reporting and accounting procedures. The final arrangements were adequate but the efforts to arrive at this solution distracted from project activities.

#### Administrative Arrangements between RPIU and UWI/OAS/World Bank

During project preparation, UWICED was chosen as the most appropriate institution to host the project and absorb the RPIU functions in the long term. Unfortunately, UWICED did not have the necessary authority to engage in contracts and maintain independent accounts from UWI. At the beginning of the project, UWI's financial, administrative and accounting procedures delayed project implementation as they were slow and too restrictive to work with the procedures of the OAS and the World Bank. A management review was undertaken just before mid term review and UWI implemented the recommended measures, which helped address this issue. To address the need for a greater cash flow, the OAS requested and was granted a higher allocation in the Special Account.

### *5.2 Factors generally subject to government control:*

#### Participation and Political Buy-In at the National Level

One of the challenges of the project was to promote national ownership including participation and political support for the climate change agenda. While the project's inception at the Barbados Program of Action sent a strong message of regional commitment to CPACC and to the issue of climate change, it was recognized during project preparation and implementation that, at the national level, a higher level of ownership and commitment was needed. Efforts were made throughout the project to strengthen national ownership, including: responding to national demand by providing responsive support and focusing or expanding activities popular at the national level, updating government commitments, national public awareness campaigns and the implementation of some components using multi-sectoral country teams and climate change committees. All of these contributed to a higher degree of participation and ownership. However, additional efforts are still required. The issue of local ownership is a long-term issue. It requires a strong connection between local immediate needs and the needs to adapt to the impacts of climate change in the long term. Overall, the networks established and the articulation process achieved through the project with many regional institutions constitute a solid platform on which to

continue building the process of local ownership. On the other hand, some of the NFPs/NICUs did not necessarily have the visibility/leverage needed to ensure the necessary political buy-in (see Section 7.5); also, some aspects of the enabling environment for adaptation were not stressed as part of the CPACC (by design) such as the public awareness/information campaigns, which could have brought further visibility; in addition, the nature of climate change impacts, specifically the fact that these impacts are long-term and gradual and the intensity of change uncertain, further adds to the buy-in a challenge; finally, there are some larger systemic weaknesses in the Caribbean in dealing with natural disaster management in general, including climate change. All these aspects make further efforts all the more important and the work initiated needs to be characterized as work in progress.

#### National Capacity

While the project was able to build capacity at the national level through the flexible, responsive support of the RPIU, it was also constrained by the prevailing scarcity of resources and capacity in the region. In particular, project activities were limited by government agencies with stretched human and financial resources, high staff turnover rate, competing responsibilities and a finite skill base. The environmental monitoring practices and data collection in each country were also limited. These combined to cause project delays and in some cases reduced the quality of the outputs.

#### *5.3 Factors generally subject to implementing agency control:*

##### Delay of Establishment of RPIU

The establishment of the RPIU was forecasted to take 60 days, however, it took 11 months. This was attributed to the complexities of: (i) establishing legal agreements and working relationships with the National Focal Points and NICUs; (ii) staffing the RPIU; and (iii) integrating operations within the University (UWI) structure. This delayed disbursement at the beginning of the project and reduced the time allowed for completion of project activities. Although the steps taken caused unwanted delays, they were necessary to address the complexities of establishing a regional institution of this character and structure. The effectiveness of the RPIU paid off throughout the remainder of the project.

##### Delay in Component 3 Implementation

The initiation of this component was delayed by over one year due to the time it took to procure the coastal zone management specialist that would be in charge of the component. It also was affected by delays in execution due to the difficulty in acquiring data. During supervision, several measures were taken to accelerate the component activities including establishing protocols before implementation began, focusing the RPIUs priority on the component, and frequent assessment of progress and scheduling. This component was originally designed to provide the baseline data for other components, however, the delays prevented this and it ended up focusing on developing an application that would allow greater access to GIS and monitoring data for decision making, including adaptation to climate change. While this did not significantly delay or abbreviate activities under the other components, it did require unanticipated compromises in the quality and depth of the data that could be used in the project activities

#### *5.4 Costs and financing:*

##### Budget Shortfall due to SDR Fluctuation

As explained in section 3.4(c), the project was restructured to account for the depreciation of the SDR exchange rate relative to the US dollar, the currency used for project planning. The budget shortfall resulted in the elimination and downscaling of a few activities scheduled at the end of the project (shown in table under section 3.4(c)). In addition, the SDR shortfall and related project adjustments took up significant time that could have been more productively focused. In terms of project achievements, however, it only had a limited impact as budget adjustments were made to protect the key outcomes of the project.

## **6. Sustainability**

#### *6.1 Rationale for sustainability rating:*

The sustainability rating is **likely**. Actions initiated under the project, and in the context of the scope for Stage I adaptation, constitute a solid basis for climate change adaptation in the region. In fact, the Caribbean region is probably one of the most advanced in terms of planning for adaptation (the institutional network promoted under



the project has established itself in international fora through the increasingly proactive role in the COPs and SBSTA's). The issue of climate change is now in the political agenda of the region. Global awareness of the impacts of climate change in small island nations has also increased and this will induce a higher political leverage for continuing regional efforts that address an issue of impacts resulting from global pollution in which the region has a negligible contribution.

During the project, efforts were made to develop a regional institutional mechanism to anchor the climate change agenda. The RPIU was effective both as a regional focal point and a catalyst at a national level. The CARICOM countries have initiated the process further strengthening the institutional capacity in the region through a proposed Caribbean Community Climate Change Center that would sustain the climate change agenda in the region for the long-haul (the official decision to establish the Climate Change Center took place at the meeting of the Heads of States in February 2002). The long-term sustainability of climate change efforts including project activities will depend upon a suitable institutional mechanism and a coherent, long-term regional approach to the challenges of climate change.

#### *6.2 Transition arrangement to regular operations:*

The CARICOM Secretariat is in the process of implementing the decision of the Heads of States to establish a permanent and independent Caribbean Community Climate Change Center. The aim of the Center is to protect the climate system of the Caribbean for the benefit of present and future generations. The Center will be a regional mechanism to anchor, support, facilitate and sustain the Caribbean's program of action on climate change adaptation and will serve as: (i) an advisory mechanism on climate change policy to CARICOM Secretariat and its member countries; (ii) a source of scientific and technical information on climate change its potential impacts in the region; and, (iii) a coordinating and articulation mechanism for climate change related activities, enhancing the institutional effectiveness and maximizing synergies and cross-sectoral linkages among multiple stakeholders. While progress has been made in defining the basis for the Center much work remains to be done to ensure a sustainable basis for its operation.

## **7. Bank and Borrower Performance**

### **Bank**

#### *7.1 Lending:*

Bank performance is rated **satisfactory**. The project was well identified, responsive to the requests and needs of the region and consistent with Bank CASSs, government priorities and UNFCCC Stage I Adaptation. The consultation process was excellent and provided the basis for project ownership and the institutional framework. The technical assistance and the appraisal process provided a thorough assessment that resulted in the many successes of project implementation. Weaknesses during preparation were: (i) the inability to foresee the problems encountered in setting up and operating the RPIU and locating it in UWI, and (ii) not providing enough contingencies to anticipate currency fluctuations and the problems in executing a complex project with institutional capacity limitations.

#### *7.2 Supervision:*

Bank supervision is rated as **satisfactory**. The Bank team provided thorough reporting that identified implementation problems that were proactively addressed through guidance and independent studies. This was especially important in mitigating the problems surrounding the establishment and operation of the RPIU but was also useful in addressing issues such as national ownership, maintenance of the monitoring stations, implementation of the coral reef monitoring program, development of a long-term regional institution for climate change, and establishment of linkages to the global monitoring networks. The mid-term review was scheduled and undertaken on a timely basis, resulting in the identification, discussion and implementation of problems and corrective actions. The Bank was able to establish a frequent policy and technical dialogue on climate issues in the region and was instrumental in promoting the participation of the RPIU at global and other regional meetings. This role facilitated the cross-dissemination of experiences and enhanced the ability of the region to advocate for its positions and specific needs in global fora. At the same time, the Bank team was flexible, allowing changes in component focus and activities in order to accommodate the dynamic nature of the topics and project

implementation challenges.

