CARIBBEAN
Mainstreaming Adaptation to Climate Change Project

GEF Project Document

Latin America and Caribbean Region
LCSES

Date: February 26, 2003
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Project ID: P073389
Focal Area: G

Team Leader: Benoit Blarel
Sector(s): General public administration sector (30%), General water, sanitation and flood protection sector (20%), Other industry (20%), General agriculture, fishing and forestry sector (15%), Housing construction (15%)
Theme(s): Climate change (P), Natural disaster management (P), Environmental policies and institutions (S), Vulnerability assessment and monitoring (S)

Project Financing Data

[ ] Loan **[ ] Credit** **[X] Grant** **[ ] Guarantee** **[ ] Other:**

For Loans/Credits/Others:
Amount (US$m): 5.0

Financing Plan (US$m): Source	Local	Foreign	Total
BORROWER/RECIPIENT	3.15	0.00	3.15
CANADA, GOV. OF	0.00	2.00	2.00
GLOBAL ENVIRONMENT FACILITY	0.00	5.00	5.00
US, GOV. OF	0.00	0.80	0.80
Total:	3.15	7.80	10.95

Borrower/Recipient: CARICOM (SEE COUNTRIES LISTED BELOW)
Participating Countries: Antigua & Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Cooperative Republic of Guyana, Jamaica, St. Kitts and Nevis, Saint Lucia, St. Vincent & the Grenadines, Trinidad & Tobago.
Responsible agency: CARIBBEAN COMMUNITY (CARICOM)
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Estimated Disbursements (Bank FY/US$m):

FY	2003	2004	2005	2006	2007			
Annual	0.81	1.59	1.26	1.17	0.17			
Cumulative	0.81	2.40	3.66	4.83	5.00			

Project implementation period: April 1, 2003-March 31, 2007
Expected effectiveness date: 04/15/2003 **Expected closing date:** 09/30/2007

A. Project Development Objective

1. Project development objective: (see Annex 1)

1. Project Development/Global Objective. To facilitate the creation of an enabling environment for climate change adaptation in CARICOM small island and coastal developing states (the participating countries are: Antigua & Barbuda; Bahamas; Barbados; Belize; Dominica; Grenada; Cooperative Republic of Guyana; Jamaica; St. Kitts and Nevis; Saint Lucia; St. Vincent & the Grenadines; Trinidad & Tobago).

2. Key performance indicators: (see Annex 1)

- Strengthened regional knowledge base:
  - 90% of the stations reporting with 90% reliability;
  - Wide dissemination of climate change related data and documentation;
  - Models, databases, vulnerability assessments and adaptation approach developed under the project are found useful by potential users/beneficiaries who are also willing to use them, and are assessed of satisfactory quality.
- A large constituency of sectoral staff equipped and trained to incorporate climate change concerns into their work (vulnerability and risk assessment, economic analysis, policy aspects, adaptation options and the use of a risk management framework to determine the best options available, and the development of a strategy to implement these).
- Public awareness to climate change issues and impacts enhanced
- National Multi-sectoral Adaptation Strategies and Implementation Action Plans, developed in a participatory fashion with stakeholders, are presented to Cabinet, or being considered in appropriate committees/commissions
- Plans prepared for improving the application and enforcement of existing policies and regulations which have been identified as raising vulnerability to climate change;
- Regional coordination on climate change issues improved, such as representation to international fora (United Nations Framework Convention on Climate Change) and in addressing climate change adaptation

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)

Document number:

(a) Jamaica CAS: Report Number 21187; Date: 2000/11/02 **Date of latest CAS discussion:** Jamaica CAS Progress Report: Report Number 24689; Date: 2002/09/18
(b) Belize CAS: Report Number 20708; Date: 2000/08/02
(c) Eastern Caribbean Sub-Region CAS: Report Number 22205; Date: 2001/06/04
(d) Guyana CAS: Report Number 24073; Date: 2002/05/17
(e) Trinidad and Tobago CAS: Report Number 19052; Date: 1999/04/15

1. Sector-related CAS goal supported by the project. Climate change is an important topic of discussion between the Caribbean countries and the World Bank. The most recent CAS for the Eastern Caribbean (June 2001) highlights the serious impacts that global climate change could have on OECS small island developing states (SIDS). A specific CAS objective is the need to complement traditional disaster management approaches in the region with comprehensive disaster mitigation, sustainable land use, and risk minimization measures to address anticipated changes in sea-level, sea surface temperature, and other regional impacts of global climate change. The CAS for Guyana clearly identifies breaches of sea

defenses and corresponding flooding as a threat to settlements and economic activities in coastal areas. It emphasizes upgrading quality standards for road maintenance to reduce their vulnerability to natural disasters. It also suggests the development of a disaster management strategy as a key to sustainable economic development. The Jamaica CAS identifies improving disaster preparedness as one of the key elements in its overall poverty reduction and economic development strategy. It articulates the need for a regional approach to disaster management, including building adequate human resource capacity to deal with such contingencies. The Trinidad and Tobago CAS suggests developing a regional agenda for dealing with disaster management and climate change impacts.

The proposed project supports these natural disaster and climate change related CAS objectives to achieve environmentally sustainable development. The project will build adequate knowledge base and capacity at the regional and country level to identify the climate change impacts, assess vulnerability of, and concomitant risks for, key sectors of the SIDS' economies, and build capacity in individual countries to develop and mainstream adaptation strategies into the planning and development processes. The project will help facilitate the transition from data collection and analysis and technical interventions to creating an enabling environment for climate change adaptation. To achieve this transition, the project will additionally focus on public education and outreach, and on the policy and regulatory environment (policies, regulations and their enforcement).

1a. Global Operational strategy/Program objective addressed by the project:

The strategic goal of the proposed project is to create an enabling environment for adaptation to climate change. This is consistent with the GEF operational criteria for enabling activities under the UNFCCC (UN Framework Convention on Climate Change). The proposed project builds upon the Caribbean Planning for Adaptation to Global Climate Change (CPACC) project, a Stage I activity project, which closed in 2001. The proposed project is a Stage II activity as defined under the UNFCCC and the Conference of Parties (COP) decisions, and is also consistent with the July 2001 guidelines issued by COP on climate change adaptation and capacity building. Stage II activities as envisaged in Article 4.1 of the UNFCCC include "measures, including further capacity building, which may be taken to prepare for adaptation". The project will enable incorporation of climate change projections into disaster management to enhance the disaster mitigation approach adopted by the region.

2. Main sector issues and Government strategy:

Main Sector Issues. Caribbean countries, small islands and/or low-lying states, are economically, socially and environmentally vulnerable, and the climate change variations will exacerbate this vulnerability. Global climate change is expected to induce permanent climate changes in the Caribbean region, as well as an increase in extreme weather events, both of which will be difficult to reverse. Most Caribbean islands are too small to be identified with a grid point in global climate models, limiting the ability to generate future projections for climate change. However, most projections at the regional level are reasonably robust and suggest that permanent climate shocks to the Caribbean countries are expected to include sea level rise, and higher surface air and sea temperatures; extreme weather events, such as tropical storms and hurricanes, and more "El Niño-like" conditions are also expected to become either more frequent or more severe, or both; rain intensity is also expected to increase, leading to both more frequent as well as more severe flooding events.

These permanent shocks and changes in extreme events are expected to result in loss of livelihood, and to affect the region's resource base, damaging natural ecosystems and man-made infrastructure. Beaches, wetlands and other coastal lands could be lost to rising sea levels and higher storm surges. Coral reefs may be lost due to higher water temperatures, leading to changes in fish stocks. Some agricultural crops may become less productive with climate change. The availability of fresh water supplies may be

affected by long-term changes in rainfall patterns and evaporation. There is a risk of damage to buildings, roads, sewer and water systems, port facilities and other infrastructure due to rising sea levels, higher storm surges, and more intense tropical storms. Flood damage from heavy rains may also occur, rising exponentially with the intensity of extreme weather events. These changes in the region's resource base (natural ecosystems and infrastructure) will have economic impacts such as loss of coastal lands, loss of coastal infrastructure, reduced earnings from tourism, lower levels of fish landings and agricultural production, and loss of livelihood.

Over the last three decades, these countries have suffered direct and indirect losses due to natural disasters that is estimated to be between US$700 million to US$3.3 billion (2002 Report by Inter-American Development Bank on Natural Disasters in Latin America and Caribbean). It is difficult to approximate the impact of climate change on the SIDS economies, due partly to the varying global climate change scenarios, limited geographical projections for the Caribbean, and the inadequate inventory of vulnerable assets and resources in these economies. A recent estimate of the potential economic consequences of the impacts of climate change on the economies of Caribbean countries (Haites, 2002), in a "no-adaptation" scenario, ranges from 5% to over 30% of GDP on average (annualized values), with an even broader range for some individual countries. Tourism, agriculture, forestry, and fisheries sectors contribute significantly to the SIDS' economies, and together with water resources, are most vulnerable to climate change. These sectors are at greatest risk from the anticipated deleterious impacts of climate change. As a result, there is a clear risk that in the event of poor preparedness or the adoption of a reactive adaptation strategy, the SIDS economies may end up diverting scarce resources earmarked for development projects to relief and reconstruction arising from extreme climate change related events. This is expected to set back economic growth.

Environmental degradation further exacerbates the impacts of climate change. There is a close link between environmental degradation and poverty, and the low-income populations and communities are likely to be particularly adversely affected because they settle on lands more vulnerable to climate change related disasters,. Limited resources or land ownership and tenure patterns induce the poor to settle on unstable slopes, riverbanks and low-lying coastal areas. In addition, easy access to some resources, such as fishing grounds or fertile soils on volcanic slopes, prompt settlements in hazardous locations. Impacts of climate change are therefore likely to be more intense for the poorer sections of the populations.

Thus, if sustainable pro-poor development is to be achieved in the SIDS' economies, these countries will have to manage the impacts emanating from expected climate change. The Caribbean Group for Cooperation in Economic Development Report (2002) on Natural Hazard Risk Management in the Caribbean concluded that there is a considerable level of experience with the "risk management" approach to natural hazards in the region, covering groups of activities under the broad headings of risk identification, risk reduction and risk sharing/transfer. Proper hazard risk management contributes to efforts to adapt to climate change. The techniques used to determine the impacts of climate change are closely related to those used in disaster management, namely, vulnerability and risk assessment, development of adaptation policy, and identification of a strategy to implement the adaptation policy. Natural hazard risk management and adaptation to climate change draw on the same institutional capacities and technical skills. The risk management approach is equally applicable to addressing climate change impacts, vulnerabilities and risks. The Report points out that (i) "existing knowledge" for climate change impacts assessment is not well-developed; (ii) "wide sharing of information" with affected stakeholders or policy-makers has not taken place; and (iii) "mainstreaming climate change responsive adaptation measures into the planning and development process," both in the public and private sectors, has not yet commenced.

The main climate change sector issues are discussed under the three broad categories of risk management actions - risk identification (climate change vulnerability and risk assessment), risk reduction (adaptation strategy to climate change), and risk sharing/financing mechanisms (meet the costs of adaptation to climate change).

Issues relating to the identification of vulnerability to climate change

- Projecting the extent of climate change is a starting point in developing adaptation programs. The existing climate change models are global in nature and too aggregated to permit projections at the Caribbean countries' level. These models require downscaling to be tailored to meet the requirements of Caribbean SIDS.

- The information database on climate and sea-level monitoring, including monitoring of coral-reefs, which feeds into the climate change projection, is limited. There is a need for upgrading infrastructure already created under CPACC to deepen the process of collection, analysis and mapping for a comprehensive climate and sea-level monitoring information database. In addition, standard mapping and interpretation approaches need to be developed to make the information easy to understand by the policy makers, the private/public sector and the civil society.

- The knowledge base to effectively perform climate change impact assessment on SIDS' ecosystems is weak. This includes an assessment of the physical and socio-economic vulnerabilities and risks associated with climate change that is insufficient to inform the process of identification of climate change risk and formulation of appropriate adaptation strategies. Models and capacity to assess the impact of climate change scenarios on coastal ecosystems and on the water-cycle specific to the Caribbean SIDS' situation are yet to be developed. In most Caribbean SIDS, there is a lack of comprehensive inventory of existing critical facilities to assess the vulnerability of key infrastructure and economic sectors to climate change. The focus of the limited vulnerability assessments carried out until now ignores the social vulnerabilities and does not incorporate community level information in the assessments. The range of available climate change impact models, vulnerability and risk assessment methodologies needs to be carefully reviewed, selected, tailored and applied to SIDS economies, so as to develop a more refined and reliable knowledge base covering the expected impacts of climate change on the national economies.

- Human skills and institutional capacity in each of the Caribbean SIDS is inadequate to address the needs of climate change related vulnerability and risk assessment, given the small size of these countries. A coordinated approach will be required that: delineates activities best performed at the regional level to build regional human and institutional capacity, and achieve economies of scale (typically including identification and fine-tuning climate projection models, climate impacts assessment models, developing harmonized methodologies for vulnerability assessment and adaptation approaches); and identifies areas for country level capacity and institution building to sustain the process of identification of adaptation strategies, and facilitate their implementation in each participating country (typically including sector specific vulnerability assessments, assessment of economic costs, developing adaptation policy options, identifying institutional constraints, and public education).

Issues relating to the reduction of vulnerability to climate change

- There is a perception that climate change management is the sole responsibility of government rather than a shared responsibility involving the private sector, civil society, government ministries, and trade associations. This results in low public demand for climate change adaptation. There is a need to

educate the public and disseminate information with respect to the potential impacts of climate change, and the benefits and advantages of reducing vulnerabilities to climate change through user-friendly documentation of successful pilots. Civil society, the business community and industry require accurate information to make decisions on participation for adaptation to climate change. An information clearing house is required at the regional level, and a strong public education and outreach program needs to be developed and implemented. There is a clear need to stimulate public demand for climate change risk management related information.

• Adaptation to climate change is not mainstreamed into the planning and development processes. Climate change implications are not incorporated into the policies and programs that guide development, (private and public) investments, and disaster mitigation strategies towards reduced vulnerability to climate change. For example, building codes and standards would need to incorporate the expected impacts from climate change to reduce infrastructure vulnerability to climate change impacts; land use control tools such as Environmental Impact Assessments (EIAs) and land use plans would need to take into consideration climate change concerns to identify appropriate investment locations that are less vulnerable to climate change; water resource management and infrastructure plans would need to reflect shifts in water availability induced by climate change.

• A coordinated multi-sectoral approach is required to implement the national climate change adaptation policies relating to specific sectors. This is particularly true in the context of small islands' economies and ecosystems. Assessment of institutional requirements, their readiness and existing capacity, and cross-sectoral working arrangements to implement the national sectoral climate change adaptation strategy remain to be carried out.

• Enforcement of existing policies and programs that guide development and investment decisions is weak. For example, existing building codes and design standards to cope with natural hazards are not vigorously implemented. Existing land use controls throughout the region are generally weak and poorly applied; enabling legislation to require the use of EIAs is often lacking, and many EIAs do not include hazard issues; planning and physical development legislation could benefit from updating. Water rights, markets and pricing could be better used to facilitate the sustainable and efficient use of water. These weaknesses would need to be identified and addressed, preferably before policies are enhanced, to reflect climate change concerns. Creating incentives, as well as education and awareness, for the private sector, local communities and governments to apply or enforce existing, as well "climate change-enhanced", policies would be a prerequisite to reducing vulnerabilities to climate change.

Issues relating to Climate Change risk sharing & financing mechanisms

• Inability to differentiate between good and bad risks. Some of the risks associated with climate change may be insurable, others may not be. However, in the absence of precise information on vulnerability and risk assessment to climate change, it is not possible for either the insurance industry or its clients to distinguish between "good" and "bad" risks; i.e., between those risks that could be transferred at a fair price and those that could not. In the absence of such information, it is likely that insurers would either not be willing to assume any climate change related risks, or would charge high premiums to do so.

• High cost of insurance. If "good" risks could be identified, another set of issues has to do with the observed or potential inefficiencies associated with the insurance industry in the Caribbean region. Governments, businesses, industry and households can reduce the financial impacts of climate change by insuring "good" risks associated with key assets, infrastructure or business activities. However, one

deterrent is high cost stemming from a variety of factors, such as inadequate legislation and regulation, or their weak enforcement, uneven human resource capacity and technical knowledge in the industry, or lack of product innovations, such as risk-pooling mechanisms. A recent Bank report (see *Catastrophe Insurance Market in the Caribbean Region: Market Failures and Recommendations for Public Sector Interventions*) has identified a series of policy, regulatory and institutional constraints to a more efficient regional insurance industry.

• Inadequate preparedness to access UNFCCC and other financial mechanisms for climate change adaptation. Some of the risks and costs associated with climate change may not be insurable because they are either too large, systemic or permanent in nature. The UNFCCC attempts to overcome this long-recognized market failure problem. The principle of *Common but Differentiated Responsibilities* that underlies the UNFCCC assigns the financial lead in combating climate change impacts to industrialized countries. With the exception of funds for the preparation of National Adaptation Programs of Action, global funds for investments in adaptation are still something of the future. Most Caribbean countries are unwilling to trade existing development aid for adaptation interventions they regard as incremental. It does not help that "no regrets" adaptation measures (which by definition have domestic benefits other than climate change adaptation) may not qualify as incremental costs under current GEF policies.

The institutional needs and preparedness of SIDS to undertake adaptation were assessed through a Capacity Development Initiative that recommended that SIDS should: (a) cooperate in the formulation of climate change policies, standards and guidelines, and enhance national capacity to effectively plan, manage and monitor their climate change policies; (b) develop a common position for international negotiations on issues related to climate change, energy and sustainable development; and (c) participate, based on the common position, in climate change-related international fora and negotiations.

Government Strategy. There has been a recognition for some time now that given the small size of the SIDS countries, there is a need and opportunity for collaboration at the sub-regional and regional level to address climate change issues. The response of Caribbean governments covers two broad actions – building capacity to address climate change and taking regional disaster management initiatives that complement the climate change initiatives.

• Building capacity to address climate change. At the SIDS Ministerial Meeting held in Barbados in 1994, climate change was accorded the highest priority among issues to be addressed under the Barbados Programme of Action. The importance of this issue as a critical element in dealing with regional sustainable development was further underlined by several pronouncements and actions taken by regional governments to address building national capacity to cope with the challenges posed by climate variability/change to regional sustainable development and culminating in the decision by Caribbean Heads of Government at their Meeting in Canouan in 2000 to establish a Regional Climate Change Center. At the 2000 meeting of the Caribbean Ministries of Finance and Environment, priority activities for sustainable development were identified, including planning for climate change. In April 2001, the OECS countries signed the St. George Declaration, under which, Principle 4 states: "member States shall implement obligations under the UNFCCC and establish appropriate legal, technical, and regulatory mechanisms for adaptation to the impacts of climate change."

CARICOM small island and coastal developing states realize there are constraints to building institutional capacity in the region and to promoting an efficient allocation of available resources. The Community has responded with education, training and capacity-building initiatives to promote the acquisition and retention of technical skills in the region. Efforts are being made to improve

coordination between existing institutions and reduce fragmentation of institutional efforts. In February 2002, CARICOM member countries established the *Caribbean Community Climate Change Center* (CCCCC) to provide an institutional mechanism for the coordination of climate change adaptation at the regional level. In late 2002, CARICOM member countries decided to locate the CCCCC in Belize.

The GEF-funded Caribbean Planning for Adaptation to Global Climate Change (CPACC; 1997-2001), a Stage I Enabling Activities project, was the first regionally coordinated effort to enable Caribbean countries to prepare to cope with global climate change, particularly sea level rise in coastal and marine areas through vulnerability assessment, adaptation planning, and capacity building linked to adaptation planning. Under the CPACC project, a collaborative approach was used to develop a *National Climate Change Adaptation Policy and Action Plan* for each of the twelve CARICOM participating countries. This approach provided considerable opportunity for stimulating broad-based interests in and exchange of information on climate change issues of national and regional importance, and for the close coordination of the policy development process at the regional level. This ensured buy-in and consistency and uniformity in the development of adaptation policy options. The exchange of *Issues Papers* and participating countries' respective *National Climate Change Adaptation Policy and Action Plans* provided further opportunities to coordinate and rationalize adaptation policy options within the Region, and was particularly effective in disseminating information on climate change policy issues and options. *National Climate Change Adaptation Policy and Action Plans* have been approved by the Governments of St. Lucia and Dominica, thereby raising the profile of the climate change agenda to the highest level.

At the completion of the CPACC project in December 2001, the government of Canada initiated its contribution to MACC, in the form of a project entitled Adaptation to Climate Change in the Caribbean (ACCC), funded by the Canadian Climate Change Development Fund (CCCDF). The project is funding activities that are aimed at maintaining the momentum that was built under CPACC and extending selected experiences until the GEF funded portion of MACC comes on-stream in early 2003. The proposed MACC project logically builds upon this Stage I activities, to consolidate the achievements of CPACC, and also to extend the coverage to move to Stage II Enabling Activities.