### *7.3 Overall Bank performance:*

Overall Bank performance was satisfactory based on the lending and supervision performance described above.

### **Borrower**

#### *7.4 Preparation:*

CARICOM and its member states' performance was **highly satisfactory** during preparation. The project was championed by the region and all aspects of the complex and technical design were developed with participation of the relevant institutions and agencies. The role they played in design is one of the major reasons for project success.

#### *7.5 Government implementation performance:*

CARICOM and its member states were involved with project implementation at both the regional and the national levels. Overall their performance was **satisfactory**. At the regional level, the performance was satisfactory as CARICOM elevated the issue of climate change politically in the region, supported project implementation throughout and championed the establishment of the a long-term regional institution for climate change (Caribbean Community Climate Change Center). At the national level, in many of the participating countries, there was a very strong commitment to the project, which resulted in high implementation performance. In a few countries, scarce national capacity limited the implementation performance.

#### *7.6 Implementing Agency:*

**OAS:** The OAS was the executing agency for the project. Their performance was **satisfactory** and without their role, the project would have been difficult for the CARICOM countries and the Bank to manage. Their management and supervision of the project was responsive and hands-on. Their flexibility allowed the project to overcome the problems encountered in setting up the RPIU as well as address many technical and day to day administrative issues. They also enhanced the Banks responsiveness to the project, as they were both actively working in the region and in Washington. There is however a likely need for a retroactive extension to account for a delay in documenting accounts at UWICED through the OAS involving an amount under 1% of the total GEF resources. This incident however, should not detract from the overall effective role of the executing agency.

**RPIU:** The Regional Project Implementation Unit's performance was **satisfactory**. While at the beginning, performance was hindered by the problems encountered in setting it up, its responsiveness to national needs, leadership on climate change issues in the region, technical expertise and flexibility to accommodate project challenges were key factors in the project's success. In terms of management and delivery, the RPIU had its limitations which affected project execution. Most of these were, however, largely a result of growing pains and the large workload experienced at the end of the project.

**UWI and UWICED:** The performance of these institutions was rated **moderately satisfactory**. Although overall the role intended was played, these institutions were not able to deliver the level of support on a consistent basis.

**NFPs/NICUs:** The performance of the NICUs was mixed and therefore rated **moderately satisfactory**. It was expected that the NICUs and NFPs would be both implementers and beneficiaries of the project. As implementers they participated in the pilot components, the regional components and the climate change agenda regionally and nationally and this was done with only some shortcomings in terms of execution and participation in some countries. In light of their role as beneficiaries and the long term goal of mainstreaming climate change at the national level, their performance was encouraging, but at the same time, the project revealed the many institutional challenges to mainstreaming at the national level including severe resource constraints, low levels of appreciation of climate change at critical decision making levels, and frequent changes in personnel, leading to lost capacity. These issues began to be addressed under CPACC but will need to be continued under the follow-on MACC project.

#### *7.7 Overall Borrower performance:*

The overall Borrower performance was **satisfactory** based on the above description.

## 8. Lessons Learned

- Given the nature of the issue, long term sustainability is a major requirement for climate change adaptation. It can be enhanced through building regional and national commitment and institutional and technical capacity ensure national buy-in (a point raised in the Section 7.5). Also, on the institutional front, the project illustrates the need for a flexible approach. The best option for the region seems to be the development of regional core capacity that could bring together the limited national institutional assets for work on climate change issues.
- Political buy-in is a major implementation and sustainability issue in adaptation to climate change and can be enhanced through a highly visible regional coordination institution, multi-stakeholder committee, public awareness campaigns and involvement of a variety of relevant national ministries. There is likewise a need to change/develop economic instruments and incentives to promote the climate change agenda.
- The use of SDR denominated GEF grants introduces a currency risk that needs to be taken into account by building contingency funds in the financing plan. These risks should be considered upfront in project preparation and monitored throughout implementation.
- Complex projects that require flexible implementation may necessitate conservative schedules and cost contingencies.
- Establishment of new institutions as a part of a project necessitates a careful assessment of its structure, functions and administrative processes and a schedule that realistically accounts for potential delays in its establishment.
- There is a strong need to ensure that the reality on the ground (institutional limitations, limited technical skills) is properly linked to the process being used by activities in this area. Because of the large anticipated impacts and the limited (yet growing) local capacity, it is essential that methods and tools employed be based on what can reasonably be expected to perform in the region. The thin capacity in the region is a challenge. This can be dealt with through: careful assessment of capacity; ensuring government commitment; and providing regional support that is responsive to the circumstances in the country.
- The baseline for sustainable development is weak and therefore the additionalities linked to the impacts of climate change represent a major challenge. The policies to be developed and tools to be introduced need to have the dual purpose of advancing the baseline and adding the concerns on climate change.
- The data collection networks need a much stronger support at the National level to perform at the level that is expected. A major effort is required in this front to ensure that the network is sustainable in the long-term.
- Finally, there is a danger that the efforts promoted by GEF and the UNFCCC at large in the area of climate change may be seen by some as an opportunity to capture financial resources instead of the mechanism by which adaptation needs are understood, formulated, internalized and acted upon. To face this danger, additional efforts need to be invested in the process of awareness among key policy makers and stakeholders.

## 9. Partner Comments

### *(a) Borrower/implementing agency:*

Comments on the draft ICR were provided at the Stakeholder Workshop (Annex 9). This workshop provided good feedback on the project and a reality check from the perspective of the main partners (the National Focal Points). All comments received were considered in the preparation of the ICR. The RPIUs draft Final Report is summarized in Annex 10.

Key comments are summarized below, a full account of all comments received can be consulted in Annex 9.

As the project objective was to support Caribbean countries in preparing to cope with effects of climate change through vulnerability assessments, planning and capacity building, the National Implementation Coordinating Units (NICUs) were surveyed at the end of the project (between October 2001 and May 2002) as the key partners and beneficiaries of the project. Of the 12 NICUs representing the CARICOM countries, 10 of them responded to the survey. The results, including comments from individual respondents are summarized below:

<b>QUALITY OF DESIGN</b>			
	<b>Yes</b>	<b>Somewhat</b>	<b>No</b>
Consistency with Government needs	100%	0%	0%
Overlaps with Other Government Programs	0%	25%	75%
Project was too ambitious	12.5%	12.5%	75%
<b>Things that were done well by institutions involved</b>			
National consultations were useful in project design			
Technical assistance and support provided during preparation was helpful.			
Organization was excellent.			
<b>Things that could have been done better by institutions involved</b>			
Wider consultation with national experts.			
Some general in-country workshops could have allowed an easier introduction of topic.			
More contingency funds to account for unanticipated problems in the project.			
More emphasis on institutional strengthening and capacity building in the project			
More funds allocated to education and awareness.			
CARICOM could have played a more active role in policy development.			
Loss of funds from SDR exchange rate devaluation should be better catered for.			
The political focus of the project could have been better defined.			
Need to cater national activities to each country and ensure adequate resources, capacity and commitment.			