- Taking regional disaster management initiatives. Two new regional initiatives, the proposed strategy for comprehensive disaster management (CDM) in the Caribbean, and the establishment of the Disaster Mitigation Facility for the Caribbean (DMFC) within the Caribbean Development Bank (CDB), have been taken in 2001. The proposed CDM (2001) emphasizes risk reduction, while incorporating preparedness and response activities. The Caribbean Disaster Emergency Response Agency (CDERA), a CARICOM agency responsible for disaster management, is the promoter of CDM; its mandate and activities are being expanded to include broader risk management activities with a view towards identifying gaps, targeting interventions and capacity building, and coordinating activities for risk management. At the national level, consultations are being held to encourage governments to develop national strategies for disaster mitigation within the CDM framework. The CDB established the DMFC to assist member states with the adoption and institutionalization of successful disaster mitigation policies and practices, and to strengthen the capacity of the CDB to implement its 1998 Natural Disaster Management Strategy and internalize disaster management into its own policies and programs. Both these regional initiatives can benefit from incorporating the outputs generated through the proposed climate change activities.

3. Sector issues to be addressed by the project and strategic choices:

The project will build capacity and knowledge base, consolidating the achievements of CPACC, and adopting a "learning-by-doing" approach to capacity building. The project will support activities that strengthen the capacity of Caribbean SIDS to:

- better identify climate change vulnerabilities and concomitant risk. The project will support activities that build the regional capacity to establish and expand its knowledge base about climate trends, the impacts of climate change, and climate change vulnerability and resultant risk in key economic sectors. As a strategic choice, the project will focus its efforts on expanding the knowledge base on climate change vulnerability and risk for the tourism, water supply, and agricultural sectors;

- reduce their vulnerability to climate change by focusing on building the national capacity to identify policy issues and measures for adaptation to climate change. The project will adopt a sequential approach to capacity building, identifying and formulating national adaptation strategies and implementation action plans that build on climate change vulnerability and risk assessments previously prepared for key sectors and their integration into National Development Plans; and

- effectively access and utilize resources to reduce vulnerability to climate change and variability. Consistent with the conclusions of the Capacity Development Initiative, the project will support the development of a regional agenda to the UNFCCC, and of a regional strategy that enhances national capacity to effectively plan, manage and monitor their climate change policies. The project will consolidate the work initiated under CPACC on the formulation of National Adaptation Policies and Action Plans and contribute to the completion of the Second National Communications of participating countries to the UNFCCC.

The project will seek to build capacity in a cost effective way. This will contribute to the sustainability of project activities and objectives, and enable participating countries to extend the scope of project interventions outside of the project. For example, one strategic choice supported by the project will be to build capacity for the development of climate change hazard information (monitoring network, downscaling of climate change models, climate change impact scenarios) with specialized regional institutions in order to take advantage of economies of scale and make effective use of highly specialized skills, tools, techniques, and hardware. Similarly, economies of scale will be sought by developing for the region a harmonized approach in vulnerability and risk assessments and adaptation approach models that meet the needs of Caribbean SIDS. Capacity will be enhanced at the national level (with support from regional institutions) in the development of climate change vulnerability and risk assessments, the identification of adaptation options and formulation of adaptation strategies, and measures to reduce vulnerability to climate change in key economic sectors. Additionally, the capacity to formulate a regional agenda and adaptation strategy to climate change will be developed at the regional level.

The project will support the mainstreaming of adaptation to climate change into national and sectoral planning and policies. This will be achieved through the use of models tailored under the project to address key economic sectors. This economic sector approach lends itself better to clearly identifying the institutions and stakeholders ultimately responsible for taking actions, whether in water supply, coastal zone management, or spatial planning. Representative adaptation strategies will be developed for each sector in different country settings, and all participating countries will be able to modify these strategies to reflect their respective country settings.

The project will support a strong public education and outreach program, and a comprehensive communications strategy. Learning from CPACC, a strong public education and outreach program is

important to inform stakeholders (policy-makers, national and local governments, private sector, local communities) about: the adverse effects of, and vulnerabilities to, climate change; the actions that could be taken to reduce these vulnerabilities; and the efforts necessary to build consensus and willingness across all stakeholders to contribute to, and endorse, the adaptation strategies.

The project will attempt to create an enabling environment for adaptation to climate change. The project will build on the progress achieved under CPACC, further building institutional capacity, strengthening the knowledge base, and deepening awareness and participation. The project will also address the need to establish a policy and institutional environment that encourages and provides the incentives for adaptation by public and private sectors and local communities. For example, the project will assist and complement the work initiated by CDERA and other agencies on building standards by developing additional climate change risk responsive standards to be incorporated into existing standards. The project will also target key economic sectors (tourism, water supply, agriculture) to evaluate policy and institutional options, identify policy or enforcement gaps that would need to be addressed, and to formulate and implement climate change adaptation strategies.

Strengthening of the insurance sector will not be addressed by the project. A parallel project (OECS/Barbados Catastrophe Risk Management & Insurance Reform Project) is being prepared by the World Bank (IDA/IBRD and Caribbean Development Bank) that attempts to strengthen the domestic insurance sector and its arrangements within the international reinsurance and credit markets for Barbados and the OECS countries. It also proposes to augment the capacity of domestic insurance markets to manage and transfer large risk exposures, while building requisite reserves to pre-fund and insure against future natural and climate change related disasters. The proposed insurance reform project will become effective around the same time as this project.

C. Project Description Summary

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

Component I: Build Capacity to Assess Vulnerability and Risks Associated with Climate Change (Total US$4.88 m; GEF US$2.32 m)

This component will build regional capacity to collect and analyze data, and expand the overall knowledge base on climate change impacts and associated physical, social and economic vulnerabilities. The first four sub-components will operate at the regional level, and will focus on strengthening and expanding the knowledge base as a sound platform for analysis and decision making at the national and local levels, and will be: (a) strengthening the climate and coral reef monitoring network; (b) downscaling global climate models in support of decision making for adaptation at the regional and country level; (c) generating climate change impact scenarios; and (d) developing a harmonized approach for assessing climate change vulnerability and risk, and adaptation policy decision making.

The fifth sub-component will draw upon the information and techniques developed under the above four sub-components to prepare, vulnerability and risk assessment studies for selected countries, or groups of countries, in key economic sectors (tourism, water resources and agriculture), focusing on coastal areas. The countries where the studies will be implemented will be selected based on an agreed set of criteria (an indicative list is provided in the Detailed Project Description - Annex 2). Non-study countries will still benefit from the vulnerability and risk assessment exercises by: (a) participating, as members, in the country teams conducting the vulnerability assessment studies to actually use the harmonized approaches, and in the dissemination and training workshops; and (b) adapting the outputs of such assessments to their own country sectoral settings to evolve appropriate sectoral adaptation strategies.

The project will widely disseminate the outputs of the climate projection and impacts assessment modelling exercise, and the harmonized approach to vulnerability and risk assessment. It will build capacity by strengthening regional and national agencies and having them as coordinating agencies for identified activities, imparting information about the models and the approach to the country teams, and training these teams in their use by actual participation with expert consultants in the country level sectoral vulnerability and risk assessment studies.

Component II: Build Capacity to Reduce Vulnerability to Climate Change (Total US$2.15 m; GEF US$0.73 m)

This component will build in-country capacity to formulate and analyze adaptation policy options, and finalize sectoral adaptation strategies which will be prepared for all participating countries: (i) in the first instance, for those countries where the vulnerability and risk assessment studies are implemented (directly); and (ii) in the second instance, for non-study countries (indirectly), through derived vulnerability assessments based on lessons learned from the country-level sectoral studies. The adaptation strategies for the non-study countries will be informed by the outcomes of the field-based vulnerability studies.

This component will have four sub-components: (a) identification of "no regrets" adaptation measures for all countries (carried out in parallel with, and informed by, the vulnerability assessment studies); (b) development of adaptation approaches to food security, water, health and fishery sectors, and incorporation of climate change concerns relating to environmental impact assessments; (c) development of recommendations relating to upgrading technical norms for infrastructure in response to climate change concerns, including risk reduction incentives by the insurance and banking industry; and (d) finalization of country level multi-sectoral adaptation strategies based on the vulnerability and risk assessment studies, and inputs from the three sub-components (a) to (c) above.

The project will build capacity for developing adaptation strategies through training of country teams, having them participate with consultants in the actual strategy development exercise, and providing technical assistance to the country teams to extend their hands-on training to develop other sector-country setting climate change adaptation strategies.

Component III: Build Capacity to Effectively Access & Utilize Resources to Reduce Vulnerability to Climate Change (Total US$0.42 m; GEF US$0.18 m)

This component will have two sub-components: (a) building the regional capacity to prepare a regional position for the UNFCCC and other international fora to enhance the region's visibility and influence on relevant negotiations and policy decisions, and provide member countries with a consolidated and common position on key issues in the international forum; and (b) learning from the implementation of the CPACC project, activities under this project, and the outcomes of the monitoring and evaluation exercise, the second sub-component will support the development of a regional strategy designed to better and more effectively organize the region in a manner that will facilitate access to cost sharing or financing mechanisms (UNFCCC and others), and improve regional coordination and harmonization on climate change adaptation and policy-making. The project will specifically prepare a business plan for the regional Caribbean Community Climate Change Center, which is foreseen to help guide and implement the future climate change strategy for the region. It will also identify opportunities for resource mobilization by the region, including designing and proposing projects and developing concept papers to be presented at a donors meeting to obtain support for furthering the implementation of the adaptation strategy.

Component IV: Public Education & Outreach (Total US$2.10 m; GEF US$0.59 m)

This component will support a public education and outreach (PEO) program geared towards improving decision-making, encouraging policy changes where required, strengthening information access and data resources for key stakeholders, disseminating project-generated data and information, and fostering public awareness about the potential impacts climate change. The project will have four sub-components: (a) finalizing the ACCC developed regional PEO strategy, and developing national PEO strategies; (b) implementing the regional PEO strategy; (c) implementing the national level PEO strategies; and (d) undertaking a mid-term and final evaluation of the effectiveness of the PEO strategies, inputs and activities. Key areas of focus will be: (a) to facilitate a participatory process in the development, discussion, finalization, and dissemination of the outputs of the other project components such as climate projection and impacts assessment models, vulnerability and risk assessment strategies, adaptation strategies, technical norms upgradation in construction industry; and (b) establish a clearing house of information which will facilitate both access to information by the stakeholders, and dissemination of information by the PIU.

The project will build capacity at the regional and national level by participatory approaches to the formulation and implementation of PEO strategies, and training the national PEO teams in the latest techniques of PEO.

Component V: Project Management (Total US$1.38 m; GEF US$1.18 m)
This component will provide support to CARICOM and the PIU for the efficient and timely execution of the project, including project administration as well as planning, monitoring, and evaluating project activities over the duration of the project. The component will finance the required consultancies, training, auditing, and operating costs.

Component	Indicative Costs (US$M)	% of Total	Bank financing (US$M)	% of Bank financing	GEF financing (US$M)	% of GEF financing
I. Build Capacity to Assess Vulnerability and Risks Associated with Climate Change	4.88	44.6	0.00	0.0	2.32	46.4
II. Build Capacity to Reduce Vulnerability to Climate Change	2.15	19.7	0.00	0.0	0.73	14.6
III. Build Capacity to Effectively Access & Utilize Resources to Reduce Vulnerability to Climate Change	0.42	3.8	0.00	0.0	0.18	3.6
IV. Public Education and Outreach (PEO)	2.10	19.2	0.00	0.0	0.59	11.8
V. Project Management	1.38	12.6	0.00	0.0	1.18	23.6
Total Project Costs	10.93	100.0	0.00	0.0	5.00	100.0
Total Financing Required	10.93	100.0	0.00	0.0	5.00	100.0

2. Key policy and institutional reforms supported by the project:

The project will not directly seek the implementation of policy or institutional reforms. It aims to create the technical, knowledge and institutional base to ensure that climate change adaptation is articulated and mainstreamed into national planning, and that policies and incentives for adaptation to climate change are identified. It will support the development of an enabling environment within each SIDS to mainstream and implement sectoral climate change adaptation strategies.

The project will work with existing institutions. It will support capacity building for regional and national institutions in climate and sea-level change data generation and collation, climate projection and impacts assessment modeling, vulnerability assessments, and adaptation approaches, improving the

existing public outreach and education building programs. The project will also support the establishment of institutional mechanisms for national and regional coordination, including the articulation of a regional agenda. At the regional level, the project will seek an efficient coordinating mechanism consisting of CARICOM and the PIU, its Technical Committee, its Council of Ministers, and the National Implementation Coordination Units. Finally, the project will support the development of a regional climate change adaptation strategy that would address, among other things, the preparation of a business plan for the recently created Caribbean Community Climate Change Center.

3. Benefits and target population:

Project benefits mainly revolve around creating an enabling environment to take adaptive measures to address climate change, and to institutionalize a mechanism for a coordinated regional approach to climate change adaptation. Specific project benefits include:

- improvements in the information monitoring networks, including enhanced maintenance leading to better sustainability.
- availability of tested and tailored models and approaches for climate projections, impacts assessments, vulnerability and risk assessments and adaptation initiatives at the sectoral level, which with the capacity built up during the project, can be scaled up to a multi-sectoral exercise.
- enhanced understanding of proactive risk-reduction initiatives in reducing vulnerabilities to climate change of infrastructure, populations, and the environment;
- articulation of a regional strategy and approach for climate change adaptation.

The main beneficiaries of the project include:

- the region and the individual SIDS countries, and the global environment, through protection of infrastructure, human life, and natural resource.
- the 12 participating countries, which will use the methodologies developed and refined under the project to mainstream climate change risk management activities into planning and development processes, and implement national sectoral adaptation strategies.
- the Caribbean region, which will benefit from more comprehensive climate change forecasting techniques and be better prepared for climate change related disasters. The region will also be able to benefit from pooled insurance possibilities in the light of better "self insurance" measures adopted by the public and private sectors, and a more dispersed (geographical and hazard-type) risk resulting in lower premiums for risk insurance.
- the public and private sectors, which will be able to: (a) make better-informed decisions on location of the infrastructure based on more accurate hazard impact data; and (b) better protect its assets through incorporating risk-responsive structural standards; and (c) benefit from wider insurance coverage, insurance and financing incentives, and lower insurance rates.
- the populations, and in particular the coastal populations which comprise about 60% or more of the 5.2 million population in the small SIDS countries, which are particularly vulnerable to climate change risks and extreme events. In some countries (i.e. Guyana), some 90% of the population resides on the coastal plains. The implementation of the national climate change adaptation strategies focusing on environmental, physical, economic and social vulnerabilities of the Caribbean SIDS, should reduce the vulnerability of this group to climate change.
- donor community, which through strategic programming of resources, improved coordination in project/program implementation, and consolidation through the next level projects, will be able to achieve greater national and regional impacts.
- regional institutions, such as CARICOM, UWI, CDERA, etc. will be strengthened through increased synergy among projects implemented in the area of climate change and disaster management.

4. Institutional and implementation arrangements:

Implementation period. The Grant is expected to become effective in mid-April 2003 for a four year period, up to March 31, 2007 (the expected project completion date).

Project oversight and implementation arrangements. The *CARICOM* (located at Georgetown, Guyana) will be the Grant recipient and the Executing Agency for the implementation of the project. CARICOM is a not-for-profit, developmental, inter-governmental organization of the independent states of the Caribbean, established under the Revised Treaty of Chaguaramas, and enjoys tax-exempt status relating to its member countries (all the project participating countries are CARICOM member countries). It will execute the project under the guidance of the Project Advisory Committee. The Bank will function as the GEF Implementing Agency.

The project will be implemented by a dedicated *Project Implementation Unit (PIU)*, established within CARICOM, and physically to be located in Belize, where the region has recently decided to establish the Caribbean Community Climate Change Center (CCCCC). The PIU will be responsible for the day-to-day operation and management of project. It will be in charge of project oversight, coordination, maintenance of institutional networks, and articulation and collaboration with stakeholders. It will undertake some activities with regional and other international institutions (for example, relating to climate projection modeling, harmonization of vulnerability assessment and adaptation approaches), and will work with the participating countries for the implementation of the country-level project activities (for example, vulnerability assessment and adaptation studies, implementation of the national PEO strategies). The PIU will be headed by a Project Manager who will be responsible for overall project management, and specifically for Component III. He will be assisted by: (a) a Technical Coordinator (to manage Component I); (b) a Public Education & Outreach Specialist (to manage Component IV); and (c) an Economist (full-time, but whose services will be required when implementation of Component II commences). The Terms of Reference for these core consultancies have been agreed with CARICOM and included in the Project Operations Manual. The process of recruiting the consultants has already been initiated, and the establishment of the permanent PIU at Belize by June 30, 2003 is a dated covenant included in the Grant Agreement. During the interim period, CARICOM has established a transitional PIU at Barbados headed by a Project Manager, who will also be managing Component I in the absence of a Technical Coordinator. He will be supported by a PEO Specialist and a MIS expert. The transitional PIU will kick-start the project time-critical activities, initiate the process of establishment of the PIU at Belize, install the MIS for the project activties at Belize, and eventually hand over the project by June 30, 2003 to the core consultants who will be positioned in the PIU at Belize.

Two key functions for the PIU will be performed by CARICOM, namely, accounting and financial management, and procurement. CARICOM has already identified staff exclusively for these functions. CARICOM would be reimbursed the salaries of these staff, subject to an aggregate of US$176,000 over the four year life of the project. This amount will be ballooned in the initial project implementation period, and will reduce with advancement in implementation.

Each participating country will establish a *National Implementation Coordination Unit (NICU)* for this project which would, *inter alia*, coordinate with the PIU, CARICOM, and with other country NICUs, implement the in-country project activities such as vulnerability assessments and preparation of multi-sectoral adaptation and national PEO strategies, ensure maintenance of national level infrastructure feeding into climate information generation, interact with national agencies relating to project activities, disseminate regional and national reports, participate in M&E activities, and provide feedback to PIU on project performance in their respective states. NICUs already exist in the participating countries for the CPACC project; these entities will be reoriented for this project. The reoriented NICUs will be

established and in operation by Effectiveness, and will have representation from Government Ministries (Finance, Planning, Education, Information, Agriculture), private sector, NGOs, specialized agencies (for example, Environmental Management Authorities, Coastal Zone Management Units) as core members. Other institutions would be co-opted as members at different times depending on the nature of the exercise. The NICUs would be adequately empowered by the participating country governments to discharge their responsibilities under the project.

The roles and responsibility of CARICOM, participating states and their respective NICUs are embodied in the Co-participating Agreements which have been signed between CARICOM and each of the 12 participating states. Under a co-participating agreement, each participating state will be required to establish and maintain the NICU as a precondition to their participation in the project, provide counterpart funds, assist with the implementation of project components assigned to them, and exercise due diligence with regard to project implementation requirements.

The Project Advisory Committee (PAC) will consist of one representative from CARICOM who will chair the PAC, the OECS Secretariat, two representatives from the NICUs, and one representative each from the UN Environmental Program/Caribbean Environment Program, two representatives of the University of West Indies (one of whom would be UWICED), the Caribbean Development Bank (CDB), the Caribbean Disaster Emergency Response Agency (CDERA), and a NGO community representative. The PAC will provide policy guidance for the project, review implementation progress, and evaluate its progress and results. It will meet at least once every year at the invitation of CARICOM. The PIU will act as the technical secretariat to the PAC and will meet to review the annual progress report prepared by the PIU.

The PIU will work through five lead *Beneficiary/Coordinating Agencies* for the climate and coral reef monitoring, for the climate projection and impacts modelling, and for developing climate change responsive infrastructure standards. These regional specialized institutions are neither co-financiers nor consultants hired under the project. They have been specially targeted for capacity building in the above areas, based on their specialization, and would work closely with other international agencies or consultants to provide support to the project. Separate Memoranda of Understanding are being entered into between the PIU and these coordinating agencies to support implementation of identified groups of activities. The draft MOUs have been reviewed by the Bank and found to be satisfactory, and are included in the Project Operations Manual. The five beneficiary agencies are:

- The Caribbean Institute for Meteorology and Hydrology (CIMH) will serve as the Regional Coordinator for the climate change monitoring network. The CIMH will also continue to operate the Tidal and Climate Gauge Replacement Fund, a fund designed to finance the replacement of monitoring instruments and related equipment. It will also work closely with the national meteorological and hydrological agencies, which will continue to manage all climate monitoring stations;

- The Faculty of Engineering of the UWI, St. Augustine campus will continue to support the operation of the Regional Archiving Center for climate change data;

- The Marine Studies Center of the UWI, Mona will serve as the Regional Coordinator for coral reef monitoring, and will be supported by its Caribbean Coastal Data Center which currently functions as the regional archiving center for coastal ecosystem data. It will work closely with the Coastal Zone Unit of Barbados for the yet-to-be established Eastern Caribbean Technical Support Node, with the OECS coral reef monitoring network countries, and with the Discovery Bay Jamaica platform for the oceanographic parameters;

- The Climate Studies Group at UWI, Mona will be the Regional Coordinator for climate projection and impact assessments. It will work closely with NOAA-NCAR which is very active in climate modelling, and with CIMH and the Physics Department at UWI, Cave Hill to broaden its capacity to undertake this activity. It will also interact with international centers of excellence (such as the UK Climate Impacts Programme (UKCIP) based at the Environmental Change Institute, University of Oxford) which have already developed an approach combining climate projections with climate impacts and development of adaptation options in national and sectoral settings. It will also work closely with the Canadian Climate Center, NOAA and the Hadley Center for techncial inputs; and

- The CDERA will review and initiate mainstreaming upgraded infrastructure norms and standards into its regional Comprehensive Disaster Management strategy, and promote their use in disaster management, infrastructure design and construction, property insurance and banking industry at the national level. It will also develop links with the Caribbean Council of Engineering Organization, and the Faculty of Engineering of UWI, St. Augustine to execute the studies for updating infrastructure standards. This activity will be carried out in coordination with efforts to update Caribbean Uniform Building Code, coordinated under the Caribbean Development Bank.