(b) *Cofinanciers:*

(c) *Other partners (NGOs/private sector):*

## 10. Additional Information

## Annex 1. Key Performance Indicators/Log Frame Matrix

Indicator/Matrix	Projected in last PSR	Actual/Latest Estimate
<b>1. Improved Knowledge:</b> (i) systematic data observation, monitoring, collection and analysis are effectively done and disseminated;  (ii) regular reviews are made of technical models, policy frameworks and data sets, and appropriate procedures are adopted for improvement;  (iii) standards for regional archiving, access and reporting formats are agreed;  (iv) useful project information and data are included in global databases.  (v) technical soundness and validity of models are confirmed in independent reviews.		Achieved with some shortcomings in quantity of good data and in on-line availability.  Reviews were undertaken during implementation and are planned to continue.  Standards established for sea level/ climate and coral reef monitoring, other datasets need standardizing.  Achieved through incorporation of sea level/ climate monitoring data in GCOS database and international recognition of coral reef monitoring results.  Independent technical reviews were undertaken during implementation. Technical soundness was confirmed.
<b>2. Capacity Building:</b> (i) climate change considerations and adaptation strategies appropriately disseminated and proposed for national institutionalization;  (ii) technical studies, models and data are used in regional and national environmental decision-making;  (iii) legal, regulatory and economic framework for integrated coastal zone management and adaptation planning are reviewed and proposed for adoption;  (iv) researchers, policymakers and other stakeholders are able to access all relevant technical information, methodologies and data in a useful format;  (v) technical training courses and workshops are successfully completed by appropriate staff of collaborating institutions.		Dissemination achieved and process of institutionalization was begun  Decision-making has yet to benefit from the outputs of the project in a consistent manner. Some examples of integration are the inclusion in the national communications of the results of vulnerability assessment. However, much remains to be done.  Tools for development of adaptation plans prepared in all countries .  Achieved for sea level/climate monitoring stations with some shortcomings in format. Other data sets (CRIS, corals) provides data access but format not yet streamlined with government processes.  Achieved.
<b>3. Public/Private Involvement:</b> (i) governments, public/private institutions and other stakeholders are involved in development/adaptation of methodologies and identification of options for improved adaptation planning and coastal resources management;  (ii) national resources are allocated and leveraged to carry out or continue activities of adaptation planning and ICZM;  (iii) interest is generated in other governments/institutions seeking to utilize the CPACC pilot project methodologies.		Achieved through consultations, climate change committees and country implementation teams. NGOs media and private sector participation was small.  Achieved for countries participating in the pilot activity.  Achieved.

<p><b>4. Project Continuity/Sustainability:</b></p> <p>(i) long-term workplan defined and agreed;</p> <p>(ii) Most responsibilities, technical personnel and databases of the RPIU have been effectively transferred to UWICED and other regional institutions;</p> <p>(iii) achievements and expertise of national implementation coordinating units integrated into national development planning process;</p> <p>(iv) funding obtained for continuation of CPACC activities in accordance with regional and national priorities;</p>		<p>Achieved through ACCC, MACC project and plan for CCCCC.</p> <p>Achieved but RPIUs functions will be transferred to the CARICOM as proposed executing agency for MACC.</p> <p>CPACC began this process through the climate change committees and adaptation planning process. MACC will continue mainstreaming CC in development planning.</p> <p>Achieved.</p>
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### Project Execution Indicators

Indicator/Matrix	Projected In last PSR <sup>1</sup>	Actual/Latest Estimate
(i) The RPIU is functioning efficiently and is staffed with qualified professionals.	Achieved	Achieved
(ii) The Project Advisory Committee (PAC) is providing policy guidance and reviewing implementation progress and project impact.	Achieved	Achieved
(iii) Quarterly activity and semiannual progress reports are prepared in a timely and satisfactory manner.	Achieved	Achieved
(iv) Quarterly disbursement plans and annual financial reports are prepared in a timely and satisfactory manner.	Achieved	Achieved
(v) Performance targets are achieved as specified in the Annual Operating Plan.	Achieved in the end, despite some intermediate delays	Achieved in the end, despite some intermediate delays
(vi) Deviations from the annual operating plan are corrected promptly and appropriately.	Achieved	Achieved
(vii) Disbursements are made on a timely basis and procurement is carried out according to Bank guidelines.	Disbursements slow in 1st half of project. Procurement done according to WB Guidelines	Disbursements slow in 1st half of project. Procurement done according to WB Guidelines
(viii) Audit reports and other reviews show sound financial practices.	Achieved	Achieved

### Output Indicators

Indicator/Matrix	Projected In last PSR <sup>2</sup>	Actual/Latest Estimate
<p><b>Component 1:</b></p> <p>(i) 18 gauges installed in the 11</p>	Completed	Completed

Participating Countries collecting data on sea level and other related climate variables.		
(ii) Trained national and regional staff in monitoring and analysis of sea level and climate data.	Ongoing	Completed
(iii) Geocentric fixing bench marks.	Completed	Completed
(iv) Regional Archiving Center (RAC), a long-term regional data and analysis center, for sea-level network at CMI and IMA.	Completed	Completed
(v) Creation of Sea Level and Climate Monitoring Network Replacement Fund.	Not completed	Completed
(vi) Action Plan for continued operation of gauges.	Not completed	Completed
<b>Component 2:</b>		
(i) Computer based network linking the main institutions involved in project implementation, especially the RPIUs and NICUs.	Completed	Completed
(ii) Databases using data/information generated by the project activities.	Completed	Completed
(iii) Training.	Completed	Completed
<b>Component 3:</b>		
(i) Consolidate, evaluate and computerize GIS existing information in each Participating Country.	Completed	Completed
(ii) Improve baseline data for other project activities.	Completed	Completed
(iii) Regional training courses on techniques for resource inventory preparation and management.	Ongoing	Completed <sup>1</sup>
(iv) Inventory of physical and biological resources in Caribbean coastal areas, their current use and users.	Ongoing	Completed in 11 of 12 countries
(v) Country-specific mapped outputs for use in ICZM and planning.	Ongoing	Completed for some areas in 4 countries, Delivery of >2/3 of imagery was dropped. <sup>4</sup>
<b>Component 4:<sup>5</sup></b>		
(i) Preparation of national issues papers.	Completed	Completed
(ii) Preparation of national adaptation policy papers and	Ongoing	Completed

implementation plans.		
(iii) Political approval of national policies.	Ongoing	Approved in 2 of 12 countries, 2 other countries ready for presentation to cabinet
(iv) Preparation of public education/awareness plans.	Ongoing	Completed in 11 of 12 countries
(v) Development of regional policy and strategy.	Dropped <sup>4</sup>	Dropped <sup>4</sup>
<b>Component 5:</b>		
(i) Review existing status of coral reef monitoring and research in the three participating countries and their institutional capacity and responsibilities.	Completed	Completed
(ii) Monitoring program to determine potential impacts of climate change on coral reef.	Ongoing	Completed
(iii) Dissemination of information and methodology to all participating countries through regional workshops and study tours.	Workshops and Study Tours Dropped. <sup>4</sup>	CDs produced for dissemination. Workshops and Study Tours Dropped. <sup>4</sup>
<b>Component 6:</b>		
(i) Studies to evaluate models and techniques for vulnerability analysis and risk assessment and adaptation of the IPCC common methodology for application to the Caribbean region. <sup>1</sup>	Completed	Completed
(ii) Draft adaptation strategy for pilot countries.	Ongoing	Completed in Draft form -needs more technical input and consultation
(iii) Awareness and education program to inform the general public about the vulnerability of coastal areas and the need to plan for climate change.	Not completed	Partially completed
(iv) Training and study tours.	Dropped <sup>4</sup>	The field training was replaced in a cost-effective manner with the start up of the web-site and sharing of information on line.
<b>Component 7:</b>		
(i) Assessment and review of resource valuation techniques.	Completed	Completed
(ii) Three pilot studies using resource valuation techniques in ecosystems with varying environmental resources and economic uses.	Ongoing	Completed  The workshops were replaced by on



(iii) Regional workshop to discuss and disseminate results of pilot studies.	Dropped <sup>1</sup>	line consultations and feedback.
<b>Component 8:</b>		
(i) Two pilot studies to illustrate the uses of various economic and other innovative regulatory options for coastal zone management.	Ongoing	Completed
(ii) Regional workshop on the design and implementation of economic approaches to environmental regulation.	Dropped <sup>1</sup>	A workshop was undertaken after closure with non-project resources, by the region <sup>2</sup>
(iii) Training in innovative environmental policy design, program finance and policy implementation.	Not completed	Not completed
<b>Component 9<sup>4</sup>:</b>		
(i) Preparation of greenhouse gases inventory.	Completed	Completed
(ii) Preparation of a vulnerability assessment of agriculture and water resource sectors.	Completed	Completed
(iii) Preparation of initial National Communication report to the UNFCCC.	Completed	Completed

<sup>1</sup> These ratings were not determined at each PSR, rather some were done at MTR.

<sup>2</sup> Ratings done at last supervision mission (May 2001).

<sup>3</sup> Scaled-down but not eliminated as an output after restructuring (see section 3 for details).

<sup>4</sup> Dropped as an output after restructuring (see section 3 for details).

<sup>5</sup> Reflects the outputs after modifications of component 4 were implemented (see section 3 for details).

<sup>6</sup> Component added in July, 1998.

## Annex 2. Project Costs and Financing

Project Cost by Component (in US\$ million equivalent)

Project Cost By Component	Appraisal Estimate US\$ million	Actual/Latest Estimate US\$ million	Percentage of Appraisal
Regional Activities:	0.77	0.81	105
(a) Design and Establishment of Sea Level/Climate Monitoring Network			
(b) Establishment of Databases and Information Systems	0.37	0.36	97
(c) Inventory of Coastal Resources and Use	0.66	0.63	95
(d) Formulation of a Policy Framework for Integrated Coastal and Marine Management*	0.28	0.23	82
Pilot Activities:			
(e) Coral Reef Monitoring for Climate Change	0.38	0.32	87
(f) Coastal Vulnerability and Risk Assessment	0.41	0.36	88
(g) Economic Valuation of Coastal and Marine Resources	0.30	0.25	83
(h) Formulation of Economic/Regulatory Proposals	0.18	0.17	94
(i) Greenhouse Gases Inventory/Agriculture and Water Resources Vulnerability Assessment**	0.00	0.10	
(j) Regional Project Implementation and Capacity Building	2.04	2.07	101
(k) Executing Agency Costs	0.67	0.68	101
<b>Total Baseline Cost</b>	6.06	5.98	
<b>Physical Contingencies</b>	0.13		
<b>Price Contingencies</b>	0.11	0.24	
<b>Total Project Costs</b>	6.30	6.22	
<b>Total Financing Required</b>	6.30	6.22	

\*This component was changed to "Formulation of a Policy Framework for Integrated Adaptation Planning and Management" during implementation.

\*\*This component was added during implementation.

Estimates as of September 5, 2001. During implementation physical and price contingencies were not accounted as separate line items and therefore only the total contingent expenses are shown.

The changes in actual disbursement was affected by: (i) the addition of component 9 and related activities (US\$350,000) and (ii) the loss due to the devaluation of the SDR exchange rate (US\$434,500).

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

Expenditure Category	Procurement Method <sup>1</sup>			N.B.F.	Total Cost
	ICB	NCB	Other <sup>2</sup>		
<b>1. Works</b>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<b>2. Goods</b>	0.00 (0.00)	0.00 (0.00)	1.25 (1.25)	0.00 (0.00)	1.25 (1.25)
<b>3. Services</b>	0.00 (0.00)	0.00 (0.00)	2.66 (2.66)	0.00 (0.00)	2.66 (2.66)
<b>4. Training</b>	0.00 (0.00)	0.00 (0.00)	1.67 (1.67)	0.00 (0.00)	1.67 (1.67)

<b>5. Executing Agency Costs</b>	0.00 (0.00)	0.00 (0.00)	0.67 (0.67)	0.00 (0.00)	0.67 (0.67)
<b>6. CMI subgrant for Tidal Gauge Replacement</b>	0.00 (0.00)	0.00 (0.00)	0.05 (0.05)	0.00 (0.00)	0.05 (0.05)
<b>Total</b>	0.00 (0.00)	0.00 (0.00)	6.30 (6.30)	0.00 (0.00)	6.30 (6.30)

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

Expenditure Category	ICB	Procurement Method		N.B.F.	Total Cost
		NCB	Other <sup>2</sup>		
<b>1. Works</b>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<b>2. Goods</b>	0.00 (0.00)	0.00 (0.00)	1.25 (1.25)	0.00 (0.00)	1.25 (1.25)
<b>3. Services</b>	0.00 (0.00)	0.00 (0.00)	2.60 (2.60)	0.00 (0.00)	2.60 (2.60)
<b>Technical Assistance</b>					
<b>4. Training</b>	0.00 (0.00)	0.00 (0.00)	1.64 (1.64)	0.00 (0.00)	1.64 (1.64)
<b>5. Executing Agency Costs</b>	0.00 (0.00)	0.00 (0.00)	0.68 (0.68)	0.00 (0.00)	0.68 (0.68)
<b>6. CMI subgrant for Tidal Gauge Replacement</b>	0.00 (0.00)	0.00 (0.00)	0.05 (0.05)	0.00 (0.00)	0.05 (0.05)
<b>Total</b>	0.00 (0.00)	0.00 (0.00)	6.22 (6.22)	0.00 (0.00)	6.22 (6.22)

<sup>1/</sup> Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies.

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

**Project Financing by Component (in US\$ million equivalent)**

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	Bank	Govt.	CoF.	Bank	Govt.	CoF.	Bank	Govt.	CoF.
<b>Regional Activities:</b>	0.77	0.00	0.00	0.81	0.00	0.00	105.2	0.0	0.0
(a) Design and Establishment of Sea Level/Climate Monitoring Network									
(b) Establishment of Databases and Information Systems	0.37	0.00	0.00	0.36	0.00	0.00	97.3	0.0	0.0
(c) Inventory of Coastal Resources and Use	0.66	0.00	0.00	0.63	0.00	0.00	95.5	0.0	0.0
(d) Formulation of a Policy Framework for Integrated Coastal and	0.28	0.00	0.00	0.23	0.00	0.00	82.1	0.0	0.0

<b>Marine Management Pilot Activities:</b>									
(e) Coral Reef Monitoring for Climate Change	0.38	0.00	0.00	0.33	0.00	0.00	86.8	0.0	0.0
(f) Coastal Vulnerability and Risk Assessment	0.41	0.00	0.00	0.36	0.00	0.00	87.8	0.0	0.0
(g) Economic Valuation of Coastal and Marine Resources	0.30	0.00	0.00	0.25	0.00	0.00	83.3	0.0	0.0
(h) Formulation of Economic/Regulatory Proposals	0.18	0.00	0.00	0.17	0.00	0.00	94.4	0.0	0.0
(i) Greenhouse Gas Inventory/Agric. and Water Resources Vulnerability Assessment (added after appraisal-see section 3.4 for details)	0.00	0.00	0.00	0.11	0.00	0.00	0.0	0.0	0.0
<b>Regional Project Implementation and Capacity Building</b>	2.04	0.00	0.00	2.07	0.00	0.00	101.5	0.0	0.0
<b>Executing Agency Costs</b>	0.67	0.00	0.00	0.68	0.00	0.00	101.5	0.0	0.0
<b>Contingencies</b>	0.24	0.00	0.00	0.25	0.00	0.00	104.2	0.0	0.0

### Annex 3. Economic Costs and Benefits

#### Efficacy of CPACC

While it is difficult to devise quantitative indicators for CPACC's cost-effectiveness, several observations can be made. The project's approach required the use of limited funds to begin the process of tackling a large problem in a dispersed region with limited capacity. The project was thus designed to target activities that could address priority needs at least cost. Additionally, using the RPIU as a regional coordinator and a means of capacity building was very cost effective relative to the option of undertaking the activities independently in each country.

#### Economic Benefits of Climate Change Adaptation in the Caribbean

As a Stage I Adaptation activity, CPACC focused on planning, including studies of possible impacts of climate change to identify particularly vulnerable countries or regions and policy options for adaptation and appropriate capacity building. In adaptation projects, the benefits are expected to accrue as a result of avoiding the full impact of future climate induced changes. Although it is not yet known what the exact economic costs of climate change would be in the Caribbean, the current scientific understanding (shown below) indicates that they are likely to be significant and that the relatively low costs of adaptation planning are a necessary precondition for informed decision making on the reduction of vulnerabilities and mitigation options. In this light, CPACC provided an effective first step of mitigating the potentially large economic impacts of climate change through adaptation.