The PIU will also ensure, through appropriate insertions in the respective TORs of the selected consultants for the country level sectoral vulnerability and risk assessment, and adaptation strategy studies, that these consultants work closely with *other specialized institutions* in the identified sectors. These include: FAO, CARDI, CEHI, IICA, CWWA, OECS-ESDU, Caribbean Tourism Organization and CAST, which will provide support to the country study teams in their areas of expertise. The PIU will also coordinate with the Caribbean Dialogue on Water and Climate and the Integrated Watershed & Coastal Area Management Project being developed by UNEP-CAR-RCU, CEHI, the CFRAMP for the fishery program, and the GEF-assisted Meso-American Barrier Reef System Project. A Coordination Protocol already exists with the project management team of the Integrated Watershed & Coastal Area Management Project (included in the Project Operations Manual) which will serve as a model for developing similar protocols with other projects during implementation .

Financial Management System. All project accounting will be centralized at CARICOM, which has a well-established finance and accounting division, with clear policies, rules and procedures in place. The accounting system has been redesigned (under the 2001 reorganization) to be able to capture financial information across expenditure/disbursement categories (the Bank's legal/disbursement categories) and project components. A CARICOM Operations Manual has been developed as a part of the reorganization of the finance division by KPMG, and has been reviewed by, and found acceptable to, the Bank. Procurement information is also linked to accounting and budgeting information to enable the finance division to undertake effective contract management. The financial management capacity of CARICOM has been rated as satisfactory. A separate Chart of Accounts has been prepared for project expenditures, and found to meet Bank requirements for project accounting and financial reporting. This is now being incorporated into CARICOM's Solomon IV-based accounting system.

Procurement capacity assessment. The procurement assessment rated the risk as "high" since CARICOM has limited international procurement capacity, and no prior experience with, or knowledge of, Bank policies and procedures. In addition, responsibilities for procurement of consultants are diffused across several CARICOM departments who carry out the selection processes, according to their needs. In order to address these weaknesses, it was agreed that adequate procurement technical assistance will be provided, and separate procedures acceptable to be Bank will be adopted by CARICOM for the project. Specifically, the following three-point risk mitigation action plan was agreed: (a) nominate a qualified professional staff and a support staff on a full-time basis, within CARICOM, to work on procurement administration for the project; (b) retain an experienced international procurement consultant to provide

intensive technical assistance at critical times; and (c) include in the procurement section of the Project Operations Manual a clear definition of roles and responsibilities with respect to procurement, clear procedures for maintaining separate files, and a file control system. CARICOM has already identified two staff members with appropriate qualifications to support the procurement function relating to project activities, and has also prepared a comprehensive section on procurement function (organization, delineation of responsibilities across CARICOM and PIU, procurement procedures relating to individual consultants including the contract format, invitations for shopping, and procedures relating to operating costs, proposal evaluation arrangements, first year procurement plan, among other aspects). This has been found to meet Bank requirements. The Terms of Reference for the international procurement consultant have been agreed with the Bank, and the process for retaining the services of the consultant for a six-month period over the first two years of the project, until mid-term review, has been initiated. Contracting of this consultant position is a condition of Board Presentation.

Funds flow and disbursement arrangement. GEF Grant funds will be disbursed to a Special Account, maintained in a commercial bank in Washington D.C. This account will be utilized for the purposes of project disbursement, and will be managed by CARICOM. Since accounting would be centralized at CARICOM, this arrangement will not require additional Special Accounts for Bank funds, and all financial transactions will flow directly from the designated Special Account. This arrangement will also fall under the normal scope of work for the annual external audit. No funds are expected to be transferred to the NICUs for country-level activities. All payments will be made directly by CARICOM under instructions from PIU. Likewise, most PIU activity, procurement, consultancy-related payments will be made directly by CARICOM upon request from PIU. An imprest account for local level office and administration expenditures will be maintained with the PIU (about US$20,000) since it will be physically located at Belize, under which arrangement, following the first imprest from CARICOM, subsequent advances by CARICOM to the PIU will be linked with submission of expenditure reports and bank reconciliation statements.

CARICOM is an institution with "tax-exempt" status, and therefore local taxes such as VAT and sales tax on goods procured by such entities can be financed under Bank-funded grant agreements on an exception basis. Also, under GEF procedures, all incremental costs are eligible for full disbursement. Since all operating costs under this Grant are incremental in nature, these are eligible for 100% reimbursement. Disbursements against all expenditure categories indicated in Schedule 1 to the Grant Agreement have been agreed at 100%.

Although Financial Monitoring Reports will be prepared under the project, these will be primarily for the purposes of project management. The initial disbursement into the Special Account will be an advance, and subsequent requests for replenishment of the Special Account from the GEF Trust Fund Account will be supported by Statements of Expenditure, including full documentation for contracts beyond the established thresholds.

Retroactive Funding. The Grant provides US$500,000 in retroactive funding for eligible project expenditures, covering all disbursement categories, up to six months before the date of the Grant Agreement signing but after January 1, 2003. The retroactive funding will cover the following main expenditures: (a) transitional PIU consultant fees; (b) time-critical activites of evolving downscaled climate project models and developing harmonized vulnerability and risk assessment, and adaptation strategies; (c) other project activities on a modest scale; and (d) the PIU and agreed CARICOM operating costs (as defined in the Schedule 1 to the Grant Agreement) for the six-month period.

Financial monitoring and reporting system. Financial statements and reports will be prepared in formats satisfying the Bank's monitoring and fiduciary requirements. On a monthly basis (at least), the

CARICOM Finance Division will prepare the project's Statement of Expenditure, a matrix classifying receipts by financing source, and expenditures by project component and disbursement category, as required by CARICOM's operational guidelines for donor-funded projects. This information will be available from the CARICOM accounting system, which will have a separate Chart of Accounts for project expenditures.

In addition to Statement of Expenditure, the monthly financial reports will include the Special Account Reconciliation Statements. Any difference in the amount of expenditures reported under the two financial statements would be explained. The project financial statements, along with the physical progress and procurement sections of the Financial Monitoring Reports, will be submitted to the Bank on a quarterly basis, and will be submitted no later than forty-five (45) days after the end of each quarter. The contents of the FMRs have been discussed and the initial design of the reports has been agreed between the CARICOM Finance Division and the Bank. The reports, structured for this project, are included in the Project Operations Manual.

Annual audit arrangements. Annual project financial statements will be audited in accordance with International Standards on Auditing, by independent auditors (Deloitte and Touche audited CARICOM's accounts for FY 2001) acceptable to the Bank. These will include audit opinions on project financial statements, Special Accounts and Statements of Expenditures. The audited statements will be submitted to the Bank no later than four months following the end of each fiscal year (January–December). For Bank purposes, the annual financial statements will include a schedule of Statements of Expenditure presented during the year in support of Withdrawal Applications. CARICOM has already contracted Deloitte and Touche to audit project expenditures as per standard Bank audit TORs; the contract and the TORs are incorporated in the Project Operations Manual. The grant will finance the audit of project expenditures under the head "Consultancies".

Co-financing arrangements. In addition to the counterpart funds from the participating states and grant assistance by GEF, the project will be co-financed by the Governments of Canada (CIDA) and United States (NOAA). The NOAA support, aggregating to US$800,000, will be parallel in nature, and will take the form of in-kind assistance consisting of consultancies, technical assistance and studies, workshops, seminars, and training. There will be no fund flow, and therefore no procurement-related conflict with Bank procedures in this instance. The CIDA funding of US$2.0 million equivalent, covers several activities, in the nature of parallel and joint funding with GEF. The CIDA will provide funds in advance to CARICOM for project expenditures, and procurement will follow procedures acceptable to the Bank. The detailed sharing of activities between GEF, CIDA and NOAA is indicated in Table 1, Annex 2 (Project Description Summary). The co-financing agreement between CIDA and CARICOM is already in place and found acceptable by the Bank; a Letter of Commitment has been received by CARICOM from NOAA confirming the scope and amount of assistance to this project. The exact amount of NOAA assistance will be finalized with the adoption of the US government budget, and the co-financing agreement between CARICOM and NOAA is expected to become effective latest by June 30, 2003.

Monitoring and Evaluation. This will be undertaken at three levels: regular monitoring and concurrent evaluation; mid-term review, and final assessment. Regular monitoring of project activities will be the responsibility of the PIU, which will prepare semi-annual reports on the implementation progress. This will cover reporting on the progress achieved vis-à-vis the Project Operations Manual timeline for project activties, the Procurement Plan and Schedule, and agreed Work Plan for the year, among other aspects. An annual report will also be prepared indicating project achievements, experiences, problems and lessons learned during the year to be discussed in March each year. Since the key outputs of the project relate to tailoring of climate projection and climate impacts models, vulnerability assessment and

adaptation approach, regional and national level staff and institutional capacity building, formulation of adaptation strategies, there will be an assessment of the quality of the outputs by a range of external consultants (scientist, social experts, economist) as and when required, which will supplement the monitoring work done by PIU. The semi-annual reports from PIU should incorporate these qualitative assessments too. These consultants will be funded under the project. Finally, with regard to staff capacity building, the project will fund periodic "self-assessment" exercises through which the trained staff will do an internal assessment of the quality, usefulness, and "on-the-job" application of the training modules. The quality of capacity building will also be reflected in the quality of the outputs (vulnerability assessment, economic costs, adaptation policies, institutional analyses, etc.) which the trained staff will be assisted to self-prepare in teams. These will be reviewed by external consultants.

Annual Reviews. While the Bank will be reviewing the project through review missions, a full-scale review of the progress in project implementation will be undertaken around March of each year. An independent consultant(s) will be contracted to review general project execution and review the execution of specific components immediately preceding the second annual review. The outcomes of this review would be discussed at a workshop, where recommendations will be developed for the remaining project period.

Final Evaluation/Review of Project Execution. It is a requirement that all projects funded by GEF undertake a final evaluation of the project and its execution, particularly to review success and lessons learnt. CARICOM and the PIU will carry out such a review with the assistance of an independent consultant acceptable to all parties. The project will support a review workshop or Implementation Completion Report stakeholder meeting, wherein all countries and agencies will participate to review and assess the findings of the study, and evolve a sustainability plan for project activities in the post-project period.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

Focusing on creating an enabling environment versus implementing adaptation measures. Progress on adaptation to climate change requires a balanced development of the knowledge base, institutional capacity, public education and outreach, and policy environment. Building upon CPACC achievements, the project will facilitate policy formulation and integration of climate change concerns and actions into the planning and development process. An alternative approach considered was to support the formulation and implementation of adaptation investments. However, the knowledge base is insufficient to identify the adaptation investments. Further, this approach may not be sustainable if not supported by an appropriate institutional and policy environment. Also, this approach risks sending a signal to participating countries that all adaptation measures would be funded through the financial support mechanism of the UNFCCC. The project focuses on enhancing the knowledge base, building capacity at national and regional level for evolving climate change risk adaptation policies, and identifying institutional prerequisites to implement the adaptation policies.

Having a regional versus a series of country level projects. "Global" climate change is an important environmental challenge to sustainable development. The project will work at both the national and regional levels to: (i) build capacity and formulate sectoral risk management and adaptation policies; and (ii) build capacity at the regional level for climate and sea-level monitoring, including coral data collection, climate projections, refinement of approaches to vulnerability assessments, and formulation of adaptation policies, the development of a regional position for the UNFCCC, and a regionally coordinated action plan to deal with climate change concerns. An alternative approach considered was to

work with individual countries. However, the CARICOM countries have limited national capacity and resources to address this serious environmental challenge individually. Also, the success of the CPACC project provides a strong justification for espousing a regional approach that is particularly effective in disseminating and replicating lessons learned during the implementation of country-specific pilots. The regional approach also facilitates a more cohesive stance to international negotiations under the UNFCCC, and the harmonization of policies across countries to deal with climate change impacts on specific sectors.

Focusing on adaptation versus mitigation. The aggregate regional contribution to the global emission of green house gases is estimated at 0.15% of the total. As low emitters, for the Caribbean SIDS, mitigation should not be a priority, although mitigation would emanate from the adaptation policy formulation process. For the Caribbean SIDS, their highest environmental priority relates to actions to cope with climate change impacts on their most vulnerable sectors through appropriate climate change adaptation strategies. The agreements in Bonn and Marrakesh (Conference of Parties 6 and 7) support adaptation activities in the more vulnerable countries, endorsing the project approach.

Adopting a project versus programmatic approach. Through the implementation of the CPACC, the Caribbean SIDS country governments have come to realize that the challenges posed by climate change are pervasive and long-term in nature. Responding to these challenges requires a long-term commitment of resources. This will ensure that as climate change sciences mature in the medium- to long-term, adaptation policies are fully integrated into the planning and development process of these economies. A programmatic approach requires a sound baseline to be in place. It was therefore agreed that a project approach at this stage should be adopted, laying out the basis for longer-term programmatic assistance by creating the required enabling environment, by defining a longer-term national and regional strategy to address climate change risk management aspects, and by strengthening the institutions and processes at the national and regional level to evolve and implement adaptation policies.

Including multi-sectoral pilots versus limiting project scope to sectoral adaptation policies. While it is well-recognized that evolving a coordinated multi-sectoral adaptation policy would be useful for small SIDS' economies, the process of introducing pilots to demonstrate the range of activities involved, including information collection, multi-sectoral climate change impacts, multi-sectoral vulnerability and risk assessments, policy formulation, and institutional implications for implementing a multi-sectoral adaptation policy at the national level would be too time-consuming and too ambitious at this stage, especially given limited financial resources. Also, given limited experience of the governments and the sectoral agencies with adaptation policy formulation and implementation, such an approach could have frustrating consequences. The project therefore proposes to focus on the impact of climate change in key sectors, build capacity in sectoral agencies, and identify the cross-sectoral institutional and coordination issues relating to sectoral climate change adaptation policy implementation. The multi-sectoral approach could be considered in the next phase of the program.

Implementation through the Caribbean Community Climate Change Center versus Project Implementation Unit. CARICOM established the Caribbean Community Climate Change Center (CCCCC) in February 2002, which will be physically located in Belize. During project preparation, the capacity of the CCCCC to implement the project was evaluated through an Institutional Review produced in August 2002, the results of which were shared and discussed at a meeting between CARICOM, World Bank and co-financiers (GEF, CIDA) in early September 2002. During this meeting, a consensus was reached between the parties that it was premature for the CCCCC to assume project implementation responsibilities at this early stage of its development. The alternative arrangement of implementing the project through a dedicated project implementation unit (PIU) established within CARICOM (which would be the recipient of the Grant and the executing agency of the project), was agreed.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed			
Climate change vulnerability assessment, adaptation planning and related capacity building.	Caribbean Planning for Adaptation to Global Climate Change Project (GEF).	S	S
Mitigation of adverse effects of natural disasters through institutional strengthening and infrastructure support.	OECS Emergency Recovery and Disaster Management Program (Dominica, Grenada, St. Kitts & Nevis, St. Lucia and St. Vincent) (IBRD).	S	S
Restoration of agricultural capacity in drought-stricken areas; vulnerability reduction measures; flood protection and restoration of water supplies in low-lying areas.	Guyana El Niño Project (IBRD).	S	S
Improvement of potable water supply and sanitation services; reduction of vulnerability to hydrologic extremes; modernization of water sector policy and institutional framework.	Guyana Water Supply Technical Assistance and Rehabilitation Project (IBRD).	S	S
Management of wastes, coastal and marine resources, capacity building.	OECS Solid Waste Management Project (GEF;IBRD;IDA;CDB;EIB;EU;OECS)	S	S
Rehabilitate hydraulic infrastructure of priority watersheds; strengthen government capacity for environmental management and flood preparedness	Saint Lucia Watershed and Environmental Management Project (IBRD).	S	S
Barrier reef protection, coastal zone management, institutional strengthening and harmonization of national policy frameworks.	Mesoamerican Barrier Reef Project (GEF).	S	S
Develop comprehensive country and sub-regional risk management ex ante funding strategies, strengthen domestic	OECS/Barbados Catastrophe Risk Management and Insurance Reform Project		

insurance industries, and facilitate arrangements with international reinsurance and credit markets. (Under Preparation)	(IBRD, IDA, CDB)		
Second National Communications to the United Nations Framework Convention on Climate Change. (Under Preparation)	St. Vincent and Grenadines: Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas) (GEF)		
Other development agencies			
Climate change enabling activity support to Caribbean countries for preparation of first National Communications (with exception of St. Vincent and the Grenadines under CPACC).	Caribbean: Climate Change Enabling Activity Projects (UNDP;UNEP;GEF).		
Testing and improvement of methodologies and guidelines through a series of country studies for assessing climate change impacts and adaptation.	Global/Antigua and Barbuda: Country Case Studies on Climate Change Impacts and Adaptations Assessment - Phase I (UNEP;GEF).		
Capacity building, training and institutional strengthening for development of national strategies for implementation of UNFCCC.	Global: Climate Change Training Phase II - Training Program to Support the Implementation of the UNFCCC (UNDP;GEF).		
Information exchange and technical assistance for preparation of initial national communications.	Global: National Communications Support Program (UNDP;UNEP;GEF).		
National/regional studies and capacity building to assess climate change impacts on socioeconomic sectors and ecological systems for development of adaptation response options.	Global: Assessment of Impacts and Adaptations to Climate Change in Multiple Regions and Sectors (UNEP;GEF).		
Disaster mitigation in housing and infrastructure.	Caribbean Disaster Mitigation Project (USAID).		
Development of national, long-term integrated island management and sustainable development strategies throughout the sub-region and within the context of GEF operational program 12.	Implementation of an Integrated Archipelagic ecosystem management and sustainable development program for the Eastern Caribbean (UNDP-OECS		

	PDF-B Proposal)		
Coastal and marine resources capacity building.	Caribbean Regional Oceans and Fisheries Program (CROFP), Fisheries Resource Assessment and Management (CIDA).		
Disaster preparedness in the health sector.	Caribbean Hospital Mitigation and Mass Casualty Training (PAHO)		
Rehabilitation and Disaster Preparedness	Belize Hurricane Rehabilitation and Disaster Preparedness (IADB)		
Post-hurricane Reconstruction and Disaster Preparedness	Belize Emergency Reconstruction Facility Following Hurricane Keith (IADB)		
Post-hurricane Reconstruction and Disaster Preparedness	Dominican Republic Reconstruction and Improvement in the Wake of Hurricane Georges (IADB)		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

Coordination with other GEF projects. The project team coordinated with other GEF project executors and sponsors to address potential overlaps at the earliest opportunity and agree upon a mechanism for cooperation and collaboration in areas of mutual interest. During project preparation, opportunities for collaboration with projects already approved or under implementation were explored. The PIU will also coordinate with the project management teams of the Caribbean Dialogue on Water and Climate and the Integrated Watershed & Coastal Area Management Project being developed by UNEP-CAR-RCU, CEHI, the CFRAMP for the fishery program, and the GEF-assisted Mesoamerican Barrier Reef System Project. A Coordination Protocol already exists for coordination with the project management team of the Integrated Watershed & Coastal Area Management Project (included in the Project Operations Manual), which will serve as a model to develop similar protocols with other project management units during implementation.

3. Lessons learned and reflected in the project design:

A key lesson learned and reflected in the proposed project is the sequencing of the activities to address climate change issues, given the long-term horizon over which these initiatives have to be phased in. There is a crucial and immediate need to build an enabling environment to embrace climate change adaptation policies, rather than investing in mitigation measures. The proposed project attempts to create an enabling environment for climate change adaptation to occur on a sustainable basis. Specifically, it focuses on building and refining the knowledge base for informed decision-making, on piloting the process of preparation for adaptation policies, identifying institutional gaps and remedies for

implementation and enforcement of adaptation policies, and forging a strong academic, private sector, NGO, public sector, civil society and government (sector level and national) partnership for developing and implementing a climate change adaptation strategy.

Another central lesson learned and reflected in the project design has to do with the fundamental need to mainstream climate change issues into national sustainable development strategies. Good progress has been made under CPACC and other projects in technical capacity building and institutional strengthening; however, climate change issues still are not generally a part of the mainstream policy dialogue at the national level. To this end, the proposed project has been designed to broaden and deepen capacity building efforts with stakeholders in local communities and key sectors to incorporate climate change impact and risk assessment into their ongoing development planning and investment decisions. Public and political awareness activities will also be intensified through a vigorous education and outreach effort to further sensitize the general public about the relevance of climate change issues in their daily lives and to build political support for adaptation initiatives.

A related issue is the need to expand climate change monitoring and impact assessment as a basis for national and regional decision making. CPACC and other projects in this area have underscored the need for region-specific climate models for the Caribbean in order to make more accurate projections about climate change impacts, and develop appropriate strategies in individual countries. To this end, the proposed project will support: (a) the downscaling of global climate models; (b) assisting the already established monitoring networks, including planning and building capacity for their routine operation and maintenance; (c) further development of data applications relevant to the design of national adaptation activities for selected sectors; and (d) expanding vulnerability assessments from a focus on coastal management issues to include water resources, tourism, and agricultural impacts of climate change, and also from a pure engineering assessment focus to include social and economic aspects.

Other regional projects have underscored the importance of an effective regional coordination mechanism to address system-wide transboundary issues. CPACC has been instrumental in taking the first step of establishing a regional network of national government agencies, private sector representatives and regional institutions addressing climate change and its effect on economic, social and cultural development in the Caribbean region. The proposed project will consolidate this initiative and formalize the regional institutional mechanisms to articulate a regional strategy for climate change and also to determine the national level actions required to further the region level strategy. In addition, the regional mechanism will also assist individual countries in crafting their national communications, as required under the UNFCCC.

In order to effectively mainstream climate change into development planning, strong national institutions such as the finance, planning, economic ministries and line agencies need to be involved. Keeping the climate change agendas within the environmental agencies has not led to effective mainstreaming of these issues into policy decisions. Through the development of a national policy framework, evolving sectoral policies for climate change management, setting the stage at the end of the project for multi-sectoral planning for climate change risk management, and the technical support and capacity building efforts for line ministry and national agency staff, the project will facilitate dialogue between line agencies, finance ministries and environment ministries to include climate change considerations in their respective agendas.

4. Indications of borrower and recipient commitment and ownership:

The topic of climate change remains a high priority to the Caribbean SIDS. All participating countries

have ratified the United Nations Framework Convention on Climate Change (UNFCCC) and have also signed the Kyoto Protocol. The region has also been actively involved in the discussions relating to the design of the Clean Development Mechanism, and is now playing an important role in shaping the climate change debate in special interest groupings – AOSIS, G77 and China.

The Caribbean SIDS have been full participants in the implementation of the CPACC project. Under this project, governments have committed resources for its operation through National Focal Points and National Implementation Coordinating Units. Some countries have even established cross-sectoral National Climate Change Committees that have been actively involved in implementing CPACC activities, such as vulnerability assessments, coral reef monitoring, national climate change adaptation policies and coastal resource inventories. These groups will now be expected to support the implementation of the proposed project. Through an interface with the region-promoted CPACC project, PETROTRIN (the Petroleum Company of Trinidad and Tobago) has supported climate change activities in the region and has recently established an in house climate change institute to advise the industry on actions which they need to take for compliance with some aspects of the UNFCCC. One country, St Lucia, has declared that it will pursue a policy of a totally non-fossil fuel based economy, and it has already taking steps to implement this initiative. Further, under CPACC all countries are committed to developing and adopting a National Climate Change Adaptation Policy and Implementation plan formally at the national level.

Under the UNDP Enabling Activities project, all participating countries have completed their first National Communications. Some of these communications were submitted to the UNFCCC secretariat at COP6. All of these communications identify adaptation to climate change as a high priority issue for the region, and support the regional approach adopted for implementation of CPACC. At the national level, the initial national communication reports from CARICOM countries requested support for a second regional project (as a follow-up to CPACC), to continue capacity building and technical assistance in the area of climate change, and to further strengthen the adaptation process.

At the regional level, therefore, the CARICOM Heads of Governments approved a resolution during their last meeting in July 2000, authorizing the then implementation team of the CPACC project to submit a request to the GEF to support the development of a full proposal to continue the process of adaptation. The CARICOM Heads of Government also endorsed a resolution calling for the establishment of institutional capacity to champion adaptation policies and to coordinate climate change activities in the region.

5. Value added of Bank and Global support in this project:

Bank's comparative advantage in managing climate. The GEF's role in this project is essential. Issues relating to climate change are global, and in the case of Caribbean countries, transboundary and regional in character. Incremental cost aspects can be addressed adequately through grant support at the regional level. The World Bank brings to this project its considerable capacity to address climate change related environmental issues and its ability to convene governments around issues of common concern.

Relevant Sector Work. The Bank will provide the recipient with access to climate change related initiatives in other regions, including the Pacific Islands' proposed adaptation effort, the sector work on adaptation by low-lying areas, and the development policies and regulations on climate change used in other regions. Likewise, the sector work on optimization of participation in the Clean Development Mechanism, undertaken under the aegis of the National Strategic Studies partnership in Colombia, Argentina, and Bolivia will be useful in the discussions leading to adoption of regional positions at the

UNFCCC Conference of Parties.

Successful experience with CPACC project. The Bank has gained considerably from the experience of implementing of the CPACC project. Since this project is a logical extension from Stage I (CPACC project) to Stage II enabling and adaptation activities, the Bank is ideally suited to provide support for the proposed project, as it brings institutional memory and continuity to consolidate the achievements under the CPACC project.

Extensive experience in institutional, strategic, economic, and social aspects. Climate change initiatives in the Caribbean have, until now, paid limited attention to policy and institutional considerations and PEO activities, with some work on developing knowledge base for SLR adaptation, and with limited work on social vulnerabilities and impacts assessment or economic assessment of potential climate change damage/loss. Some very basic work was done under the CPACC project on climate projection and vulnerability assessments for selected coastal areas. In the Stage II initiatives, it is important to move towards a more comprehensive and participatory approach to social and economic vulnerabilities and economic assessments, and develop adaptation strategies, identify institutional prerequisites for implementation of the action plans, and bring about a coordinated action at the regional level. The Bank has considerable experience in these areas that could be shared with the region for effective implementation of the project.

Complementarity with other projects. There are several completed, ongoing and proposed initiatives in managing climate change risks by the Caribbean SIDS. The *recently completed CPACC project* created a platform to launch the proposed project. *Activities of several on-going projects need to be coordinated* with the proposed project. In the area of strengthening observational and monitoring networks and climate-related data generation, FINNIDA is an important contributor. The Comprehensive Disaster Management Strategy developed by CDERA will be used as starting framework to incorporate climate change issues into governmental response strategy. The *proposed project is co-financed* with contributions from the Governments of Canada and the United States. The Integrated Watershed and Coastal Areas Management Project is another proposed project funded by GEF and directly relevant to this project. The Bank brings a unique comparative advantage of coordinating the activities of these completed, on-going and other proposed projects at the national and regional level, yielding considerable benefits in terms of experience and best-practice sharing.

E. Summary Project Analysis (Detailed assessments are in the project file, see Annex 8)

1. Economic (see Annex 4):

○ Cost benefit NPV=US$ million; ERR = % (see Annex 4)

○ Cost effectiveness

● Incremental Cost

○ Other (specify)

The project is a Stage II enabling activity for climate change adaptation as defined under the UNFCCC and at the Conference of Parties (COP) meeting. Annex 4 compares the baseline scenario with the GEF alternative, identifying an incremental cost of US$9.9 million to achieve the global benefits.

2. Financial (see Annex 4 and Annex 5):

NPV=US$ million; FRR = % (see Annex 4)

Fiscal Impact:

The anticipated fiscal impact of the project on participating countries is expected to be minimal. The

financial plan for the project relies largely on grants from the GEF under the enabling activities window, and from the Governments of Canada and the United States. Almost all funding is either for climate and coral reef monitoring equipment, or for building knowledge base and capacity amongst participating countries through workshops and training, to use the tailored models for climate projection, climate impacts, and vulnerability and risk assessment, or to educate the stakeholders about the climate change risk management strategies. Since the project will be implemented through existing institutions, with only a small coordinating PIU, the "recurrent" costs pertaining to the PIU are very modest. Counterpart contributions are largely in kind, in terms of staff time, during the project period, and do not have any budgetary implications for the participating countries. In the post project period, the demand for counterpart resources on the SIDS countries for recurrent costs would be about US$500,000 for the entire region (see Annex 5), and can be easily absorbed into the participating country financial budgets.

3. Technical:

The SIDS are particularly vulnerable to the impacts of climate change and, under the UNFCCC financing mechanism, need to be assisted with capacity building initiatives for adaptation to climate change impacts. The project design is technically appropriate, as it focuses mainly on the development of knowledge base through upgrading the climate monitoring infrastructure and tailoring models, which will facilitate climate change and impacts projection, and undertaking vulnerability and risk assessment that will inform the development of climate change adaptation strategy. As such, there are issues relating to only two project interventions: expansion of the monitoring network and the tailoring of appropriate climate projection models for SIDS situation. These are discussed below.

Expansion of the monitoring network. The existing CPACC monitoring network was designed in 1997 as a long term sea-level and meteorological trend monitoring system. At the time this system was designed and procured, it was the best technology available. The network is operating satisfactorily, but is vulnerable to failure. The main reason for this vulnerability is inadequate maintenance capacity, which exacerbates problems of normal wear due to the age of the equipment. This wear is largely seen in the form of "drift" in electronic equipment. The other vulnerability is damage caused by extreme events. The network needs to be enhanced to include measurements that will complement direct readings on sea level and sea surface temperature.

To address these problems, the project proposes to: (a) upgrade existing infrastructure and equipment with new technology by adding optional attributes that have become available since the equipment was procured in 1997; (b) introduce a system of early replacement of selected sensors; (c) improve maintenance capacity by training national staff, especially in the smaller countries; and (d) strengthen the equipment to reduce its vulnerability to damage from hurricanes. In addition, the project will specifically identify issues relating to, and promote, linkages with other networks such as Global Climate Observation System (GCOS) and Global Sea-level Observing System (GLOSS) to ensure compatibility and effectiveness.

Tailoring global climate projection models. All climate projection models that are being used today are global in nature and do not lend themselves to direct adoption for smaller regions or countries. There is wide consensus on the advantages of downscaling global models; however, there is less certainty on which instruments should be used. The project will adopt two actions to provide the region with climate change projections at a resolution compatible with the size of the landmasses in the Caribbean. First, it will specifically support the development of downscaled models using statistical techniques to serve as a starting point for the first iteration of climate change scenarios to formulate climate change impacts. Second, it will support the development of a regional climate model based on dynamic assumptions relating to variables, and obtain expected scenarios with a range of climate-related variables.

4. Institutional:

4.1 Executing agencies:

Project Executing Agency - Caribbean Community (CARICOM)
Project Implementation Agency - Project Implementation Unit (PIU)

4.2 Project management:

CARICOM will be the Grant recipient and also the executing agency. Project implementation will be the responsibility of PIU, which will be assisted by the National Implementation Coordination Units of each participating country at the country level for national level activities. These entities will be able to participate effectively in regional activities and contribute to intra-regional and international discussions.

Both CARICOM and the PIU have limited experience in implementing Bank-funded projects, and therefore limited understanding of the procurement and financial management related aspects. Since CARICOM is an already established institution with considerable capacity in financial management, and some exposure to procurement processes, it will liaise closely with the World Bank, as well as house the project-related accounting, financial management and overall reporting and carry out procurement-related activities for the project. While its accounting and financial management capacity is rated as adequate to support the project, its procurement capacity is rated as inadequate. CARICOM and the Bank have agreed to an action plan to mitigate risks related to project funds flow, and to strengthen CARICOM capacity in procurement aspects (see Section 4.3 and Annex 6A for Procurement-related, and Section 4.4 and Annex 6B for Financial Management-related, detailed Action Plan).

Given the regional nature of the project, the PIU will be headed by a Project Manager with strong management skills. He/she will be assisted by a Technical Coordinator and Economist to manage the development of climate change knowledge base, including the finalization of vulnerability and risk assessment studies, and the formulation of country-level, sector-specific climate change adaptation strategies. A PEO specialist will support the Public Education and Outreach sub-component. The economist will support selected country teams in conducting the adaptation strategy preparation exercise.

To facilitate expeditious implementation of project activities, to establish the PIU at Belize, and to ensure continuity in the on-going ACCC project activities, a transitional PIU has been set up in Barbados. Three consultants with relevant experience and qualifications have been contracted on a short-term basis from January 1, 2003 to perform the above functions. Synchronously, an advertisement is being released soliciting consultants to staff the PIU on a transparent, competitive, and permanent basis. Following their appointment, the transitional PIU staff will handover the responsibilities of project management to the newly appointed PIU core consultants by June 30, 2003. Since most payments will be made by the CARICOM Finance Division with only an imprest account being maintained at the PIU in Belize, an experienced accountant/book-keeper will be either positioned in the PIU on a part-time basis, or her services contracted out.

Also, since the PIU will have minimal staff, it will work through five coordinating beneficiary agencies (CIMH, UWI Mona (Marine Studies Center and the Climate Studies Group), UWI St. Augustine, and CDERA) for climate and coral reef monitoring, climate and impacts assessment modelling, and upgrading infrastructure standards and norms under separate MOUs. Project implementation is expected to be shared and carried out in a collaborative framework by CARICOM, PIU, the participating countries, and the regional and national agencies, and will involve partnerships at the regional and international level.

4.3 Procurement issues:

All procurement responsibilities under the project would rest with CARICOM, the executing agency. A procurement capacity assessment was carried out during project preparation under which the procurement risk was assessed as "high". Project management would be the responsibility of a PIU to be established within CARICOM, although physically located initially in Barbados, and eventually in Belize. The PIU will closely coordinate with CARICOM staff assigned to the project on all technical aspects relevant to procurement (e.g. technical specifications and terms of reference, approval of consultant short lists, bid and proposal evaluation, supervision and evaluation of consultant performance). CARICOM has limited procurement capacity and no prior experience with, or knowledge of, Bank policies and procedures. In addition, responsibilities for procurement of consultants are not assigned to any specific unit, and all departments carry out selection processes, according to their needs.

Agreed Action Plan. To address the above inadequacies, it was agreed that: (a) an appropriate focal point would be established at CARICOM to manage procurement for the project within the existing structure; (b) adequate procurement technical assistance would be provided by the project to CARICOM; and (c) separate procedures acceptable to be Bank would be adopted for the project procurement (see Annex 6A for more details on the Action Plan). Most of these actions have been completed (institutional arrangements relating to procurement, specially designated procurement staff in CARICOM, separate chapter in the Project Operations Manual on procurement aspects, documentation of CARICOM procedures for procurement where applicable, initiating the process of retaining the services of an international procurement consultant, among other things).

4.4 Financial management issues:

Accounting and financial management capacity of CARICOM has been assessed to meet Bank requirements. CARICOM has a well established finance and accounting division, with clear policies, rules and procedures in place. The internal control mechanisms are also adequate, permitting the safeguarding of project assets. Auditing arrangements have been found to be satisfactory. Since CARICOM has no experience with implementation of Bank-funded projects, and given the inadequate banking sector arrangements in Guyana and the moderate to high risk associated with various aspects of implementation, the overall financial management risk is rated as “moderate to high”.

Agreed Action Plan: To address the risks, three specific actions have been agreed to with CARICOM: (a) that for the first year of implementation, financial management supervision will take place every six months; and (b) that the Special Account would be restricted to a single location (preferably Washington D.C.); and (c) that SOE procedures would be used for replenishment, but with a lower threshold in the Special Account (see Annex 6B for more details on the Action Plan). Three additional actions have been taken by CARICOM: (a) finalizing the Chart of Accounts for project expenditures, and initiating the process of incorporating it into the CARICOM Solomon IV-based accounting system; (b) contracting external auditors based on standard Bank auditing TORs; and (c) preparing draft Financial Monitoring Reports tailored to project requirements.

5. Environmental: Environmental Category: C (Not Required)

5.1 Summarize the steps undertaken for environmental assessment and EMP preparation (including consultation and disclosure) and the significant issues and their treatment emerging from this analysis.

The project expands the information base relating to projected climate impacts, builds capacity to carry out vulnerability and risk assessment, and assists with the formulation of adaptation strategies to address

climate change impacts. As this is a capacity building project involving studies, training and strategy formulation but not actual implementation (as is required under Stage II Enabling Activity project under UNFCCC), no adverse environmental impacts are expected to emanate from it. The project will, in fact, facilitate the incorporation of environmental considerations into planning and development processes at the country level.

As a result of global climate change, over the medium to long-term, major changes in sea level, hydrological regimes, vegetation cover, and agricultural patterns, are anticipated that could be considered to have major environmental impacts. For example, project generated climate projection and impacts models and the vulnerability and risk assessment exercises may reveal that the changing patterns of agricultural use and rise in sea level could have major impacts on natural habitats, and could potentially displace a significant portion of the population in some countries. Rather than directly supporting the design, or redesign, of an adaptation option, the project will encourage the formulation of a range of options and assist in the identification of environmental issues for the different options. In this context, the project will contribute to address more explicitly the question of assisting countries in adapting national (and sectoral) planning frameworks to take into account environmental impacts arising from climate change.

Although no preparation or implementation of adaptation pilots is considered, the stakeholders will benefit from capacity building on aspects that will include: environmental screening based on potential impact; environmental impact analysis; and design and implementation of environmental management plans where applicable. The procedures will also assess compliance with any applicable safeguard policies. A key intervention under the project will be to conduct workshops to build capacity within participating country teams, and dessiminate knowledge on a range of possibly relevant safeguards issues.

5.2 What are the main features of the EMP and are they adequate?

Not applicable.

5.3 For Category A and B projects, timeline and status of EA:

Date of receipt of final draft: Not applicable

5.4 How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environment management plan? Describe mechanisms of consultation that were used and which groups were consulted?

Not applicable.

5.5 What mechanisms have been established to monitor and evaluate the impact of the project on the environment? Do the indicators reflect the objectives and results of the EMP?

The project generated adaptation strategies will be reviewed for quality and compliance with environmental considerations. This will be done at two stages: first, while evaluating the range of adaptation options, a transparent and participatory process will be followed to discuss the options with representatives of various stakeholder groups; and second, evaluation of this aspect has been specifically built into the M&E plan for the project, under which both the breadth and depth of the participation, and the quality of the selected adaptation option(s) from the environmental/social standpoint will be evaluated by an external expert consultant.

6. Social:

6.1 Summarize key social issues relevant to the project objectives, and specify the project's social development outcomes.

The project focuses on planning and capacity building to address the impact of anticipated climate

change, and does not involve any physical investments (other than upgrading monitoring stations) nor does it assist with the implementation of any adaptation pilot. The project is not expected to have any direct impact on specific populations. No negative social impacts are therefore expected to emanate from the project. In fact, since the coastal areas and more environmentally fragile areas are generally more accessible by the poorer sections of the population, these stakeholder groups may be more vulnerable to climate change impacts. Risk management procedures proposed under the project may eventually result in the preparation of adaptation strategies that disproportionately benefit these sections of the population.

As with environmental concerns, rather than directly supporting the design or redesign of an adaptation option, the project will encourage the formulation of a range of options, and assist in the identification of social issues for the different options. In this context, the project will contribute to address more explicitly the question of assisting project states in adapting national (and sectoral) planning frameworks to take social issues into account. The project will also support workshops on social analyses, and related topics to build capacity within participating country teams, and dessiminate knowledge on these aspects.

6.2 Participatory Approach: How are key stakeholders participating in the project?

The project will address issues of mainstreaming climate change into the national planning processes. Accordingly, a key interlocutor will be the Planning Ministry. In addition, the planning offices of the line ministries (water, agriculture, fisheries and land use, tourism) will also play an important role. These agencies have participated in the design of the project through representation at the meetings of the heads of governments dealing with the inclusion of climate change in the regional development agenda, and will continue to be involved through their participation in national and regional stakeholder meetings as part of the project's regional consultations. These agencies will also play an important role in the implementation of the project, and in particular, in the formulation of adaptation strategies for the participating countries, and in the institutional assessment exercise. Other important stakeholders, such as the scientific communities and the Ministry of Environment, will be engaged in specific technical consultations during the implementation of the project, and will contribute the environmental focus to the adaptation strategies.

The project specifically includes a Public Education and Outreach component. Civil society, NGOs, the banking and insurance sectors, construction industry, and other national and regional institutions will all be targeted to receive information on project activities and outputs, encouraged to participate in discussions and deliberations, designed to build awareness and coordinate the regional position, participate in the development of adaptation strategies and pilots, propose for adoption upgraded building standards, examine a proposed insurance and financing incentive framework for a consensual and participatory environment. The campaign itself will be designed to provide opportunities for public participation. The public awareness campaign will also have a strategy for dialogue and involvement of key politicians in the region. Stakeholders targeted under the public awareness campaign and involved in the consultation process will also include private sector representatives from key economic sectors, such as fisheries, real estate, banking and tourism. NGOs working in this region will also be engaged. Initial contacts have already been made with representative NGOs, and this practice will continue through project implementation.

6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

NGOs working on climate change and related sustainable development issues will participate in project implementation through representation on the Project Advisory Committee, and through involvement in capacity building, training and planning activities under the proposed project. Various NGOs and civil

society representatives have already participated in CPACC. The NGO community will be strongly encouraged to continue to participate in the implementation of this project, which is a CPACC follow-up project.

6.4 What institutional arrangements have been provided to ensure the project achieves its social development outcomes?

See Sections 6.2 and 6.3 above.

6.5 How will the project monitor performance in terms of social development outcomes?

The project generated adaptation strategies will be reviewed for quality and for compliance with social considerations. This will be done at two stages: first, while evaluating the range of adaptation options, a transparent and participatory process will be followed to discuss the options with representatives of various stakeholder groups; and second, evaluation of this aspect has been specifically built into the M&E plan for the project, under which both the breadth and depth of the participation, and the quality of the selected adaptation option from the environmental/social standpoint will be evaluated by an external expert consultant.