**Economic Effects of Climate Change in the Caribbean**

Issue or resource vulnerable to climate change	Potential effect of CC	Sectors at Greatest Risk*	Economic Relevance
Freshwater availability	Reduced precipitation; increased evaporation and saline intrusion from sea level rise.	Water resources, agriculture and forestry	Water supply is anticipated to be a bottleneck for economic activity and serious health concern. All water using sectors would be affected.
Degradation of Marine and Coastal ecosystems	Sea level rise and changes in sea temperature can affect important ecosystems such as mangroves, fishing grounds and coral reefs.	Fisheries and tourism	Fisheries account for a sizable share of GDP. Tourism accounts for up to 83% of GDP and is highly dependent on marine ecosystems.
Land flooding	Sea level rise will result in flooding of coastal areas.	Tourism, agriculture and forestry	Most tourism activities are located in the coastal zone. Significant capital investment assets and infrastructure could be affected.
Climate	Climate change may increase extreme events such as precipitation intensity, tropical storms or droughts.	Multisectoral	The cost of hurricanes and other natural disasters in the Caribbean region have been estimated at several hundred million during the last decade.

\* The above sectors have been identified by the IPCC as ones that could be negatively affected by climate change in small island and low lying states. Modeling efforts, however, have not been undertaken to understand the extent of the impacts on these sectors in the Caribbean.

## Annex 4. Bank Inputs

### (a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
	Month/Year	Count	Specialty	Implementation Progress      Development Objective
<b>Identification/Preparation</b>	9/95	2	Env. Specialist (TM); Project Assistant.	
	11/95	2	Env. Specialist (TM); Project Assistant.	
	1/96	2	Env. Specialist (TM); Project Assistant.	
	2/98	1	Env. Specialist*	
<b>Appraisal/Negotiation</b>	5/96	3	Env. Specialist (TM); FM/Procurement Specialist; Climate Change Specialist	
<b>Supervision</b>	12/97	3	Env. Specialist (TM); 2 Operations Specialists.	S      S
	3/98	1	Env. specialist.	S      S
	6/98	3	Env. Specialist (TM); 2 Operations Specialists.	S      S
	2/99	3	Chem. Engineer (new TM); 2 Operations Specialists.	S      S
	9-10/99 (MTR)	3	Chem Engineer (TM) 2 Operations Specialists.	S      S
	10/00	1	Chem. Engineer (TM).	S      S
	5/01	3	Chem. Engineer (TM); Operations Specialist; Project Management Specialist.	S      S
<b>ICR</b>	10/01	1	Env. Specialist.	S      S
	05/02	4	Chem. Engineer (TM) Env. Specialist (2) Sector Leader	S      S

\*The mission on 2/98 was for the preparation of component 9, which was developed and amended to the project after implementation began (see section 3.4 for more details on this component).

### (b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ ('000)
Identification/Preparation	59	151
Appraisal/Negotiation	29	50
Supervision	57	230
ICR	9	18
Total	151	444

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

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

	Rating					
<input checked="" type="checkbox"/> Macro policies	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input checked="" type="radio"/> N	<input type="radio"/> NA	
<input checked="" type="checkbox"/> Sector Policies	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input checked="" type="radio"/> N	<input type="radio"/> NA	
<input type="checkbox"/> Physical	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA	
<input type="checkbox"/> Financial	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA	
<input checked="" type="checkbox"/> Institutional Development	<input checked="" type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA	
<input checked="" type="checkbox"/> Environmental	<input checked="" type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA	
 <i>Social</i>						
<input checked="" type="checkbox"/> Poverty Reduction	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input checked="" type="radio"/> N	<input type="radio"/> NA	
<input type="checkbox"/> Gender	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA	
<input type="checkbox"/> Other (Please specify)	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA	
<input checked="" type="checkbox"/> Private sector development	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input checked="" type="radio"/> N	<input type="radio"/> NA	
<input checked="" type="checkbox"/> Public sector management	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA	
<input type="checkbox"/> Other (Please specify)	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA	

## Annex 6. Ratings of Bank and Borrower Performance

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

### 6.1 Bank performance

#### Rating

- |   |                          |                                    |                         |                          |
|---|--------------------------|------------------------------------|-------------------------|--------------------------|
| <input checked="" type="checkbox"/> Lending     | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Supervision | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Overall     | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |

### 6.2 Borrower performance

#### Rating

- |   |                                     |                                    |                         |                          |
|---|-------------------------------------|------------------------------------|-------------------------|--------------------------|
| <input checked="" type="checkbox"/> Preparation                           | <input checked="" type="radio"/> HS | <input type="radio"/> S            | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Government implementation performance | <input type="radio"/> HS            | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Implementation agency performance     | <input type="radio"/> HS            | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Overall                               | <input type="radio"/> HS            | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |



## **Annex 7. List of Supporting Documents**

CPACC website: [www.cpacc.org](http://www.cpacc.org)

Regional Archiving Center Website: [www.cpaccrac.org](http://www.cpaccrac.org)

Aide Memoire of ICR Stakeholder Workshop



ICR workshop aide memoirell.

## Annex 8. Beneficiary Survey Results

As the project objective was to support Caribbean countries in preparing to cope with effects of climate change through vulnerability assessments, planning and capacity building, the National Implementataion Coordinating Units (NICUs) were surveyed at the end of the project (between October 2001 and May 2002) as the beneficiaries of the project. Of the 12 NICUs representing the CARICOM countries, 10 of them responded to the survey. The results, including comments from individual respondents\*, are summarized in the following tables:

QUALITY OF DESIGN			
	Yes	Somewhat	No
Consistency with Government needs	100%	0%	0%
Overlaps with Other Government Programs	0%	25%	75%
Project was too ambitious	12.5%	12.5%	75%
<b>Things that were done well by institutions involved</b>			
National consultations were useful in project design			
Technical assistance and support provided during preparation was helpful.			
Organization was excellent.			
<b>Things that could have been done better by institutions involved</b>			
Wider consultation with national experts.			
Some general in-country workshops could have allowed an easier introduction of topic.			
More contingency funds to account for unanticipated problems in the project.			
More emphasis on institutional strengthening and capacity building in the project			
More funds allocated to education and awareness.			
CARICOM could have played a more active role in policy development.			
Loss of funds from SDR exchange rate devaluation should be better catered for.			
The political focus of the project could have been better defined.			
Need to cater national activities to each country and ensure adequate resources, capacity and commitment.			

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\*The comments shown are from individual respondents, therefore any contradictions represent country to country differences in experience.

QUALITY OF IMPLEMENTATION			
	Yes	Somewhat	No
Achievement of Project Objective	56%	44%	0%
Effectiveness of NICUs as conduits of information and regional concerns.	88%	0%	12%
Project successes		Project shortcomings	
National ownership was developed successfully due to focus of project on NICUs and the national consultation.	Lack of resources for public awareness.		
Kick started the process of CC adaptation.	Needed more hands on involvement by national teams (Comp 7 in particular).		
Able to gain support of policy makers and provide a platform for to develop public awareness on CC and its impacts.	Needed more training.		
Provided valuable experience in CC issues.	Climate change vulnerability and adaptation assessment were limited by data quality.		
Setting up of NICUs and the resulting success with in-country networking and regional comprehensive approaches.	Public awareness campaigns and policy work was not done early enough and continuously enough to see great impact on these issues.		
Setting up the monitoring stations.	Greater political involvement was needed at the national level.		
Completion of national communication document (for St. Vincent and the Grenadines).	Inability to access continuous climate change and sea level data from the recording stations via the internet.		
	Limited resources at end of project did not allow sharing of lessons from pilots regionally. (30% felt that budget cuts due to SDR shortfall significantly affected the project, 20% felt that it significantly affected several components; and 50% felt that it moderately affected the project.)		
Things done well by institutions involved	Things that could have been done better by institutions involved		
Accessibility and hands-on support by RPIU to the NICUs and the effectiveness of NICUs and NFP meetings.	Disbursement procedures could have been less bureaucratic if allowed direct drawn down of project funds in-country and disbursement based on advances for RPIU.		
NICUs were committed and performed well but their political influence was limited.	A small stipend for national counterparts would provide incentives for delivery and participation.		
All institutions performed well but were hindered by budgetary constraints.	Informing the national institutions upfront of role and expectations.		
	More involvement of the media, private sector and NGOs.		
Lessons during implementation			
It is of key importance the project be stakeholder driven.			
National involvement including continuous in-country consultations is important and timelines should be flexible to accommodate national circumstances.			
Public awareness should be specifically designed with the target audience in mind.			
Monitoring and appraisal should be done at various stages in the project.			
There should be a greater focus on capacity building, which should be continuous and incremental.			
Political and technical involvement should be sought and maintained.			
It is necessary to provide incentives for NICUs, prompt payments to local consultants and ensure timely recruitment of technical support for the implementation of project components.			