7. Safeguard Policies:

7.1 Are any of the following safeguard policies triggered by the project?

Policy	Triggered
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	○ Yes ● No
Natural Habitats (OP 4.04, BP 4.04, GP 4.04)	○ Yes ● No
Forestry (OP 4.36, GP 4.36)	○ Yes ● No
Pest Management (OP 4.09)	○ Yes ● No
Cultural Property (OPN 11.03)	○ Yes ● No
Indigenous Peoples (OD 4.20)	○ Yes ● No
Involuntary Resettlement (OP/BP 4.12)	○ Yes ● No
Safety of Dams (OP 4.37, BP 4.37)	○ Yes ● No
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	○ Yes ● No
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)*	○ Yes ● No

7.2 Describe provisions made by the project to ensure compliance with applicable safeguard policies.

Not applicable.

F. Sustainability and Risks

1. Sustainability:

The project benefits include the following: (a) improvements in the information monitoring networks, including enhanced maintenance capacity; (b) availability of tested and tailored models and approaches for climate projections, impacts assessments, vulnerability and risk assessments and adaptation initiatives at the sectoral level, which with the capacity built up during the project, can be scaled up to a multi-sectoral exercise; (c) enhanced understanding of proactive risk-reduction initiatives in reducing vulnerabilities to climate change of infrastructure, populations, and the environment; and (d) articulation of a regional strategy and approach for climate change adaptation.

Improvement in the information network will be sustained in the post-project period as the project will build adequate technical capacity in regional and country level staff to maintain the monitoring station

facilities. Requirement of counterpart funds for maintenance is modest and can be provided through budgetary support. Sustainability of the infrastructure created under the CPACC project was threatened due to poor technical maintenance capacity, particularly in the smaller SIDS.

The climate projection, climate impacts generation and the vulnerability and risk assessment models will be sustained for two key reasons: first, the project will train a rather large constituency of technical staff, both at the regional and country level, to be able to use these methodologies; second, successful mainstreaming of climate change concerns into sectoral, national and regional development planning will facilitate sustainability of the climate change agenda in the long-term. Processes and tools to support the formulation of the adaptation agenda to climate change will be integrated into planning activities, as decision support mechanisms, and this is expected to facilitate the long-term sustainability of these tools.

The possibility of reducing the vulnerability to climate change impacts will depend on civil society, the business community and private sector to understand the climate change risk management measures and proactively embrace them for implementation. It will also depend on the political will and the cost associated with the actual implementation of the sectoral and national level climate change adaptation strategies. It is premature at this stage to even guess whether this be a constraint to the longer-term sustainability of adaptation processes. The project addresses these risks to sustainability through a vigorous public education program that will target politicians, line departments, industry, NGOs, and other stakeholders to build the institutional and political support needed to facilitate mainstreaming during project completion.

The regional strategy and agenda have been the result of a continuous dialogue among the Caribbean SIDS and their acceptance of the fact that individually these countries do not have the capacity to address climate change issues. A regional approach has been taken by the SIDS voluntarily, which was furthered by CPACC, and which the project proposes to strengthen.

Financial and institutional sustainability of the regional approach to climate change adaptation is a concern. The project will address this concern by supporting the development of a regional adaptation strategy that will identify and formulate options for securing the financial and institutional support for a regional approach to climate change adaptation. This will involve, in particular, examining and finalizing the functional responsibilities, possible sources of financing, and governance structure of the recently created Caribbean Community Climate Change Center.

1a. Replicability:

The project will build capacity in the region through: (a) facilitating the country teams to carry out vulnerability and risk assessments, and to develop adaptation strategies for selected key sectors; (b) supporting regional institutions on adaptation of appropriate climate projection and impacts scenarios development models to meet Caribbean SIDS requirements; (c) strengthening and working closely with local universities, regional institutions such as CIMH, CDB and CDERA (which have spearheaded work in the area of climate monitoring, formulation of disaster management strategies, development of infrastructure design standards); (d) developing databases which will be useful to carry out vulnerability and risk assessments in future; and (e) developing PEO strategies which will enable the process of vulnerability assessments and development of adaptation strategies to become participatory and transparent, and facilitate endorsement by various stakeholders. All these activities support knowledge building and are continuous in nature, extending well beyond the project period.

Replicability is embedded in the project at three levels: first, at the Caribbean region level, where the project created knowledge (at regional institutions and country level) and database could be used to extend the vulnerability and risk assessments and adaptation strategy formulation to other sectors in the

participating countries; second, the regional approach to the project could be replicated and bring useful lessons to other countries, in particular, the Pacific SIDS, which face similar capacity constraints; and third, the project approach to mainstreaming adaptation to climate chnage is expected to bring useful lessons that could be replicated elsewhere.

2. Critical Risks (reflecting the failure of critical assumptions found in the fourth column of Annex 1):

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
Climate and coral reef monitoring network is not efficiently maintained, and is unable to contribute to expanding the information base	M	(a) A Maintenance Fund has already been established under the CPACC project; adequacy of the fund will be assessed during project implementation and will be augmented, if necessary; (b) The project will build technical capacity to undertake maintenance work, which was one of the main reasons for poor maintenance under the CPACC project; (c) An incentive framework for the national and regional agencies to participate and collaborate in operating and maintaining regional-level infrastructure will be evolved during project implementation.
Inadequate participation and capacity-building in countries not selected to participate in sectoral vulnerability assessments	M	(a) CARICOM and PIU will play a critical coordinating role in getting the countries to work together. Success has been demonstrated by PIU and CARICOM in this area under the CPACC project. (b) Assisting all project participating countries with the "no regrets" policies studies will motivate countries not selected for the vulnerability assessment studies to participate.
Poor capacity-building in countries selected to participate in sectoral vulnerability assessments	M	(a) Selection criteria for country sectoral vulnerability assessments which include availability of minimal data sets for meaningful assessments, replicability, representativeness, collaboration mechanisms among countries, country commitment (including counterpart funding), are designed to mitigate this risk; (b) The staff from the non-selected countries will participate in the actual vulnerability assessments to gain an understanding of the process, resulting in hands-on capacity building, and benefit from the results of the Country Vulnerability Assessment Studies.
From Components to Outputs		

Sectoral departments do not appreciate cross-sectoral nature of climate change impacts, and do not work readily in a coordinated manner to identify and formulate the lead Sectoral Adaptation Strategies and Implementation Action Plans	S	(a) Selection criteria for adaptation strategies will include country commitment and mechanisms for inter-sectoral coordination at the national level. (b) The adaptation strategy preparation process will be transparent and participatory in nature. In addition to the lead sector department, other affected departments will also participate in the process, leading to improved ownership of the Adaptation Strategy by all; (c) The strong PEO process is also expected to build awareness among all stakeholders, including the other sector departments, to appreciate the implications and impacts of climate change, including the coordinated approach to risk management.
The private and public sectors and civil society do not show a keenness to participate in the identification and formulation of lead Sectoral Adaptation Strategies and Implementation Action Plans	M	A strong PEO process has been built into the project to generate awareness and interest in stakeholders to participate in the Adaptation Strategy and preparation of Implementation Action Plans, among other aspects. This is critical to building ownership in the project's processes and outcomes, that will ultimately facilitate their adoption by stakeholders.
Some countries do not support the regional approach to climate change adaptation and representation at international fora	M	Caribbean SIDS are used to working at the regional level on climate change, as demonstrated by the CPACC project.
Some countries do not endorse actions outlined in the Regional Strategy for implementation at the national level	M	The outcomes of the Capacity Development Initiative study which highlighted the need for a coordinated regional approach to strategy preparation and representation at the international for a have been endorsed by all participating countries. This indicates their commitment to work at the regional level.
Donors, PIU, CARICOM and participating countries do not work in concert, and do not cooperate in the implementation of the project activities	M	(a) Preparation of the project has been participatory in nature, with all agencies contributing to the project design. The project reflects the commitment of all agencies; (b) Caribbean SIDS have the experience of implementing projects in a collaborative manner, as demonstrated by CPACC; (c) A Co-participating Agreement signed between CARICOM and each participating country will clearly develop their respective

		relationship and corresponding responsibilities for the project; (d) MOUs will be signed between CARICOM and the implementing agencies of other projects to lay down the rules of coordination and information sharing to facilitate cooperation.
CARICOM and PIU are unable to comply with Bank financial management and procurement standards, and are unable to implement the project satisfactorily	H	(a) Action Plans for Procurement and Financial Management have been agreed with CARICOM and PIU to strengthen their capacities in these areas. Many actions have already been taken; (b) The Project Operations Manual indicates the sharing of the roles and responsibilities between CARICOM and PIU; (c) The staffing of PIU has been agreed to with CARICOM; a key strategy has been to flexibly staff PIU as per the needs of the project over the implementation period.
The Public Education & Outreach program does not create an environment of shared understanding of climate change risks, risk reduction possibilities, or a collaborative approach to risk management	M	A tentative PEO strategy has already been developed under the ACCC program. The project will facilitate finalization of the strategy, and commence implementation immediately. This will facilitate awareness building fairly early on during the project period.
Overall Risk Rating	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

3. Possible Controversial Aspects:

None.

G. Main Grant Conditions

1. Effectiveness Condition

The National Implementation Coordination Units (NICUs) have been established and staffed by the participating countries, and are operational.

2. Other [classify according to covenant types used in the Legal Agreements.]

Dated Covenants:

(a) Replacement, not later than June 30, 2003, of the transitional PIU at Barbados by a permanent PIU to be established in Belize;
(b) Effectiveness of the NOAA Grant Agreement not later than June 30, 2003;
(c) Annual work plans to be provided to the Bank not later than November 30 of each year; and
(d) Provision of biannual Project progress reports on March 1 and September 1 of each year, and annual

review of Project progress on March 31 of each year.

H. Readiness for Implementation

☐ 1. a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.
☒ 1. b) Not applicable.

☒ 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
☒ 3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.
☐ 4. The following items are lacking and are discussed under loan conditions (Section G):

I. Compliance with Bank Policies

☒ 1. This project complies with all applicable Bank policies.
☐ 2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies.

Benoit Blarel	John Redwood	Orsalia Kalantzopoulos
Team Leader	**Sector Manager/Director**	**Country Manager/Director**

Annex 1: Project Design Summary

CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Sector-related CAS Goal: Reduce vulnerability to natural disasters and climate related negative impacts	**Sector Indicators:** Enhanced technical capacity to evaluate, monitor and plan for climate change related impacts	**Sector/ country reports:** CARICOM, OECS, UNFCCC, World Bank and IDA sector and country reports	**(from Goal to Bank Mission)** Sustained political commitment to adaptation and preparedness for natural disasters and climate change impacts
GEF Operational Program: Climate Change Enabling Activity in Adaptation Stage II	**Outcome / Impact Indicators:** National capacity to effectively plan, manage and monitor climate change policies in Caribbean SIDS enhanced Common Caribbean SIDS position for international negotiations on issues related to climate change developed		
Global Objective: To facilitate the creation of an enabling environment for climate change adaptation in CARICOM small island developing states (the participating countries are: Antigua & Barbuda; Bahamas; Barbados; Belize; Dominica; Grenada; Guyana; Jamaica; St. Kitts and Nevis; Saint Lucia; St. Vincent & the Grenadines; Trinidad & Tobago).	**Outcome / Impact Indicators:** Strengthened regional knowledge base: *90% of the stations reporting with 90% reliability *wide dissemination of climate change related data and documentation * Models, databases, vulnerability assessments and adaptation approach developed under the project are found useful by potential users/beneficiaries who are also willing to use them, and are assessed of satisfactory quality A large constituency of sectoral specialists equipped and trained to incorporate climate change	**Project reports:** A blend of the following evaluation mechanisms: PIU Progress Reports Bank/Donor Review Mission Aides Memoire Independent expert consultant assessment reports Special stakeholders survey – households, construction industry, finance and insurance sector players, government staff, etc. Mid-term and final evaluations Regional agenda, PIU generated reports on the	**(from Objective to Goal)** Continuity of government commitment to climate change adaptation initiatives and to implementation of the Adaptation Strategies Policy issues relating to individual sectors – tourism, agriculture, water resources addressed by the governments Regional climate projection model, climate impacts assessment model, and V&A methodology is used by trained staff to extend the formulation of Climate Change Adaptation Strategies to other sectors The insurance and finance

	concerns into their work (vulnerability and risk assessment, economic analysis, policy aspects, and adaptation strategies) Public awareness of climate change issues and impacts enhanced National Sectoral Adaptation Strategies and Implementation Action Plans, developed in a participatory fashion with stakeholders, are presented to Cabinet, or being considered in appropriate committees/commissions Plans prepared for more effective enforcement of existing policies and regulations, especially where these have implications for addressing climate change concerns Regional coordination on climate change issues improved and access to risk sharing mechanisms like the UNFCCC increased	UNFCCC, and regional strategy papers and work plan	sectors proactively adopt an incentive framework which promotes adoption of upgraded infrastructure standards Each participating country implements actions agreed to at the national level, which are a part of the regional strategy
Output from each Component:	**Output Indicators:**	**Project reports:**	**(from Outputs to Objective)**
I. Build Capacity to Assess Vulnerability and Risks Associated with Climate Change	Climate and sea-level monitoring infrastructure upgraded with additional hardware and software Training provided to Meteorological and Survey Offices to maintain the upgraded stations and manage use of collected data Coral reef analyses and monitoring carried out in	A blend of the following monitoring mechanisms: PIU Progress Reports Bank/Donor Review Mission Aides Memoire Independent expert consultant assessment reports GCOS & GLOSS reports on Caribbean monitoring	Climate and coral reef monitoring network is efficiently maintained through counterpart funding, and continues to contribute to expanding the information base Inadequate participation and capacity-building in countries not selected to participate in sectoral vulnerability assessments

	eight additional CARICOM countries Global climate change models downscaled with resolution adequate for national level application (statistical and dynamic) Climate change impact models reviewed, selected Experts trained in utilization of climate projection and impact models Workshop conducted for V&A approaches, and a refined and harmonized approach for assessing climate change vulnerability and adaptation policy- making developed. Stakeholders trained in applying harmonized V&A approaches in country and sector settings Country-level sectoral vulnerability and risk assessment studies completed	stations on quality of support provided Dissemination reports on coral ref monitoring, climate change modeling, climate impact modeling, and VA methodology (also reviewed by independent consultant for relevance to SIDS countries and economies) Reports on Country-level Sector specific Adaptation Strategies (also reviewed by independent consultants for technical, social, economic and policy substance) Self-assessments by trainees on the quality of the training, relevance, and usefulness "on-the-job" Workshops' reports Mid-term and Final Evaluations	Poor capacity-building in countries selected to participate in sectoral vulnerability assessments
II. Build Capacity to Reduce Vulnerability to Climate Change	Country-level Sector Adaptation Strategies prepared Institutional Analysis for implementation of the Adaptation Strategies completed Action Plan to support implementation of the Country-level Sector Adaptation Strategy defined	A blend of the following monitoring mechanisms: PIU Progress Reports Bank/Donor Review Mission Aides Memoire Independent expert consultant assessment reports Reports on Country-level Sector specific	Sectoral departments do not appreciate cross-sectoral nature of climate change impacts, and do not work readily in a coordinated manner to identify and formulate the lead Sectoral Adaptation Strategies and Implementation Action Plans The private and public sectors, and civil society do not show a keenness to

	Training programs conducted to build capacity for adaptation plan preparation process Technical study completed and guidelines for updating building codes, as well as special recommendations for updating CUBiC, developed Technical study to develop feasibility options for the introduction of risk reduction incentives completed Climate change sensitization campaigns and workshops aimed at insurance and banking industries, and other stakeholders completed	Implementation Plan for Adaptation Strategies (also reviewed by independent consultants for technical, social, environment, economic and policy substance) – first batch (detailed) and second batch (derived) Reports from workshops to disseminate outputs of the comprehensive VA studies Technical reports on infrastructure Standards and Incentive Framework Outcomes of workshops designed to disseminate infrastructure standards and incentive framework Self-assessments by trainees on the quality of the training, relevance, and usefulness "on-the-job" Mid-term and Final Evaluations	participate in the identification and formulation of lead Sectoral Adaptation Strategies and Implementation Action Plans
III. Build Capacity to Effectively Access & Utilize Resources to Reduce Vulnerability to Climate Change	A unified regional position paper (based on national and regional position papers), and a regional operational strategy developed for UNFCCC discussions A Regional Long-term Strategy for Adaptation to Climate Change prepared, showing regional and national actions for implementation of National Adaptation Plans Resource mobilization strategy prepared and donors meeting held	A blend of the following monitoring mechanisms: PIU Progress Reports Bank/Donor Review Mission Aides Memoire Independent expert consultant assessment reports Adaptation to Climate Change: Regional Strategy Regional Agenda to the UNFCCC Annual policy reports and	Each country continues to support the regional approach to climate change adaptation and representation at international fora Each country endorses actions outlined in the Regional Strategy for implementation at the national level

		background documents, including Second National Communications	
IV. Public Education and Outreach	Public education and awareness materials developed and disseminated Web site improved and managed to serve as clearinghouse point, including access to a digital resource climate change library housed in the PIU Workshops conducted and project outputs disseminated to secure participatory approach to vulnerability assessments and adaptation strategy development Course materials developed for education curricula - schools and UWI Separate M&E system for the PEO component implemented	A blend of the following monitoring mechanisms: Bank/Donor Review Mission Aides Memoire Annual Work Plans PIU Progress Reports Regional and National PEO Strategies Education currucula materials Mid-term and Final Evaluations Web page, digital resource library, newsletter & others (including expert assessment and stakeholder feedback)	All donors, PIU, CARICOM and participating countries work in concert, and cooperate in the implementation of the project activities CARICOM and PIU, which have never implemented Bank-financed projects are able to comply with Bank financial management and procurement standards, and implement the project satisfactorily The PEO creates an environment of a shared understanding of climate change risks, provides possible measures to reduce the risks, a encourages collaborative approach to risk management
V. Project Management	PIU established, staffed and functional Monitoring and evaluation systems in place and assisting in improving project management	A blend of the following monitoring mechanisms: Bank/Donor Review Mission Aides Memoire Annual Work Plans Disbursement under the project PIU Progress Reports Mid-term and Final Evaluations	

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Project Components / Sub-components:	**Inputs: (budget for each component)**	**Project reports:**	**(from Components to Outputs)**
I. Build Capacity to Assess Vulnerability and Risks Associated with Climate Change	US$4.88M (GEF:US$2.32 M)	A blend of the following monitoring mechanisms: Bank/Donor Review Mission Aides Memoire	PIU has sufficient authority and technical competence to implement the project activities
II. Build Capacity to Reduce Vulnerability to Climate Change	US$2.15M (GEF:US$0.73M)	Copies of contracts Financial Management Reports	Competent staff is appointed to the PIU
III. Build Capacity to Effectively Access and & Utitlize Resources to Reduce Vulnerability to Climate Change	US$0.42M (GEF:US$0.18M)	PIU Progress Reports	CARICOM provides adequate support on financial and procurement matters to PIU
IV. Public Education and Outreach	US$2.10M (GEF:US$0.59M)		There is continued political support for regional cooperation and national level implementation
V. Project Management	US$1.38M (GEF:US$1.18M)		
TOTAL	US$10.95M; financed as follows: US$5.00M - GEF US$2.00M - CIDA co-financing US$0.80M - NOAA co-financing US$3.15 M - counterpart contribution by Recipient/Participating Countries		

Annex 2: Detailed Project Description
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

By Component:

Project Component 1 - US$4.88 million

Build Capacity to Assess Vulnerability and Risks Associated with Climate Change

The objective of this component is to identify and quantify climate change vulnerability and risk through building regional capacity to collect and analyze data, and expanding the overall knowledge base on climate change impacts and associated physical and economic vulnerabilities. The first four sub-components will operate at the regional level, but will focus on strengthening and expanding the knowledge base as a sound platform for analysis and decision making at the national and local levels. The fifth sub-component will finance the preparation of vulnerability and risk assessments for selected individual or country groups using a harmonized approach.

1.1 Strengthening the climate impacts-monitoring network

This sub-component will strengthen the existing climate and coral reef network monitoring for the region in order to provide reliable data, and to explore linkages between climate and coral reef monitoring. Principal activities will include:

Relating to Climate Monitoring

- Upgrading existing climate monitoring stations with new hardware and software to improve their performance and data reliability. Training will be provided for maintenance and operation of the stations to the operating staff. A Global Positioning Survey of the stations will be conducted, and local and regional capacity will be enhanced through a training program for Survey Department technicians for similar future follow-up surveys.
- Strengthening the capacity of the National Meteorological Offices through workshops and in-country training to manage climate monitoring stations, to expand the applications and use of the data collected through the monitoring stations, and in the installation and implementation of the twelve Continuously Operating Reference Stations (CORS); and
- Institutional support consisting of (a) archiving and quality assurance of sea level monitoring data by supporting the operation of the Regional Archiving Center (RAC) at Faculty of Engineering, UWI, St. Augustine; and (b) capacity building of the Caribbean Institute for Meteorology and Hydrology (CIMH) to provide technical back-stopping to the smaller participating countries for sustainable operation of the monitoring stations.

Relating to Coral Reef Monitoring

- Expanding the coral reef monitoring network to the remaining eight countries, namely, OECS participating countries and Barbados, and Trinidad and Tobago (Belize, Jamaica and The Bahamas were covered under CPACC; providing the required equipment and software, training staff for operation and maintenance, and undertaking actual coral reef monitoring activity along the lines of the CREWS system; upgrading the platform at Discovery Bay, Jamaica with additional sensors and CREWS equipment to monitor oceanographic parameters;
- Institutional strengthening through: (a) enhancing the capacity of the Caribbean Coastal Data Center at the Center for Marine Sciences, UWI, Mona to improve its functioning as the regional archiving center for coastal ecosystem data, and to undertake reviews of coral reef conditions in the context of climate change, and appropriate dissemination; (b) establishing an Eastern Caribbean

Technical Support Node with support from the Coastal Zone Management Unit of Barbados to coordinate training and capacity building relating to the coral reef monitoring system expansion initiative; and (c) exploring and understanding the linkages between climate and coral reef monitoring efforts to define (and expand) the appropriate correlation between reef condition, oceanographic and climate parameters.

The Caribbean Institute for Meteorology and Hydrology (CIMH) will serve as the Coordinating/Beneficiary Agency for the climate change monitoring network. The CIMH will also continue to operate the Tidal and Climate Gauge Replacement Fund, created under CPACC project, to finance the replacement of monitoring instruments and related equipment, and work closely with the national meteorological and hydrological agencies which will continue to monitor all stations. The Faculty of Engineering, UWI, St. Augustine campus will continue to support the operation of the Regional Archiving Center and will also be a Coordinating/Beneficiary Agency. The Center for Marine Science of the UWI, Mona will serve as the Coordinating/Beneficiary Agency for coral reef monitoring, and will be supported by its Caribbean Coastal Data Center which currently functions as the regional archiving center for coastal ecosystem data. It will work closely with the Coastal Zone Unit of Barbados for the yet-to-be established Eastern Caribbean Technical Support Node, the OECS coral reef monitoring network countries, and with the Discovery Bay Jamaica platform for the oceanographic parameters.

The project will finance the required hardware, software, training, consulting services, and agreed-upon operating costs of the Beneficiary Agency to execute these activities. The PIU will provide the overall coordination and supervision for this component, and will enter into MOUs with CIMH and UWI, Mona and St. Augustine for this sub-component. The Government of Canada (CIDA) will provide parallel co-financing for strengthening capacity at CIMH. NOAA will provide parallel co-financing in kind for technical assistance in linking the climate and coral reef monitoring networks using the CREWS system, installation and implementation of the twelve CORS, training to Survey Department technicians on GPS technology.

1.2 Generating climate projection scenarios

This sub-component will adapt existing global climate change models to develop appropriate statistically and dynamically downscaled regional climate change models relevant to the Caribbean SIDS, and make climate change projections. Principal activities will include:

- Institutional strengthening of Climate Studies Group at UWI, Mona, to do (i) statistical downscaling of existing global models; and (ii) to develop an appropriate dynamically downscaled regional climate model by: (a) exposing select staff to academic training in climate modelling and practical training in dynamic downscaling of global climate models; (b) licensing models from other institutions to serve as a starting point for the regional climate model developing exercise; and (c) providing equipment and software to develop a validated regional climate model;
- Making climate change projections using both the statistical and dynamic regional climate model to estimate the expected key climate related variables, including precipitation, sea-surface temperature, humidity, wind regimes and sea-level, and comparing the results of the two approaches to identify possible synergies;
- Coupling climate models with hazard models to predict the impacts of extreme events under different climate scenarios; and
- Supporting capacity building and awareness at the regional and national level through; (a) developing materials for a masters level program on climate change to be offered at UWI; (b) training identified regional and national experts in the operation of the climate projection models; and (c) disseminating the outcomes of the model development activity widely through the Public Education and

Outreach component.

The Climate Studies Group at UWI, Mona will be the Coordinating/Beneficiary Agency for this activity. It will work closely with NOAA-NCAR which is very active in climate modelling, and with CIMH and the Physics Department at UWI, Cave Hill to broaden its capacity to undertake this activity. It will also work closely with the Canadian Climate Center, NOAA and the Hadley Center for technical inputs.

The project will finance training, hardware, software, consultancies and agreed-upon operating expenditures for the Beneficiary Agencies. The PIU will provide the overall coordination and supervision, and will enter into a MOU with the Climate Studies Group at UWI, Mona for this sub-component. The CIDA will provide parallel co-financing for the development of regional and localized climate change projections using the statistical downscaling methodology. NOAA will provide parallel co-financing in kind for technical assistance to the Physics Department at UWI, Cave Hill and CIMH.

1.3 Generating climate impact scenarios

This sub-component will develop potential climate change impact scenarios on coastal ecosystems and on the water-cycle, and use these impact scenarios to enable stakeholders to understand how climate change may impact key economic sectors such as tourism, water resource management and agriculture. Principal activities will include:

- Reviewing existing climate impacts development models, evaluating their strengths and weaknesses, selecting, and acquiring those that will permit simulation of the physical impacts of climate change on coastal and watershed ecosystems, and inter-linkages between the key sectors of tourism, water, and agriculture; refining the acquired models for appropriate adaptations;
- Developing climate impacts scenarios using the refined regional climate models and the adapted impacts model; and
- Supporting capacity building and awareness at the regional and national level through; (a) post-graduate level research in the development of impact modelling; (b) training identified regional and national experts in the operation of the climate impacts models; and (c) disseminating the outcomes of the model development activity widely through the Public Education and Outreach component.

The Climate Studies Group at UWI, Mona will be the Coordinating/Beneficiary Agency for this activity. It will interact closely with international centers of excellence in climate impacts modelling such as the UK Climate Impacts Program (UKCIP) based at the Environmental Change Institute, University of Oxford, which has already developed an approach combining climate projections with climate impacts and development of adaptation options in national and sectoral settings.

The project will finance training, hardware, software, consultancies and agreed-upon operating expenditures for the Beneficiary Agency. The PIU will provide the overall coordination and supervision, and will enter into a MOU with the Climate Studies Group at UWI, Mona for this sub-component.

1.4 Refining a harmonized methodology for assessing climate change vulnerability and adaptation policy making

This sub-component will finance developing of harmonized vulnerability assessment and adaptation strategy approach appropriate to the Caribbean environment, and capacity building at the national level and in regional specialized agencies to carry out vulnerability assessments and develop adaptation measures. This sub-component will include the following activities:

- Reviewing the relevance of existing approaches to vulnerability assessment and formulation of adaptation measures - those used in the CPACC pilot components on coastal vulnerability, economic valuation and formulation; IPCC guidelines; UNEP Handbook on Methods for Climate Change Impact Assessment and Adaptation; US Country Studies International Handbook - through actual applications and results assessment, and identifying lessons for the Caribbean SIDS;
- Developing an integrated data management framework to accommodate input data for the approaches, scenarios of climate and socio-economic change, and the model results. A suitable framework will be developed that will facilitate the integration of sectoral analyses and the evaluation of vulnerability reduction strategies by stakeholders;
- Producing a comprehensive guidance document to inform practitioners on selecting appropriate tools and methods for an effective approach to vulnerability and adaptation analysis, including recommendations for data acquisition and management, vulnerability assessment and determination of potential losses, development of adaptation options, and cost benefit analysis of adaptation options; and
- Supporting capacity building and awareness by: (a) designing and implementing an intensive training program for national stakeholders and staff of specialized agencies who will be applying vulnerability and adaptation assessments in their country or sector specific settings; and (b) disseminating the outcomes of this sub-component widely through the Public Education and Outreach component.

The PIU will be directly responsible for this sub-component which will be implemented through expert consultants. The PIU will ensure that the consultants work closely with institutions such as the UWI, Mona, as well as key regional specialized institutions, including CIMH and CEHI, in providing the training and expertise, and producing the integrated management framework and comprehensive vulnerability assessment and adaptation measures development guidebook.

The project will finance the require hardware, software, training, consultancies and agreed-upon operating expenditures for training activity. NOAA will provide parallel co-financing in kind for technical assistance to the training program.

1.5 Preparing vulnerability and risk assessment studies in key economic sectors

This sub-component will finance the preparation of vulnerability and risk assessments, using the climate projection model, the climate impacts model, and the vulnerability and risk assessment approach developed under the above four sub-components. About 6-8 vulnerability and risk assessments will be carried out for selected SIDS in key economic sectors.

Given the limited project resources, the project will finance consultancies which will focus on toursim, agriculture and water resources; these three sectors are key to the Caribbean SIDS economies. The studies will be implemented in a few selected countries offering comparative advantage. The approach to vulnerability assessment in the selected focal sectors will be multi-sectoral in nature. For example, vulnerabilities of the tourism sector to climate change would be addressed through the vulnerability of the tourism infrastructure (hotels, transport, ports, water supply), assets or amenities (bio-diversity, coral reefs, beaches). Similarly, the downstream impacts or linkages of tourism with other sectors will also be identified. The studies would be carried out by consultants with participation from country teams. Principal activities will include:

- selecting the countries for situating the vulnerability assessment studies. This will be done in a collaborative manner, based on a set of predetermined selection criteria (discussed below). Once the potential country-sector-specific studies are selected, a detailed proposal will be prepared by the selected

country on the selection of the sector, the specific features of the country and the sector setting, scope of the study, and the possibility for replication in other country settings;

- supporting capacity building through: (a) dissemination of the harmonized vulnerability assessment approach; (b) training country teams to develop skills required to conduct such assessments; and (c) participation of country teams in the vulnerability and risk assessment studies;
- Conducting vulnerability assessments using country-and sector-specific climate projections and the harmonized approach to such assessments; performing risk assessments by applying the probability of specific hazardous, climate change-related events to the vulnerability of resources, facilities and populations affected by such an event (focusing on coastal areas), to determine the expected economic, social, and environmental loss from the impacts;
- Disseminating to all countries the final vulnerability and risk assessment reports produced by the country teams, and holding workshops to discuss the results and lessons learned;
- Providing technical assistance to other non-study countries to adapt the study findings to their country-sector setting and prepare initial vulnerability and risk assessment reports;
- Using the Public Education and Outreach component to make the process of assessment more collaborative and participatory, and disseminating the outcomes of this sub-component widely with a view to improving the quality of the assessment and to facilitate adoption of climate change adaptation measures by the affected stakeholders (private sector, public sector, local communities, etc.); and
- Establishing database to support future vulnerability and risk assessments in related sectors.

The country selection criteria for the studies will likely include the following:

- availability of information database for meaningful vulnerability and risk assessments;
- institutional capacity in the relevant sector to support the study being conducted by the consultants;
- importance of the sector in the selected country's economy;
- representativeness of the country to facilitate adaptation of study outcomes to other country settings;
- level of country ownership (including counterpart support) and commitment to secure inter-sectoral coordination;
- correspondence of the proposal with issues raised in the UNFCCC National Communications;
- cost-effectiveness; and replicability.

The PIU will initiate a workshop to disseminate the requirements of the vulnerability assessment and adaptation studies, identify possible sectors and scoping of the study, offer justification for situating the studies in specific country settings, possibility of adapting the study results in other country settings through project-offered technical assistance, and guide the discussion on the consensual selection of the sector-country match for the studies. Countries that do not have any study identified for implementation will participate in the formulation of the vulnerability and risk assessment studies as members in the selected country teams to help build their capacity to utilize the harmonized approach.

The component will be managed by PIU, and will be implemented through expert consultants, with assistance from country teams which will be coordinated through the NICUs. It is expected that the PIU/consultants will interact closely with national, regional and international specialized institutions, including CARDI, IICA, FAO, CWWA, OECS-ESDU, CEHI, Caribbean Tourism Organization and CAST, which will provide guidance, technical support and training in their areas of expertise. The PIU will also coordinate with the Caribbean Dialogue on Water and Climate and the Integrated Watershed & Coastal Area Management Project being developed by UNEP-CAR-RCU and CEHI. This sub-component will also support close work with private sector,local communities and NGOs to ensure

public/private sector partnership in the execution of this sub-component.

The project will finance technical assistance and consultancies for the vulnerability and risk assessment studies, including costs relating to training, dissemination workshops, etc. NOAA will provide parallel co-financing in kind for technical assistance to the country teams.

Project Component 2 - US$2.15 million

Build Capacity to Reduce Vulnerability to Climate Change

The objective of this component is to build in-country capacity to formulate and analyze adaptation policy options, and develop the multi-sectoral adaptation strategies, and implementation action plans. These sectoral adaptation strategies will be prepared for all participating countries: (i) in the first instance, for those countries where the vulnerability and risk assessment studies are implemented (directly); and (ii) in the second instance, for non-study countries (indirectly), through derived vulnerability assessments based on lessons learned from the country-level sectoral studies. The adaptation strategies for the non-study countries will be informed by the outcomes of the field-based vulnerability studies.

The first three sub-components will provide additional inputs to develop the adaptation strategies, and are as follows: (a) identification of "no regrets" adaptation measures for all countries (carried out in parallel with, and informed by, the vulnerability assessment studies); (b) development of adaptation approaches to food security, water, health and fishery sectors, and incorporating climate change concerns relating to environmental impact assessments; and (c) development of recommendations relating to upgrading technical norms for infrastructure industry, and incentives for risk reduction measures through insurance and banking industry. The fourth sub-component will develop the country multi-sectoral adaptation strategies based on the vulnerability and risk assessment studies conducted under Component 1, and the outputs of the three sub-components (a) to (c) above.

2.1 Identifying and incorporating "no regrets" adaptation measures

This sub-component will identify "no regrets" adaptation measures for all countries. Given the present uncertainties about site-specific impacts, and learning from recent experience in the Pacific Islands, a consensus is emerging that adaptation strategies should emphasize a comprehensive program of "no regrets" adaptation measures. These are measures that would be beneficial even in the absence of climate change. For example, existing building codes and design standards to cope with natural hazards should be more vigorously implemented. Existing land use controls throughout the region need to be vigorously applied; enabling legislation to require the use of EIAs should be enacted; planning and physical development legislation should be updated. Water rights, markets and pricing should be better used to facilitate the sustainable and efficient use of water. These measures would be easy to identify in the context of the vulnerability assessment studies, and could be potentially more effective than other "hard" interventions, which may require a high degree of certainty about future impacts. Principal activities will include:

- Counducting a study in parallel with, and informed by, the vulnerability and risk assessment studies to: (a) identify "no regrets" adaptation measures for all participating countries; and (b) identify gaps/weaknesses, either in the current policy and planning framework, or in the level of awareness or access to hazard and vulnerability information, discouraging the private sector, local communities and governments from applying or enforcing existing "no regrets" adaptation measures.

The PIU will be responsible for implementing this component through expert consultants, working with

the country teams coordinated by the NICUs. The project will finance the requisite consultancy.

2.2 Developing climate change adaptation approaches for selected sectors, and upgrading EIAs

This sub-component will specifically focus on developing climate change adaptation approaches in the health, water, food security and fishery sectors, and on incorporating climate change aspects into EIAs. Principal activities will include:

- Carrying out specific studies on climate change adaptation approaches in health, water, and food security sectors, and on incorporating climate change concerns into Environmental Impact Assessments; and
- Carrying out a small pilot project in collaboration with the Fishery Resources Assessment and Management Program (CFRAMP) to develop innovative approaches at adaptation by working directly at the community level;

The PIU will be responsible for implementing the component through expert consultants to be financed by CIDA.

2.3 Disaster prevention through strengthening technical norms for infrastructure development

This sub-component will support the development of appropriate technical norms and standards for infrastructure, and promoting their use in disaster management, infrastructure design and construction, and property insurance and mortgage banking sectors. Principal activities will include:

- Reviewing the Comprehensive Disaster Management Strategy and integrating climate change considerations into the strategy;
- Improving collaboration between National Disaster and Meteorological Offices to forecast and better respond to climate-related disasters;
- Promoting through presentations, meetings and workshops, the use of coastal hazards data base in all coastal planning, development and construction projects throughout the region;
- Completing a study that updates infrastructure design standards to adapt to the impact of climate change, focusing primarily on coastal zones, and that outlines the minimum data requirements for climate projections required to establish design standards based on statistical and dynamically downscaled climate projection models;
- Identifying risk reduction incentives in the property insurance and banking industry, and encouraging their adoption, through: (a) the preparation of an issues paper reviewing existing efforts and constraints in using economic incentives for risk reduction; (b) workshops bringing together insurance and banking representatives and other stakeholders in disaster management, development planning and construction sectors to identify ways in which insurance can be used as a mechanism to strengthen code enforcement; (c) a technical study to develop feasibility options for the introduction of risk reduction incentives and an outline of an Action Plan; and (d) a sensitization campaign disseminating the outcomes of this component through the Public Education and Outreach component.

The PIU will work closely with CDERA as the Coordinating/Beneficiary Agency, which will focus on mainstreaming climate change responsive infrastructure norms and standards within the regional Comprehensive Disaster Management strategy, and promoting their use in disaster management, infrastructure design and construction, property insurance and banking industry at the national level. It will encourage CDERA to develop links with the Caribbean Council of Engineering Organization, and the Faculty of Engineering of UWI, St. Augustine in conducting studies for updating infrastructure standards. This activity will be carried out in coordination with efforts to update Caribbean Uniform Building Code, coordinated under the Caribbean Development Bank. The project will also support engineering associations and universities to incorporate climate change issues as integral elements of technical norms for design, maintenance and rehabilitation of infrastructure and support proposals for changes in infrastructure codes.

The project will finance the training, hardware, software, consultancies, printed materials and their dissemination, including agreed-upon operating costs.

2.4 Developing country level multi-sectoral adaptation strategies

Based on the outcomes of the vulnerability and risk assessment studies (Component 1), and the outputs of the three sub-components 2.1 to 2.3 above, this sub-component will develop country level adaptation strategies in all countries. Principal activities will include:

- Conducting studies with technical assistance to country teams that will: (a) identify policy options; (b) analyze policy options; (c) formulate adaptation strategies; (d) identify institutional requirements; and (e) produce an implementation action plan;
- Through the Public Education and Outreach component, facilitating a participatory strategy formulation process, and disseminating the final outcomes of the exercise relating to the selection of sectoral policy options, formulation of adaptation strategies and Action Plans, including an analysis of the experiences and lessons learned that can guide future efforts to mainstream adaptation in other sectors/countries; and
- Institution building by (a) training country teams in the process of development/refinement of adaptation strategies, conducting institutional assessments, preparing action plans for implementation, and building public/private sector and civil society support for the strategy; and (b) providing "hands-on" experience to the country teams through actual participation in the adaptation strategy preparation exercise.

Project Component 3 - US$ 0.42 million

Build Capacity to Effectively Access & Utilize Resources to Reduce Vulnerability to Climate Change

The objective of this component is to provide support for the development of a regional agenda and a regional strategy through two sub-components. The first sub-component will build the regional capacity to prepare a regional position for the UNFCCC and other international fora to enhance the region's visibility and influence on relevant negotiations and policy decisions. The second sub-component will assist with the development of a regional strategy to improve regional coordination and harmonization on climate change adaptation and policy making, while strengthening the region's ability to mobilize and utilize effectively financial resources provided through the UNFCCC and other external financing mechanisms.

3.1 Development of a Regional Agenda

This sub-component will support the development of a regional position and negotiation strategy for the UNFCCC and other international negotiations, and incorporating project outcomes into the National Communications process. Principal activities will include:

- Preparing national briefings on UNFCCC based on the sectoral issues paper and the adaptation strategy, economic implications of the Kyoto Clean Development Mechanism, and the national position papers prepared by National Focal Points;
- Developing a regional agenda for hemespheric and/or other international negotiations based on a regional position paper (derived from national position papers), and a regional operational strategy (see below) that will be prepared by the PIU and other consultants, with key inputs from National Focal Points and sectoral agencies;
- Facilitating the regional participation in the UNFCCC process by coordinating briefing meetings, internet based discussion groups, attending key COP and other UNFCCC meetings, and reporting back to the countries with periodic updates on relevant decisions made or key issues discussed; and
- Incorporating the results of the project into the National Communications process under the UNFCCC.

Opportunities to develop closer links with UN implementing agencies will be fully explored, particularly in areas related to further capacity building for climate change adaptation in the region. More importantly, efforts will be made to coordinate project activities with all GEF projects implemented in the region, as well as related projects already being executed by regional specialized institutions. Cooperation with the UN implementing agencies will also provide an excellent platform for developing collaborative arrangements with non-CARICOM countries.

The PIU will be responsible for developing and executing this sub-component. The project will cover the costs of producing the briefing papers, including, if necessary, additional training and consultant fees, and operating travel costs of PIU for this purpose.

3.2 Development of a Regional Strategy for Adaptation to Climate Change

This sub-component will support regional efforts to develop a Regional Climate Change Adaptation Strategy and Action Plan. The preparation of this regional strategy will commence at the earliest practical opportunity drawing, among other things, on the various project outputs, and will define a 15 year strategic plan of action that: (a) identifies activities and actions that cannot be undertaken in isolation at the national level and which require regional support or a regional approach in order to effectively address specific climate change adaptation issues; and (b) clearly defines activities to be undertaken at a regional level that are necessary to complement and support (where necessary) adaptation programs defined in the National Communications and in the National Adaptation Strategies and Action Plans. This strategy will constitute a programmatic basis for the region's response and approach to challenges posed by climate change. The Regional Adaptation Strategy will be presented at an international donors' meeting for funding support. Principal activities will include:

- Developing a briefing paper on regional priorities and needs for climate change adaptation in the region that incorporates: (a) outputs from CPACC's Formulation of Policy Framework for Integrated Adaptation Planning; (b) lessons learned from the implementation of MACC activities; (c) the priorities identified in the First/Second National Communications; (d) issues papers and policy papers from participating countries; (e) policies and commonalities developed under the UNFCCC and other

international conventions; and (f) regional strategies such as the Sustainable Tourism Zone and the St. Georges' Declaration;

- Formulating a regional strategy based on a briefing paper prepared through a collaborative and participatory consultative process involving the CARICOM Technical Committee, the NICUs, the PIU and CARICOM. Additional support material will be produced, including recommendations for institutional arrangements, definition of appropriate approaches to the issues that require a regional perspective, identification of enforcement mechanisms, a financial analysis with an elaboration of the required resources, and a participation and dissemination strategy;
- Developing a detailed business plan for the regional Caribbean Community Climate Change Center;
- Formulating a work plan based on the broad consultative process and with more specific consultations with regional specialized agencies. Once finalized, the work plan, regional strategy and agenda will be presented to the CARICOM Council of for Trade & Economic Development for approval; and
- Identifying opportunities for resource mobilization, including designing and proposing projects and developing concept papers to be presented at a donors meeting to obtain support for furthering the implementation of the regional adaptation strategy.