<b>SUSTAINABILITY AND TRANSITION TO FOLLOW-ON PROJECT</b>			
<b>What CPACC activities are at risk of not being sustained?</b>			
Component 1: Monitoring stations			
Component 2: Networking activities			
Component 4: National plans.			
Component 5: Coral Reef Monitoring.			
Component 6: Vulnerability assessments.			
Capacity may not been maintained adequately to sustain spin-off projects.			
Subsequent national communications will suffer in absence of follow-on activities.			
<b>Applying CPACC Activities to mainstreaming and MACC</b>			
Do components 4 and 8 provide a solid basis for an overall policy framework?	Yes	No	Not clear
	50%	0%	50%
Was component 7 adequate to use as background for mainstreaming activities	67%	0%	33%
Did CPACC provide a good basis for development of an adaptation demonstration project in your country?	100%	0%	0%
<b>Types of capacity building and activities needed</b>			
Incorporating climate change into national planning process.			
Strengthening of research, monitoring and data management capability.			
Policy revision including incorporation of new scientific and economic data.			
Resource planning for adaptation to climate change.			
Demonstration projects to support policy approaches.			
Continuous public awareness program that includes presentation of scientific evidence and the economic effects of climate change.			
Background workshops for government personnel and private sector.			
Environmental economic assessment skill strengthened and applied to other sectors			
Regional exchange of information and experiences.			
Introduction of CC into the school curriculum.			

## **Annex 9. Stakeholder Workshop Results**

### **Caribbean Planning for Adaptation to Global Climate Change (CPACC) Implementation Completion Report Workshop**

A stakeholders workshop was held on May 16, 2002 to present and discuss drafts of the CPACC Final Report (prepared by the RPIU with the help of a consultant), the CPACC Implementation Completion Report (prepared by the World Bank) and the CPACC independent evaluation report (prepared by a consultant for CARICOM and GEFSEC). In attendance were representatives from: CARICOM Secretariat; National Focal Points and/or National Implementation Coordinating Units of St. Lucia; Belize; Grenada; Jamaica; Antigua and Barbuda; Bahamas; Barbados; Guyana; and Trinidad and Tobago; Caribbean Institute for Meteorology and Hydrology (CMIH); Regional Project Implementation Coordinating Unit (RPIU); Organization of American States (OAS); Petrotrin (oil company), University of West Indies-Trinidad and Tobago; Regional Archiving Center; consultants involved with the implementation of CPACC and the Canadian funded Adaptation to Caribbean Climate Change (ACCC) project; and, the World Bank. The results are summarized below:

#### **Overall**

The CPACC project was overall a successful project with significant impacts that, as intended and reflected by its Stage-I character, focused mostly on setting the baseline for adaptation. The project achieved most of its outputs and its overall outcome was satisfactory. This project is also the first adaptation project to be completed in the region and therefore constitutes by itself a valuable resource for future activities elsewhere. Political buy-in was identified as crucial to the success of the CPACC project and it was emphasized that this will need to be properly addressed under MACC. Some budget cuts due the SDR shortfall, a tight schedule at the end of the project (due to initial delays in implementation) and capacity restraints combined together to prevent completion of a few outputs scheduled at the end of the project. However, despite this, the project was able to reach its objectives and constitutes a very solid base on which to build future adaptation activities at a regional level.

#### **Specific Issues Discussed**

Completion of CPACC: CPACC has been completed on time, with a minor extension and has successfully used all available resources. Were it not for the change in SDR value, it would have completed 100% of its intended activities. However, most substantial actions and activities were indeed completed and the set of deliverables and outcomes constitutes an impressive record.

Public Awareness: The resources for public awareness under CPACC were not sufficient to be effective at enhancing public and political buy-in to the climate change agenda and the work under CPACC in the context of the multitude of nations and institutions involved.

Political Buy-in: One of the important factors in CPACC's success was the high-level political buy-in it was able to achieve through the project and in particular, through the project's inception at the high profile Barbados Program of Action. At the same time, it was acknowledged that more could be done including pursuing more aggressive dialogue, holding regional ministerial meetings on climate change and ensuring Heads of States are aware of CPACC successes and the MACC project. A high-level launch of MACC was discussed and it was suggested this be done at this year's World Summit on Sustainable Development or the UNFCCC Conference of Parties 8.

Resources at the National Level: CPACC was successful at developing capacity at the national level in climate change issues. At the same time, capacity was stressed in many countries under CPACC by a lack of financial resources, the amount of work expected, the high staff turnover, the promotion of staff, multiple responsibilities to environmental conventions and committees and the amount of coordination work necessary in the project. It was suggested that additional support and training will be necessary to sustain activities under CPACC and implement activities under MACC.

Data Collection: The lack of data in the region was mentioned as a major constraint to implementation of

adaptation activities and the science of climate change vulnerability in the region. Although data was collected during CPACC and as part of the development of the First National Communications (completed during the same time period), these activities also revealed inherent weaknesses in data quality and quantity. It was suggested that this could be better addressed through a systematic approach including: (i) national and regional assessment of data needs and gaps; (ii) systematic collection of historical data in region; (iii) establishment of a data policy that covers data access and format; and (iv) attention paid to quality assurance and quality control.

Sea Level / Climate Monitoring Stations: Although the establishment of the monitoring stations was considered a success, it was thought that the network was not functioning as well as it could. In particular, at any point in time, approximately 1/3 of the stations were not functioning or provided inconsistent or unusable data, the data was not available on the website and the processing time meant that the data could not be accessed in country in a timely fashion. A key contributor to the problem is the lack of sufficient counterpart resources in some countries.

Budget Cuts due to Depreciation of SDR Exchange Rate: It was emphasized that these budget cuts occurred in the last year of the project. The policy of the World Bank in using SDRs for all GEF projects was explained along with the measures taken by CARICOM to try to recover the project funds. Additionally, CIDA was commended for their extraordinary flexibility in responding to the circumstances by taking up the priority unfinished CPACC activities as part of the ACCC project. The World Bank was also commended in their efforts to bring in extra trust fund resources (Canadian and Dutch) in the preparation of MACC and to recover some of the lost CPACC activities. Finally, it was suggested that the first activities under MACC should be the completion of any activities under CPACC that were not completed.

Administrative Bottlenecks between WB, OAS, UWI and the RPIU: It was clarified that the financial and administrative procedural bottlenecks were not just an issue of the UWI procedures but more to do with the complexity of working with the combined requirements of the University, the World Bank and the OAS at the same time, under somewhat different rules and reporting formats. I

## **Additional Annex 10. Project Summary from Grant Recipient**

### **CARIBBEAN PLANNING FOR ADAPTATION TO CLIMATE CHANGE PROJECT PROJECT FINAL REPORT EXECUTIVE SUMMARY**

**Consolidated from:  
Draft CPACC Final Report (April, 2002)\***

#### **1.0 THE CPACC PROJECT**

The Member States of the Caribbean Community (CARICOM) are primarily small island states with fragile coastal ecosystems. Agriculture and tourism are their principal sources of employment and foreign exchange. Coastal areas, which accommodate the vast majority of the population and economic activity, are vital to the prosperity of these countries. These areas are usually the most biologically diverse and productive.

In recent years, these resources have come under increasing stress from: intensification of human population and activities; concentration of tourism-related infrastructure; inadequate disposal of liquid and solid wastes; decaying drainage infrastructure; uncontrolled and often ill-conceived development schemes; severe weather events which have caused record losses and a crisis within the reinsurance industry; and mismanagement of coral reefs, sea grass beds, mangroves, and wetlands. In addition, the lack of comprehensive information systems and an un-coordinated institutional structure have prevented an integrated approach to the management of those resources.

The findings and predictions of the Intergovernmental Panel on Climate Change (IPCC) have raised concern that these problems could be seriously aggravated by Global climate Change (GCC) and its anticipated impacts such as global warming and changes in ocean dynamics, including Sea Level Rise (SLR), increased surface temperatures and more robust wind and ocean currents. A major fear is that SLR, in particular, would likely affect freshwater supply, increase beach and coastal erosion, cause permanent coastal inundation, and aggravate the impact of tropical storms, thereby placing the economic and social assets that are located within the coastal zones of SIDS, under serious threat.

The 1992 IPCC Report estimated that the first order costs for protection of Caribbean shorelines and its uses from future sea level rise, at US\$11.1 billion, which far exceeds the combined, investment capacity of Caribbean economies. The report recommended that Small Island Developing States (SIDS) undertake measures to reduce vulnerability to SLR through improved coastal zone management.

Driven by these concerns, CARICOM Member States joined with other SIDS in an Alliance of Small Island Developing States (AOSIS) which played a significant role, firstly in the work of the IPCC and thereafter in the negotiations which produced the United Nations Framework Convention on Climate Change (UNFCC).

It was against this background that the CARICOM countries prepared for and participated in the 1994 UN Global Conference on Sustainable Development of Small Island Developing States (SIDS) in Barbados. Not surprisingly, the Programme of Action that emerged from this Conference, listed Climate Change and SLR as a priority area for SIDS. Following the Conference, a number of CARICOM countries requested assistance from the General Secretariat of the OAS (GS/OAS) in developing a project that would help them initiate the process of adapting to the impacts of climate change.

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\* Due to the delays in closing the project, including completing project activities and reporting requirements, the RPIU was unable to complete an executive summary of the project summary report before completion of the ICR. This summary was taken directly from sections of the CPACC draft final report that was prepared in April 2002 by the Regional Project Implementation Unit with the assistance of a consultant.

At that time, eleven of the CARICOM countries were party to the (UNFCCC), which established a legal framework for responding to global climate change through the promotion of measures aimed at reducing emissions of Green House Gases (GHG) and preparing for adaptation to the adverse effects of Climate Change. Being relatively small contributors to the production of GHG, but extremely vulnerable to the impact of climate change, meant that Caribbean SIDS were well positioned to qualify for assistance from the Global Environment Facility (GEF). These facts provided the justification and impetus for CARICOM Governments to request that the GEF to support the design and implementation of a project entitled: Caribbean Planning for Adaptation to Climate Change (CPACC).

### **1.1. The Project Design Process**

Following a regional technical consultation in Barbados in September 1994 - organized by the GS/OAS, with participation of several countries, the CARICOM Secretariat, and the OECS Natural Resources Management Unit (OECS/NRMU) - a revised project document was submitted to all the member states of GEF's Caribbean Constituency for consideration and approval. The project was ultimately endorsed the Council of CARICOM Ministers of Foreign Affairs who directed that it should be transmitted to the GEF. The project concept was subsequently approved by GEF Council as part of its Work Program in May 1995, and the GS/OAS received a Project Development Facility (PDF) Grant to enable it to prepare a full project document in consultation with the participating countries and regional institutions.

The PDF Grant made available through the World Bank, as a GEF Implementing Agency, supported a series of technical consultations, the first of which was held in Barbados in September 1995. Eleven CARICOM countries, who in March of that year were parties to the UN Framework Convention on Climate Change took part, as did representatives of the CARICOM Secretariat, the University of the West Indies (UWI), the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP). The consultation initiated the process aimed at securing agreement on:

- ◆ the structure and activities of the project;
- ◆ the institutional framework for project implementation;
- ◆ the management structure for the project.

The first meeting also helped to build a team of country representatives and resource persons that would be engaged in the preparation of the project document.

A series of national consultations followed in each of the participating countries. The National Focal Points (NFPs) were asked to convene a core group of government agencies and private sector stakeholders that, given their mandates and/or interests would have to play a critical role in addressing climate change in their country. With support from consultants and resource persons made available by the project, these core groups then undertook a series of meetings, culminating in a national consultation aimed at promoting awareness of climate change, and providing information on the intended project. The main output of the national consultation process was the production of national reports defining the desired nature of the country's participation in the project.

The countries and CARICOM Secretariat maintained an active level of participation throughout the project preparation phase. A second regional consultation workshop, held in Dominica in January 1996 reviewed the national reports that were generated during the national consultations, and began integrating the proposed national and regional activities into a coherent workplan. During this consultation, the countries also indicated their priorities with respect to the selection of pilot projects for national execution, and a final allocation of pilot projects was agreed upon.

A third regional consultation workshop on the project was held in St. Kitts and Nevis in May 1996, as part of the pre-appraisal review of the project document. The project structure and each of project components were reviewed in detail, addressing questions from the countries regarding operational and funding aspects. The heads or representatives of the key agencies that would be involved in the project implementation, UWICED, CMI (now CIMH), IMO, and the CARICOM Secretariat were also present, and the roles of these agencies were clarified.



After appraisal of the project in May 1996, the Second Session of the Conference of the Parties (COP2) issued Guidelines for National Communications (July 1996). Given that the CPACC project design was finalized prior to the issuance of these Guidelines, it was decided, at the instance of most CPACC participating countries, to remove the National communications component from the project, to allow the countries to apply for separate National Enabling Activities (NEA) Grants.

On successful completion of the project appraisal process, a series of Cooperation Agreements governing the roles and responsibilities of the relevant parties in the implementation of the project, were signed. The first of these Agreements, was signed between the GS/OAS as Executing Agency and the UWI on behalf of the UWI's Centre for Environment and Development (UWICED) which was deemed the most appropriate agency to host the project's Regional Project Implementation Unit (RPIU) - the team that would directly manage the execution of the field aspects of project. Cooperative agreements were also signed between the GS/OAS and each of the participating countries, which specified roles and responsibilities of the GS/OAS, the RPIU and the country's institutions in the implementation of the project's activities.

## **1.2 The Project Design Structure**

The overall objective of the CPACC, was to support Caribbean countries in preparing to cope with the adverse effects of Global Climate Change (GCC) particularly SLR, in coastal and marine areas, through vulnerability assessment, adaptation planning and related capacity building initiatives. More specifically, the project was expected to assist national governments and UWICED to:

- (a) strengthen the regional capacity for monitoring and analysing climate and sea-level dynamics and trends;
- (b) identify areas particularly vulnerable to the adverse effects of climate change and SLR;
- (c) develop an integrated management and planning framework for cost effective response and adaptation to the impacts of GCC on coastal and marine areas;
- (d) enhance regional and national capabilities to prepare for the advent of GCC through institutional strengthening and human resource development; and
- (e) identify and assess policy options and instruments that may help to initiate the implementation of a long-term programme of adaptation to GCC, in vulnerable coastal areas.

The CPACC was designed for implementation as a regional project. Its implementation modalities emphasised a cooperative approach - along with the 12 participating countries - to developing the requisite capacity at the national level, to continually assess the impacts of Climate Change on the coastal resources, and by extension, on the societies and economies of the participating countries. The project comprised four (4) regional and five (5) pilot action components. The regional components were as follows:

- (1) Design and Establishment of a Sea Level/Climate Monitoring Network
- (2) Establishment of databases and information systems.
- (3) Inventory of coastal resources and use.
- (4) Formulation of a Policy Framework for Integrated Coastal and Marine Management;

The national pilot components were as follows:

- (5) Coral Reef Monitoring for Climate Change -- Bahamas, Belize, Jamaica;
- (6) Coastal Vulnerability and Risk Assessment -- Barbados, Grenada, Guyana;
- (7) Economic Valuation of Coastal Resources -- Dominica, St. Lucia, Trinidad and Tobago;
- (8) Formulation of Economic/Regulatory Proposals- St. Kitts & Nevis, Antigua and Barbuda;
- (9) Greenhouse Gases Inventory and Vulnerability Assessment of the Agriculture and Water Sectors -- St. Vincent and the Grenadines

## **1.3 The Project Management Structure**

The project was managed through a five tiered structure as follows:

- (a) The World Bank as GEF Implementing Agency
- (b) the GS/OAS as Executing Agency for the World Bank
- (c) the UWICED as host to the RPIU. Responsibility for financial and general administration however was taken on by UWI Cave Hill, since UWICED did not have the required legal status to manage a World Bank special project account;
- (d) the Regional Project Implementation Unit (RPIU) as coordinator of the implementation of the field components of the project;
- (e) the National Implementation Coordinating Units (NICUs) to inter alia, coordinate and support the execution of activities undertaken by the project in which the government participates.