The PIU will be responsible for coordinating with a wide range of stakeholders for the execution and completion of this sub-component. The project will finance the production of the briefing papers and other documents, including, if necessary, additional training and consultant fees. The CIDA will finance the preparation of a business plan and detailed project design for the proposed Caribbean Climate Change Center that will provide the basis for further analysis of the functions and management structure of the Center.

Project Component 4 - US$2.10 million

Public Education and Outreach

The objecitve of this component is to support a public education and outreach (PEO) program geared towards improving decision-making, encouraging policy changes where required, strengthening information access and data resources for key stakeholders, disseminating project-generated data and information, and fostering public awareness about the potential impacts climate change. The CIDA supported Canada-Caribbean Climate Change program has funded a review of the PEO activities and the Public Awareness and Information Dissemination Strategy. Through this review process and further consensus building exercises, CARICOM has developed a draft PEO strategy for regional implementation under this project. This objective will be achieved through four sub-components:

- Finalizing the regional PEO strategy, and developing national PEO strategies for the participating countries;
- Implementing the regional PEO strategy, consisting of the following key ingredients: (a) developing materials needed for the public awareness generation about climate change issues; (b) implementing public awareness modules aimed at specific target audiences; (c) establishing an information clearing house within the PIU; (d) developing course materials with climate change elements for educational institutions at various levels in consultation with the Caribbean Examination Council and UWI; and (e) building capacity within the country NICUs on PEO techniques for more effective dissemination and information access; and (f) developing mutually identified linkages with the Pacific Islands and Caribbean non-CARICOM countries in website development and other PEO aspects;
- Implementing the national level PEO strategies, consisting primarily of: (a) information access and dissemination relating to the vulnerability assessment studies and the adaptation strategy development components to ensure vigorous public/private and civil society/NGO participation in

generation, evaluation, finalization, dissemination, and adoption of the climate change adaptation measures; and (b) other aspects of the national level PEO strategies as may emerge during the strategy formulation process; and

- Undertaking a mid-term and final evaluation to evaluate the effectiveness of the PEO strategies, inputs and activities of this component.

The PIU will be responsible for the implementation of the activities under this component through expert consultants, working in coordination with the NICUs. The project will finance the required training, publications, workshops and consultancies associated with these efforts. The project will also fund the cost of studies, software and equipment required. One hundred percent parallel co-financing will be provided by the CIDA for the finalization of the regional PEO strategy sub-component, as well as for the project activities related to the development of links to the Pacific Islands and other non-CARICOM countries. All other sub-components and activities will be jointly financed between the GEF and the CIDA.

Project Component 5 - US$1.38 million

Project Management

The objective of this component is to implement a management system that is efficient, flexible and transparent that would facilitate the completion of the project objectives and outputs in the time available, with the financial resources allocated according to the technical specifications and quality standards articulated by the project documents. This component will provide support to the CARICOM and PIU for the efficient and timely execution of the project, including project administration, as well as planning, monitoring and evaluating activities over the duration of the project.

To facilitate expeditious project implementation, and at the same time initiate a broad-based and transparent process for recruiting PIU staff, a six-month transitional PIU (based at Barbados) arrangement has been agreed with CARICOM, consisting of a Project Manager, a PEO Specialist, and a short-term consultant with capabilties in MIS who will also assist the Project Manager. As per the agreed timeline, project activities will be initiated starting January 1, 2003 with the transitional PIU, and the process of establishing a fully operational PIU at Belize by June 30, 2003 will commence synchronously.

Due to their assistance to project management in the areas of project accounting and financial management and procurement, CARICOM will be paid a total of US$176,000 over the life of the project (relating to salaries and other expenses of staff identified within CARICOM for these functions) as follows: US$15,000/quarter in Year 1, followed by US$12,000/quarter in Year 2, US$10,000/quarter in Year 3, and US$7,000/quarter in Year 4 (totalling to US$176,000). Disbursement will be effected under the "Operating Costs" category in the Schedule 1 of the GEF Grant Agreement.

The project will cover the costs of all training, hardware, software, consultancies and agreed-upon operating expenditures for the PIU and CARICOM, which will be jointly financed by the GEF and CIDA. Audit costs will be covered under the "Consultancies" category in the Schedule 1 of the GEF Grant Agreement.

Table I: Co-financing Arrangements for MACC Project Activities

The MACC Project will be co-financed by the Canadian and the US Governments with US$2.0 million and US$800,000 respectively.

Contribution by the Canadian Government

The Canadian Government has had a long-standing relationship with the Caribbean and has been a significant donor to the region, particularly in the field of environmental management. Acknowledging the priority status that has been accorded to the issue of climate change by the region, the Government of Canada has funded a US$2.0 million program on "Adaptation to Climate Change in the Caribbean" or ACCC project.

This project builds on and furthers the work of the Government of Canada carried out under the ENCAPD and ENACT projects, which have supported the region and specifically Jamaica and the Easter Caribbean states in strengthening their capacity to address environmental and sustainable development challenges. This contribution to the MACC project is a cash contribution and will provide additionality and complementarity to the activities, which the GEF contribution will support.

The CIDA funding will finance in parallel thefollowing activities: (a) public awareness and outreach program; (b) collaboration with the Pacific and non-CARICOM Caribbean countries; (c) the integration of climate change in the Environmental Impact Assessment (EIA) process; (d) adaptation to climate change for the health sector; (e) adaptation in the area of agriculture and food security; (f) integrating climate change into physical planning using a risk management approach; (g) strengthening the capacity of CIMH; (h) establishing the masters course in climate change at UWI; (i) developing climate change scenarios (statistical downscaling); and (j) adaptation in the water sector, (see Table below). CIDA will also jointly finance with the GEF the following activities: (a) production of public outreach materials; (b) implementation of National and Regional PEO Strategies; and (c) project management.

Contribution from the US Government

Under the MACC project, the Government of the Unites States of America will continue its support of the Caribbean region in the effort to adapt to climate change as it did under CPACC. Specifically, the US Government will make a contribution of US$800, 000 to the MACC program mainly in the support of the expansion of the knowledge base.

The contribution will be through the National Oceanic and Atmospheric Administration (NOAA) and will be totally in-kind. This contribution is expected to be initiated at project start-up. The support from the US government will focus primarily on activities to support the expansion of the existing knowledge base in areas such as climate monitoring, training and capacity development, the deployment of Coral Reef Early Warning Stations (CREWS) amd Continuously Operating Reference Stations (CORS) procured under the project with GEF funds, data collection, technical assistance in the downscaling of global models and their application to the Caribbean, integrated watershed management and the use of climate-related information for decision-making. The US Government sees its contribution as one that can significantly enhance the global observation system and provide a wealth of data related to Caribbean and global climate monitoring and modelling (see Table on next page).

Project Activities by Component Component activities that do not appear in this Table are financed entirely by the GEF	*Canadian Government: (CIDA)*	*United States Government: National Oceanic and Atmospheric Administration (NOAA)*
1.1: Strengthening the climate impacts-monitoring network	1. Strengthen capacity at the CIMH.	1. Linking climate and coral reef monitoring using the CREWS system in Discovery Bay, Jamaica. 2. Technical assistance to Survey Department technicians on GPS technology. 3. Technical assistance in the implementation and installation of twelve Continuously Operating Reference Stations (CORS).
1.2: Downscaling global climate models	Development of regional and localized climate change projections using statistical downscaling.	1. Technical assistance to the CSGM on dynamic downscaling. 2. Technical assistance to the Physics Department at UWI – Cave Hill and CIMH.
1.3: Refining a harmonized methodology for assessing climate change vulnerability and adaptation policy making	N/A	Providing resource persons for the training program.
1.4: Prepare vulnerability and risk assessment studies in key economic sectors	N/A	Technical assistance to country teams in watershed management assessments.
2.1: Country-level adaptation	1. Development of a comprehensive set of adaptation strategies for water, health and agriculture and food sectors. 2. Regional study, workshop and training to develop recommendations for an environmental assessment mechanism that incorporates climate change considerations into international and national development activities. 3. Integrating climate change into physical planning using a risk management approach.	1. Technical assistance to country teams in development of action plans relating to watershed management for incorporation into national land use strategies. 2. Technical assistance to incorporate vulnerability and risk assessment strategies into national development plans.
2.3: Disaster prevention through strengthening infrastructure norms	N/A	Providing resource persons for training activities.
3.2: Development of regional strategy	Development of a business plan and detailed project design for proposed Caribbean Community Climate Change Center.	N/A
4: Public education and outreach	All PEO activities co-financed either jointly or in parallel with GEF, including a masters course on climate change at UWI.	N/A
5: Project Management	Joint financing for all project management components	N/A

Annex 3: Estimated Project Costs

CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Project Cost By Component	Local US $million	Foreign US $million	Total US $million
1. Build Capacity to Assess Vulnerability and Risks Associated with Climate Change	1.40	3.48	4.88
2. Build Capacity to Reduce Vulnerability to Climate Change	0.67	1.48	2.15
3. Build Capacity to Access and Effectively Utilize Resources to Reduce Vulnerability to Climate Change	0.17	0.25	0.42
4. Public Education and Outreach	0.86	1.25	2.11
5. Project Management	0.05	1.26	1.31
Total Baseline Cost	3.15	7.72	10.87
Physical Contingencies	0.00	0.00	0.00
Price Contingencies	0.00	0.08	0.08
Total Project Costs[1]	3.15	7.80	10.95
Total Financing Required	3.15	7.80	10.95

Project Cost By Category	Local US $million	Foreign US $million	Total US $million
Goods	0.02	0.65	0.67
Services	1.99	5.07	7.06
Training	1.08	1.41	2.49
Operating Costs	0.06	0.59	0.65
Contingencies	0.00	0.08	0.08
Total Project Costs[1]	3.15	7.80	10.95
Total Financing Required	3.15	7.80	10.95

[1] Identifiable taxes and duties are 0 (US$m) and the total project cost, net of taxes, is 10.95 (US$m). Therefore, the project cost sharing ratio is 45.66% of total project cost net of taxes.

Annex 4 Incremental Cost Analysis
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Overview. The proposed project seeks to facilitate the development of an enabling environment for climate change adaptation in the small island and low-lying developing states of CARICOM (the participating countries are: Antigua & Barbuda; Bahamas; Barbados; Belize; Dominica; Grenada; Guyana; Jamaica; St. Kitts and Nevis; Saint Lucia; St. Vincent & the Grenadines; Trinidad & Tobago). This will be achieved through four cproject components: (a) building capacity to assess vulnerability and risks associated with climate change and variability; (b) building capacity to reduce vulnerability to climate change; and (c) building capacity to effectively access and utilize resources to reduce vulnerability to climate change and variability; and (d) public education and outreach. The project activities will be managed by CARICOM and a dedicated Project Implementation Unit established for the project.

Context and Broad Development Goals. The Caribbean Small Island Developing States (SIDS) have been identified as among the most vulnerable to the anticipated impacts of climate change. The expected sea level rise, increase in sea surface temperature, and altered patterns of precipitation are likely to hit these areas the hardest. A recent estimate of the economic consequences of the impacts of climate change concludes that a large share of the economy of the region is vulnerable to its effects and the consequent damage could be of the order of US$1-9 billion annually which represent up to 30% of the annual GDP of the CARICOM nations (Haites, 2002). Under these circumstances, the climate change risk costs borne by the SIDS are the result of external factors, it is imperative for the region to prepare for the expected induced changes and formulate suitable adaptation measures.

The UN Framework Convention on Climate Change (UNFCCC), signed in 1992 by most nations in the world, seeks to control anthropogenic emissions and stabilize greenhouse gas concentrations in the atmosphere at levels that would prevent dangerous interference with sustainable economic activity. The UNFCCC promotes impact assessment of climate change in ecological and economic systems and supports development of adaptation policies to deal with the climate changes already observed and those projected for the next century despite implementation of mitigating actions. The Caribbean SIDS have been identified by the UNFCCC as particularly vulnerable to climate change induced effects, due to their very nature and situation in tropical areas. Specifically for the region, the anticipated impacts of climate change would be reflected in flooding of low-lying areas, reduced freshwater availability, increased weather variability, and forced changes in agriculture. The Kyoto Protocol, signed in 1997, establishes the process by which the community of nations intends to address this problem, and identifies adaptation to climate change as a priority activity. It establishes goals for emission reduction and outlines a process to achieve these goals, but at the same time clearly recognizes the need for immediate climate change adaptation steps.

Scope of the analysis. The analysis of incremental cost is constrained by the limited physical investments proposed under the project (expansion and modernization of the network of climate change observing stations), capacity building initiatives, and the nature of the studies proposed to be funded under the project.

Baseline Scenario. In terms of physical investments, the baseline scenario assumes that the existing stations, including those funded under CPACC and those independently maintained in the region, will continue to operate without further investments in modernization or expansion of the network. The baseline also assumes that national planning and sector investment in the island economies will continue under the current structure, without special consideration to the impacts of climate change or its effects on the natural resource base or sector investment strategies. The emphasis under the baseline would be on continuation of sector and national planning in the most cost effective way, with little attention devoted to the issue of climate change.

The results from implementing the baseline scenario would be the development of rational national and sector planning strategies that optimize the use of natural resources in the short term.

GEF Alternative. While the UNFCCC emphasizes efforts to mitigate the anthropogenic causes of climate change, it also recognizes the need to adapt to the anticipated changes. This is required because of the inertia in current trends in climate change and associated impacts, which will continue despite any foreseeable progress in reducing emissions of greenhouse gases. The UNFCCC has recognized the long-term nature of adaptation, and establishes stages of adaptation to be assisted through the financial mechanism to the Framework Convention (GEF) that are largely designed to promote a gradual strengthening of institutional capacity, awareness and knowledge of the problem. Participation in the process of adaptation imposes additional costs on the local economies, in so far as their planning and decision making process, as well as investment strategies, need to incorporate the additional burden of anticipated climate change impacts that otherwise would have been ignored.

In the Caribbean region, the adaptation process involves four components: a reliable knowledge base, not available at this time; effective institutions, in the process of getting strengthened; sound policy environment, yet to be built; and a coordinated multi-sectoral implementation strategy. Much more work will be required for the Caribbean SIDS to adapt to the expected climate change impacts due to anthropogenic activities. The proposed project is intended as a Stage II adaptation project, and will support further capacity building, the formulation of adaptation measures, and generally facilitate the creation of an enabling environment for adaptation..

The proposed project is complementary to the baseline scenario, in that it will add climate change concerns to the processes of national planning and sector investment strategies that would otherwise not be considered. Under the GEF alternative, climate change considerations would be mainstreamed into the planning and development process.

Global benefits. Global benefits will be achieved by the GEF project in form of: (a) development of a "first of its kind" mainstreaming process for climate change considerations into national planning; (b) development of a modern and comprehensive network of climate observing stations fully integrated into global observing systems that would build into efforts already made under the previous project; and (c) identification of policy measures that incorporate climate change considerations, and that could be used as examples of the manner in which the adaptation process can be addressed.

Incremental Aspects of the GEF Project. All activities proposed to be funded under the GEF Project are incremental to the business as usual scenario, and would not have been undertaken without the GEF support.

Component 1: Build capacity to assess vulnerability and risks associated with climate change. This component will build regional capacity to collect and analyze data, and expand the overall knowledge

base on climate change impacts and associated physical, social and economic vulnerabilities. The first four sub-components will operate at the regional level, and will focus on strengthening and expanding the knowledge base as a sound platform for analysis and decision making at the national and local levels, and will be: (a) strengthening the climate and coral reef monitoring network; (b) downscaling global climate models in support of decision making for adaptation at the regional and country level; (c) generating climate change impact scenarios; and (d) developing a harmonized approach for assessing climate change vulnerability and risk, and adaptation policy decision making.

The fifth sub-component will draw upon the information and techniques developed under the above four sub-components to prepare, vulnerability and risk assessment studies for selected countries, or groups of countries, in key economic sectors (tourism, water resources and agriculture), focusing on coastal areas. The countries where the studies will be implemented will be selected based on an agreed set of criteria (an indicative list is provided in the Detailed Project Description - Annex 2). Non-study countries will still benefit from the vulnerability and risk assessment exercises by: (a) participating, as members, in the country teams conducting the vulnerability assessment studies to actually use the harmonized approaches, and in the dissemination and training workshops; and (b) adapting the outputs of such assessments to their own country sectoral settings to evolve appropriate sectoral adaptation strategies.

The baseline for this component includes, besides the current climate observing stations, the already completed work at a national and regional level on coral reef monitoring, on climate projection models (statistical downscaling), and on training relating to vulnerability assessments for coastal areas under the CPACC project. Additional investments in the knowledge base for monitoring of climate change impacts is not likely to happen without the intervention of the GEF. The costs associated with this component are incremental.

Component 2: Build capacity to reduce vulnerability to climate change. This component will build in-country capacity to formulate and analyze adaptation policy options, and finalize sectoral adaptation strategies which will be prepared for all participating countries: (i) in the first instance, for those countries where the vulnerability and risk assessment studies are implemented (directly); and (ii) in the second instance, for non-study countries (indirectly), through derived vulnerability assessments based on lessons learned from the country-level sectoral studies. The adaptation strategies for the non-study countries will be informed by the outcomes of the field-based vulnerability studies.

This component will have four sub-components: (a) identification of "no regrets" adaptation measures for all countries (carried out in parallel with, and informed by, the vulnerability assessment studies); (b) development of adaptation approaches to food security, water, health and fishery sectors, and incorporation of climate change concerns relating to environmental impact assessments; (c) development of recommendations relating to upgrading technical norms for infrastructure in response to climate change concerns, including risk reduction incentives by the insurance and banking industry; and (d) finalization of country level multi-sectoral adaptation strategies based on the vulnerability and risk assessment studies, and inputs from the three sub-components (a) to (c) above.

The associated baseline for this component includes some work done on upgrading technical norms for infrastructure development through the Caribbean Development Bank. Some developments are expected in the insurance sector through a proposed Bank-funded insurance sector reform project. Activities under the insurance sector project are considered as parallel to, and feeding into, the initiatives under this proposed project. However, this proposal is yet to be fully developed. This component would not be carried out without the GEF project.

Component 3: Build capacity to access and effectively utilize resources to reduce vulnerability to climate

change. This component will have two sub-components: (a) building the regional capacity to prepare a regional position for the UNFCCC and other international fora to enhance the region's visibility and influence on relevant negotiations and policy decisions, and provide member countries with a consolidated and common position on key issues in the international forum; and (b) learning from the implementation of the CPACC project, activities under this project, and the outcomes of the monitoring and evaluation exercise, the second sub-component will support the development of a regional strategy designed to better and more effectively organize the region in a manner that will facilitate access to cost sharing or financing mechanisms (UNFCCC and others), and improve regional coordination and harmonization on climate change adaptation and policy-making. The project will specifically prepare a business plan for the regional Caribbean Community Climate Change Center, which is foreseen to help guide and implement the future climate change strategy for the region. It will also identify opportunities for resource mobilization by the region, including designing and proposing projects and developing concept papers to be presented at a donors meeting to obtain support for furthering the implementation of the adaptation strategy.

The business as usual scenario is for each nation to approach the issue in a reactive manner at the prompting of the commitments under the UNFCCC. However, with GEF support, a regional advocacy position, both in terms of national and regional agendas, for adaptation, and in terms of a long-term strategy, would be developed. All activities under this component are incremental.

Component 4: Public education & outreach program. This component will support a public education and outreach (PEO) program geared towards improving decision-making, encouraging policy changes where required, strengthening information access and data resources for key stakeholders, disseminating project-generated data and information, and fostering public awareness about the potential impacts climate change. The project will have four sub-components: (a) finalizing a regional PEO strategy, and developing national PEO strategies; (b) implementing the regional PEO strategy; (c) implementing the national level PEO strategies; and (d) undertaking a mid-term and final evaluation of the effectiveness of the PEO strategies, inputs and activities. Key areas of focus will be: (a) to facilitate a participatory process in the development, discussion, finalization, and dissemination of the outputs of the other project components such as climate projection and impacts assessment models, vulnerability and risk assessment strategies, adaptation strategies, technical norms upgradation in construction industry; and (b) establish a clearing house of information which will facilitate both access to information by the stakeholders, and dissemination of information by the PIU.

The baseline scenario for this component is a tentative regional PEO strategy developed by the region. All activities and costs associated with this component are incremental in nature.

Component 5: Project management. As Project Management relates fully to the GEF Project, the associated costs (PIU and agreed upon costs of CARICOM for providing support services to the project) are completely incremental. This component includes the implementation of the project, the operational integration of the activities, and the evaluation of project results.