## 2.0 THE IMPACT OF CPACC

Although CPACC has made a significant contribution towards the realization of the goal of enhancing regional and national capabilities for preparing for the advent of GCC, through institutional strengthening, more has to be done to consolidate on this start. Capacity developed under the pilot activities has to be disseminated regionally and further capacity development needs to be undertaken in other key areas related to climate change adaptation. Much of the work under CPACC has been hampered by the lack of baseline data and the region will need to invest in efforts aimed at addressing this handicap.

The NFPs and NICUs have emerged as a prominent source of expertise and advocacy for Climate Change issues nationally and regionally. CPACC has also facilitated the articulation of regional positions for participation at international fora (COPs and its subsidiary bodies) and regional personnel mainly NFPs play a prominent role in the negotiating process often representing major blocs such as AOSIS, Group of 77 and China and GRULAC. At COP7 one of our NFPs and a member of the RPIU in his capacity as delegate for one of the CPACC countries, have been selected on the Technology Transfer Board as representatives of AOSIS and GRULAC respectively.

The Regional Programme Implementation Unit (RPIU) has developed into an effective mechanism for coordinating climate change activities in the region. By virtue of the arrangements for the Project Advisory Committee (PAC) which is chaired by CARICOM, the project, through the RPIU, had a direct link to the regional political decision making process. This has led to the recognition at the decision making level of the leadership role in the advocacy for climate change issues which the RPIU now performs in the region. The present staff at the RPIU through their work in managing different components of CPACC, have built up an excellent liaison with NFPs, NICUs and country implementation teams and have provided support services for their functioning. The experience and the momentum built up through institutions, organizations (both public and private sector) on climate change issues need to be maintained.

The Caribbean countries have been meeting their obligations under Multilateral Environmental Agreements, mainly through National Implementation e.g. Biodiversity Convention, Montreal Protocol, and the NEAs under the UNFCCC. The exception has been with the implementation of CPACC which adopted a regional approach. Its successful implementation has been in no small measure due to the ability of the RPIU to establish and coordinate a dynamic and highly motivated regional network of technical skills and institutions to address climate change issues in the region.

CPACC as a multi-country, multi-component project, presented several unique challenges implementation. The most important challenge was that of getting buy-in by the participating countries and maintaining their interest throughout the entire period of the project. This was made possible through the process of stakeholder consultation during the preparation of the project and during the entire implementation period (NICU meetings). The constant networking and coordinating function performed by the RPIU also contributed to keeping up interest and enthusiasm among the participants. The full involvement of the NICUs and the use of country teams (advised by consultants) in implementing project activities also served to heighten stakeholder interest and participation in the project. At another level the governance mechanism employed for the project with the Project Advisory Committee chaired by a functionary of a regional organization with a regional political mandate provided a basis for the

“visibility” and “legitimacy” of the project at the regional political level. This paved the way for significant political decisions relative to the continuation of climate change work in the region. Climate change as an issue is now a permanent item on the agenda of the meeting of CARICOM Council of Ministers of Trade and Economic Development (COTED).

Although national arrangements for the implementation of the project were commendable they placed tremendous strain on already stretched national resources especially human resources. Future projects should provide for some support to be given to facilitate these national arrangements and to encourage a higher level of national participation in project implementation.

For the RPIU, the task of coordinating the implementation of nine project components in twelve sovereign countries was not an easy one and in future adequate resources have to be allocated to facilitate the successful performance of this function. Not enough importance was attached to arrangements for the financial management of the project at the level of the RPIU and this together with the complicated arrangements put in place for this function placed undue strain on those charged with its execution. Financial management is a critical element in the mosaic of functions required for project implementation and adequate resources should be made available to ensure that it is properly addressed.

The active involvement of the different agencies – implementing, executing, regional implementing – in NICU and PAC meetings was an essential element of project success. These meetings were effective in that they provided an excellent platform for review and adjustment of project activities and proved to be a good management mechanism.

**The overarching lesson drawn from this project is that for small developing countries with scarce human resources and weak adaptive capacity most effective use can be made of resources by adopting a regional approach to meeting their obligations under the Multilateral Environmental Agreements to which they are party.**

### **3.0 CPACC SUSTAINABILITY**

The sustainability of CPACC was an issue of concern of Caribbean Ministers of the Environment, when they met in Barbados in November 1997, to review the Implementation of the ISDS/POA. At that event, Ministers recorded their support for the CPACC and mandated that Caribbean States develop the necessary institutional mechanisms to ensure that critical programmes initiated under CPACC are sustainable beyond the lifetime of the project.

When taken in its strictest context, there is strong appreciation - especially within the NICUs and NFPs - of Climate Change issues and concerns and an equally strong commitment to continue with the scientific aspects of the CPACC, providing that adequate finance and other resources, are made available to facilitate such work.

While there is little evidence of hard investment in direct Climate Change activities by Governments, there appears to be a high level of activity and investment, in areas that are not unrelated to Climate Change. For example, nearly all CARICOM Governments are investing heavily in programmes and/or projects in areas such as: coastal zone management; energy conservation and management; solid and liquid waste management; hurricane vulnerability reduction and disaster preparedness. The fact that thus far, these investments are not being driven by Climate change, per se, is only material, to the extent that the climate change dimension can “add value” to the cited policies and programmes. For example, following the damage caused by Hurricane Lenny, to nearly sixty (60) homes, located on Saint Lucia’s southwest coast, the Government decided to relocate the affected households to less vulnerable areas. In essence, this is a classic “retreat” measure, which is not necessarily being linked to Climate Change, per se.

The capacity for in-depth, routine research generally and on climate change issues in particular, is another determinant of the future sustainability of the CPACC and Enabling Activities Projects. Even with the strongest appreciation of climate change and its effects, there are limits to the level of relevant research that can realistically be undertaken at the national level. Some of the research activities, such as the Sea Level/Climate Change Monitoring Network and Data Gathering of GHGs respectively, can be incorporated into the routine activities of

competent agencies. But for the scientific purposes of the UNFCCC, these and other activities will have to be given some degree of oversight and focus. Ideally this should be provided by a regional agency.

Against this background, the emergence of a Caribbean Community Climate Change Centre (CCCC) has strong appeal and has already begun to receive overwhelming support from the region's political directorate and from the donor community. One of the key functions of the CCCCC would be to develop special programmes targeting key issues such as, coastal zone management and hurricane preparedness and sectors, such as tourism, agriculture, health, insurance and oil and petrochemical industries. Other proposed functions include:

- developing Clean Development Mechanism projects;
- assisting in resource sharing and technical cooperation;
- providing information exchange on training, both regionally and elsewhere throughout the world;
- strengthening the negotiating capabilities of SIDS representatives at CoP;
- defining common strategies and goals; and
- advocating for SIDS at international forums.

The Agreement to establish the CCCCC has already been approved by CARICOM Heads of Government. Further, endorsement was also secured at the 8th Meeting of Ministers of Environment of Latin America and the Caribbean, promoting the cause of South-South Cooperation on Climate Change issues.

While there is a compelling case for the establishment of the CCCC, more thought will have to be given to the Centre's ability to address other cross-cutting issues, as part of a wider portfolio. The evidence suggests that, for the moment, it is not Climate Change that is driving the sustainable development policies and programmes that are emerging in Caribbean countries. It is quite likely that this situation will change, as more hard evidence of Climate Change-related phenomena, becomes available. But there remains a huge body of work to be done at the sectoral level, to bring about the kind of changes in approaches that will reduce the causes as well as the impacts of Climate Change. This body of work should not be underestimated, especially given the fact there is no CARICOM-wide, sustainable development agency, with the requisite political or technocratic support. Therefore the longer this deficiency remains un-addressed, the less effective the CCCC is likely to be.



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## IMAGING

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