Incremental Cost of the GEF Project. The implementation of the Baseline Scenario would entail costs estimated at US$1.0 million, while the GEF alternative would incur costs estimated at US$10.95 million. The additional costs associated with the implementation of project are estimated at US$9.95 million. The GEF will fund US$5.0 million of this as part of the project. Two other co-financing sources, Government of Canada and the Government of United States, and the Recipient/Participating Countries will fund the balance US$5.95 million.

Incremental Cost Matrix (all figures in US$ million)

Cost Categories	Baseline Current situation	GEF Alternative	Incremental Costs	Domestic Benefits	Global Benefits
A. Build capacity to assess vulnerability and risks associated with climate change	0.90	4.88	3.98	Build capacity in climate projection, climate impacts assessment, and vulnerability assessments and adaptation approach	Contributions to the global knowledge base and climate observing systems. Political and public support for CC agenda
B. Build capacity to reduce vulnerability to climate change	0.00	2.15	2.15	Facilitate implementation of sustainable development policies through building a strong stakeholder ownership of risk reduction strategies	Example of how CC adaptation concerns can be incorporated into the development agenda
C. Build capacity to effectively access and utilize resources to reduce vulnerability to climate change	0.10	0.42	0.32	Built capacity for formulation of agendas and strategies on adaptation at a national and regional levels	The regional agenda will illustrate and provide guidance to other regions approach to their participation in the UNFCC process. The long-term strategy will provide a practical example to other regions' efforts to develop similar planning tools to face CC impacts
D. Public Education and Outreach	0.00	2.10	2.10	Improved participation by the stakeholders in the process of vulnerability assessments and development of adaptation strategies	Demonstration of a vigorous public education program in facilitating adoption of adaptation measures
E. Project Management	0.00	1.38	1.38	Improved efficiency and managerial knowledge	Effective implementation of global climate change aspects of project
Total Costs	1.00	10.95	9.95		

Annex 5: Financial Summary

CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

(figures in US$'000)

	Pre-project	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total Financing Required Project Costs							
Investment Costs	1,633	1,063	1,659	1,170	1,040	136	6,701
Recurrent Costs	399	682	1,177	923	895	159	4,235
Total Financing	2,032	1,745	2,836	2,093	1,935	295	10,936
Financing							
Government	632	407	798	633	585	89	3,144
GEF		810	1,587	1,260	1,165	178	5,000
CIDA	1,400	400	200	0	0	0	2,000
NOAA		128	251	200	185	28	792
Total Project Financing	2,032	1,745	2,836	2,093	1,935	295	10,936

Main assumptions:

(1) Pre-project expenditures reflect the ACCC project expenditure from Sep 2001 – March 2003 which represents 70% of the total project. The rest of pre-project costs are local in-kind contributions. The remaining ACCC funds, representing approximately 30% of the project, is split 2:1 across years 1 and 2.

(2) Non-ACCC costs in years 1-5 are allocated to other funding sources i.e. GEF, NOAA and in-kind (from government and beneficiaries) based on their overall % contribution to the entire MACC project.

(3) It is assumed that Year 1 would start from April 2003 and that Y5 would run for only one quarter – January to March 2007.

Annex 6(A): Procurement Arrangements
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Procurement

All procurement will be carried out in accordance with Bank Guidelines on procurement of goods and works, and using standard documents acceptable to the Bank (*Guidelines, Procurement under IBRD Loans and IDA Credits,* dated January 1995 and revised in January and August 1996, September 1997, and January 1999, and *Guidelines, Selection and Employment of Consultants by the World Bank Borrowers,* dated January 1997 and revised in September 1997, January 1999 and May 2002), and the provisions stipulated in the Grant Agreement.

Procurement Methods

The methods to be used for procurement described below, and the estimated amounts for each method, are summarized in Table A. The agreed threshold contract values for the use of each method are shown in Table B.

Procurement of Goods

The Project would finance computer hardware and software scientific equipment, such as sensors and climate monitoring stations. Packages estimated to cost more than US$75,000 would be procured following International Competitive Bidding Procedures and using the most recent version of the Bank Standard Bidding Documents. All other goods packages would be procured following international shopping procedures using procedures and documents acceptable to the Bank and described in the Project Operations Manual, up to an aggregate amount of US$91,000 equivalent. However, the licenses for a regional climate model (developed by the Hadley Center in the UK or similar agency) and climate impacts models costing US$50,000 in aggregate would be procured on a direct contracting basis due to the proprietary nature and uniqueness of the source. In addition to equipment, satellite imagery estimated to cost US$136,000 equivalent would be financed under the Goods disbursement category. This technical services package would be procured following ICB procedures and utilizing the service documents developed by the Bank and currently available on a trial basis.

Consultant Services

Firms. The Project would finance technical assistance, training and studies for development and monitoring of data on climate change, institutional strengthening of participating regional entities, reporting on national monitoring efforts, technical review and dissemination of monitoring information, and other related activities. Contracts estimated to cost US$1,000,000 in aggregate would be procured following QCBS procedures. About 3-5 assignments estimated to cost US$62,000 for which there is no clear advantage in comparing and evaluating full proposals would be awarded following Consultant Qualification procedures. Audit services for the Project, estimated to cost US$64,000 would be procured following Least Cost procedures.

Individual Consultants. Project management and monitoring services for the PIU, studies, and specialized advisory services required to complement the participating entities' in-house expertise, estimated to cost US$1,806,000, in total would be contracted with individual consultants on the basis of Chapter V of the Consultant Guidelines. It was determined that such services would be appropriate for individual consultants. In many cases, outsourcing complete activities to support the technical assistance needs projected for the participating entities would not be consistent with project's objectives, which

incorporate approaches and methodologies already tested by these entities, and aim at further strengthening existing capabilities by adding new expertise on climate change monitoring. In addition, the total amount for individual consultants includes several long-term consultants to the Project Implementation Unit.

Training

The Project would finance logistic costs associated with training activities such as participants' travel and subsistence and re-production of training materials, as well as tuition for courses regularly offered by universities and established training institutions. Such costs will be incurred in accordance with Bank procedures (see details in the Project Operations Manual).

Operating Costs

The Project would finance operating costs including expenditures incurred for incremental recurrent costs associated with the implementation of the project, such as: operation and maintenance of vehicles, equipment spare part and maintenance, office supplies, utilities, operational travel for Project Implementation Unit staff, support staff, and audit services (see Consultant Services above). For CARICOM, such costs would cover salaries of three professional staff for procurement, accounting, and financial management, and related operating costs, subject to an aggregate of US$176,000 over the life of the project. Such expenditures would be incurred in accordance with Bank procedures (see details in the Project Operations Manual).

ASSESSMENT OF AGENCY CAPACITY TO IMPLEMENT PROCUREMENT ARRANGEMENTS

Assessment of Capacity. A procurement capacity assessment was carried out during project preparation and cleared by the Regional Procurement Advisor. The procurement risk was assessed as "high". All procurement and financial management responsibilities under the project would rest with CARICOM, the executing agency. Project management would be the responsibility of a Project Implementation Unit to be initially established at Barbados (as a transitional arrangement for the first six months starting January 2003), and eventually located at Belize. The Project Implementation Unit will closely coordinate with CARICOM staff assigned to the project on all technical aspects which are relevant to procurement (e.g. technical specifications and terms of reference, approval of consultant short lists, bid and proposal evaluation, supervision and evaluation of consultant performance).

CARICOM has written operating procedures, some internal controls, and adequate accounting and financial reporting capabilities. However, it has limited procurement capacity and no prior experience with, or knowledge of, Bank policies and procedures. In addition, responsibilities for procurement of consultants are not assigned to any specific unit and all departments carry out selection processes, according to their needs.

Agreed Action Plan. To address the above inadequacies, it was agreed that an appropriate focal point would be established to manage procurement for the project within the existing structure, adequate procurement technical assistance would be provided, and separate procedures acceptable to be Bank would be adopted for the project. Specifically, the following action plan was agreed between the Bank and the Borrower:

Action	*Date*
The staff's qualifications have to be reviewed and agreed upon by the Bank.	By Appraisal (completed)
Assign a qualified professional staff and a support staff to work on a full-time basis on procurement administration for the Project.	By Board Presentation (completed)
Retain an experienced international consultant to provide intensive technical assistance at critical times (i.e. document preparation and evaluations) and on-the-job training in an initial phase, and ongoing advisory services thereafter. The consultant should be retained for a total period of no less than 6 months over the first two years of the project. The need for continued assistance will be re-assessed during mid-term evaluation. One of the objectives of the consultant assignment would be to ensure that the procurement staff can continue to perform their duties efficiently and independently and that appropriate procedures are in place.	By Board Presentation (process iniated)
A procurement chapter of the Project Operations Manual will include, as a minimum, a clear definition of roles and responsibilities with respect to procurement, clear procedures for maintaining separate files and a file control system, all relevant aspects of the legal agreement (procurement methods and amounts, thresholds for Bank prior review, etc.), and annexes with agreed documents to be used for shopping, technical services, and individual consultant contracts, the procurement plan, and monitoring procedures.	By Board Presentation (completed)
Project Launch Workshop to include a specific session on Procurement	Before March 31, 2003

CARICOM has already nominated staff for the project procurement activities, and the Project Operations Manual now includes a separate chapter on Procurement. Both these actions have been assessed as satisfactory by the Bank.

Procurement methods (Table A)

Table A: Project Costs by Procurement Arrangements
(US$ million equivalent)

Expenditure Category	Procurement Method[1]				Total Cost
	ICB	NCB	Other[2]	N.B.F.	
1. Works	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
2. Goods see Note 3	0.34 (0.34)	0.00 (0.00)	0.14 (0.14)	0.19 (0.00)	0.67 (0.48)
3. Services (including auditing services)	0.00 (0.00)	0.00 (0.00)	2.93 (2.93)	4.13 (0.00)	7.06 (2.93)
4. Training	0.00 (0.00)	0.00 (0.00)	1.10 (1.10)	1.39 (0.00)	2.49 (1.10)
5. Operating Costs - PIU and CARICOM	0.00 (0.00)	0.00 (0.00)	0.49 (0.49)	0.24 (0.00)	0.73 (0.49)
Total	0.34 (0.34)	0.00 (0.00)	4.66 (4.66)	5.95 (0.00)	10.95 (5.00)

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

[2/] Includes goods to be procured through international shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to managing the project.

3/ This category includes procurement of satellite imagery following ICB procedures, and climate projection and impacts models following Direct Contracting procedure.

Table A1: Consultant Selection Arrangements (optional)
(US$ million equivalent)

Consultant Services Expenditure Category	Selection Method							Total Cost[1]
	QCBS	QBS	SFB	LCS	CQ	Other	N.B.F.	
A. Firms	1.00 (1.00)	0.00 (0.00)	0.00 (0.00)	0.06 (0.06)	0.06 (0.06)	0.00 (0.00)	0.00 (0.00)	1.12 (1.12)
B. Individuals	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	1.81 (1.81)	4.13 (0.00)	5.94 (1.81)
Total	1.00 (1.00)	0.00 (0.00)	0.00 (0.00)	0.06 (0.06)	0.06 (0.06)	1.81 (1.81)	4.13 (0.00)	7.06 (2.93)

[1] Including contingencies

Note: QCBS = Quality- and Cost-Based Selection
QBS = Quality-based Selection
SFB = Selection under a Fixed Budget
LCS = Least-Cost Selection
CQ = Selection Based on Consultants' Qualifications
Other = Selection of individual consultants (per Section V of Consultants Guidelines), Commercial Practices, etc.
N.B.F. = Not Bank-financed
Figures in parenthesis are the amounts to be financed by the Bank Grant.

Prior review thresholds (Table B)

Table B: Thresholds for Procurement Methods and Prior Review[1]

Expenditure Category	Contract Value Threshold (US$ thousands)	Procurement Method	Contracts Subject to Prior Review
1. Works	NA	NA	NA
2. Goods	75 or more	ICB	All
	Less than 75	International Shopping (except climate projection and impacts models to be procured following direct contracting procedure	First two
3. Services			
Firms	100 or more	QCBS	All
	Less than 100	QCBS, or CQ (LC for audit)	First two
Individuals	50 or more	Chaper V Consultant Guidelines	All (TOR, selection process, CV, draft contract)
	Less than 50	"	First two
4. Training	N.A.	Bank procedures	None
5. Operating Costs	N.A.	Bank procedures	None
6. Miscellaneous			

Total value of contracts subject to prior review:

Overall Procurement Risk Assessment: **High**

Frequency of procurement supervision missions proposed: One every 6 months (includes special procurement supervision for post-review/audits)

Post review should include no less than one in every five contracts or purchase orders signed. Procurement capacity of staff should be re-evaluated at mid-term to determine whether continued technical assistance is required.

[1] Thresholds generally differ by country and project. Consult "Assessment of Agency's Capacity to Implement Procurement" and contact the Regional Procurement Adviser for guidance.

Annex 6(B) Financial Management and Disbursement Arrangements
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Financial Management

1. Summary of the Financial Management Assessment

Arrangements for project accounting. Project management and implementation will be the responsibility of the Project Implementation Unit. However, given its limited capacity in accounting, financial management and procurement, it's parent organization, CARICOM, will extend support to the PIU in accounting, financial management and procurement activities of the project. However, since this is the first World Bank project where CARICOM will be providing oversight relating to key fiduciary aspects, there is no prior experience regarding particular Bank procedures, especially relating to procurement. CARICOM has a well established finance and accounting division, with clear policies, rules and procedures in place. There is a strong segregation of duties, with a team a junior staff and clerks to handle routine processing, a team of experienced officers to oversee operations (internal and donor funded operations), and a team of senior managers who act as signatories for key documents (including disbursement applications and audit papers).

Accounting Policies and Procedures at CARICOM. Administrative procedures are in place at CARICOM to ensure that financial transactions are properly entered into the accounting/monitoring systems, and also complement safeguarding project assets. The project accounting system has the capacity to record assets, liabilities and financial transactions of the project, and produce financial statements useful to project management and meeting Bank fiduciary requirements. The accounting system was upgraded during the 2001 reorganization to capture all financial information and allocate among both expenditure categories (the Bank's disbursement categories) and project components. This is due to the flexibility of the accounting system (Solomon). CARICOM utilizes a cash basis of accounting with accruals used primarily at year-end (particularly for contributions and dues from member governments). Procurement information is linked to the accounting and budget information to enable the finance division to effectively carry out contract management.

Payments and operation of bank accounts. For processing payments relating to acquisition of goods and services, a purchase order or contract would have to exist. On the basis of these documents, appropriation warrants are issued, should budget be available. Bank account reconciliation is prepared on a monthly basis by a senior accountant, and is available within 15 days after the end of the month. The same procedures will be applicable for project expenditures.

CARICOM Operations Manual and segregation of accounting staff duties. CARICOM also has a well-developed Operations Manual, which outlines the roles and responsibilities for staff, clearly details the segregation of duties and defines the standard operating procedures for the unit. The CARICOM Operations Manual was developed during the 2001 reorganization of the finance division based on a study conducted by KPMG. The accounting system and the CARICOM Operations Manual were subsequently reviewed and found acceptable by the Bank. The finance division has a clear organizational structure for financial management, but does not have the same level of documented, well-established procedures for the operation of the project with regard to procurement. The procedures would support an adequate segregation of duties between procurement and financial management. Additionally, the procurement assessment found that the procurement capacity in CARICOM was weak and that procurement activities were dispersed throughout the organization. The assessment specifically recommended three risk-reducing actions (see Section 6A): appointing a nodal person for Bank procurement activities; securing technical assistance relating to procurement; and including in the Project Operations Manual to have a separate section relating to procurement procedures.

Safeguard of project assets. Assets acquired by the CARICOM will be in the custody of the respective institutional departments and reflected in a separate assets register. The amounts in this register will be reconciled monthly against the respective accounting balances. At least one annual physical asset inspection and verification will be undertaken by CARICOM staff (in addition to verification by external auditors). There is adequate insurance policy coverage against the financial loss of physical assets.

Flow of Funds. GEF Grant funds will be disbursed to one special account (US dollar account for Bank funds to be held at a bank in Washington D.C.). This account will be utilized for the purposes of the agreed implementation arrangements and will be managed by CARICOM. The special account will be replenished via the use of Statements of Expenditure (SOE). Due to the high inherent risk factor, the lower threshold in the special account would pose a lower risk to the Bank versus report-based disbursements.

All accounting will be done at CARICOM, including for PIU and country level expenses, to consolidate expenses at the project level. The finance division at CARICOM will provide periodic financial statements to PIU to facilitate financial management by PIU staff. Additionally, CARICOM will execute all payment orders on behalf of the PIU (for major technical consultancies) which, under the project, will provide technical input into the studies and consultancies, and also clear the technical content of the consultant reports, specifically approved in the annual work plans. CARICOM will carry out the procurement for services and/or goods in accordance with Bank procurement guidelines, and PIU will issue payment orders for eligible expenditures to the CARICOM finance division for financing and execution. This arrangement will not require additional special accounts for Bank funds, as all financial transactions will flow directly from the nodal special account managed by CARICOM. This arrangement will also fall under the normal scope of work for the annual external audit.

An imprest account for local level office and administration expenditures will be maintained with the PIU (about US$20,000) since it will be physically located at Belize, under which arrangement, following the first imprest from CARICOM, subsequent advances by CARICOM to the PIU will be linked with submission of expenditure reports and bank reconciliation statements.

2. Audit Arrangements

Since accounting will be centralized at CARICOM, all project accounting will be available at CARICOM with supporting documentation. This will considerably facilitate the process of annual audits. Annual financial statements will be audited in accordance with International Standards on Auditing, by independent auditors (Deloitte and Touche) acceptable to the Bank and in accordance with the terms of reference (TORs) already reviewed and cleared by the Bank. The audit report will include audit opinions on project financial statements, special accounts and SOEs The report will be required to be submitted to the Bank no later than four months following the end of the fiscal year (January – December). The table below summarizes audit requirements:

Audit Report	*Due Date*
Project financial statements	Four months after the end of the reporting period
SOE	Same as above
Special Accounts	Same as above

3. Disbursement Arrangements

The Bank and the Recipient have agreed to use the traditional disbursement procedures in accordance

with the Guidelines set in the Disbursement Procedures Handbook. The special account, managed by CARICOM, will be replenished from the GEF Trust Fund Account via the use Fully Documented Claims and through Summary of SOEs. Withdrawal Applications will be fully documented, except for expenditures under contracts costing less than (a) US$75,000 for goods and equipment (except for the first two contracts under International Shopping procedures which will be fully documented); (b) US$100,000 for consulting firms (except the first two contracts which will be fully documented); (c) US$50,000 for individual consultants (except the first two contracts which will be fully documented). All training costs and operating expenses will be covered through SOE procedures.

Expenditures under the categories of "goods" and "operating costs" will be disbursed at 100%. There are two reasons for this exception: first, CARICOM is an institution with "tax-exempt" status, and therefore local taxes such as VAT and sales tax on goods procured by such entities can be financed under Bank-funded grant agreements on an exception basis; and second, under GEF procedures, all incremental costs are eligible for full disbursement. Since all operating costs under this Grant are incremental in nature, these are eligible for 100% reimbursement. Disbursement against all expenditure categories, therefore, has been agreed at 100%.

The project financial statements, along with the physical progress and procurement sections of the Financial Monitoring Reports (FMRs), will be submitted to the Bank on a quarterly basis, and will be submitted no later than forty-five (45) days after the end of each six-monthly period. The contents of the FMRs have been discussed and the initial design of the reports has been agreed between the CARICOM finance division and the Bank. The format of the reports will be finalized by negotiations. While CARICOM is required to submit the FMRs, these are intended to facilitate project financial management and do not constitute the basis for disbursement against expenditures incurred under the project.

Co-financing arrangements. In addition to the counterpart funds from the participating states and grant assistance by GEF, the project will be co-financed by the Governments of Canada (CIDA - US$2.0 million) and United States (NOAA - US$800,000). The NOAA support will be parallel in nature, and will take the form of in-kind assistance consisting of consultancies, technical assistance and studies, workshops, seminars, and training. There will be no fund flow, procurement- and disbursement-related issue in this instance. The CIDA funding covers several activities, in the nature of parallel and joint funding with GEF. The CIDA will provide funds in advance to CARICOM for project expenditures on an imprest basis, and procurement will follow Bank procurement procedures. The detailed sharing of activities between GEF, CIDA and NOAA is indicated in Table 1, Annex 2 (Project Description Summary). The co-financing agreement between CIDA and CARICOM is already in place and found acceptable by the Bank; a Letter of Commitment has been received by CARICOM from NOAA confirming the scope of assistance and the allotment of funds to this project. The NOAA co-financing amount will be finalized after the US government budget is adopted, and the co-financing agreement between CARICOM and NOAA will be reviewed by the Bank upon finalization.

Retroactive Funding. The Grant provides US$500,000 in retroactive funding for eligible project expenditures, covering all disbursement categories, before the date of the Grant Agreement but after January 1, 2003. The retroactive funding will cover the following main expenditures: (a) transitional PIU consultant fees; (b) time-critical activites of evolving downscaled climate project models and developing harmonized vulnerability and risk assessment, and adaptation strategies; (c) other project activities on a modest scale; and (d) the PIU and CARICOM agreed-upon operating costs (defined in the Grant Agreement) for the period.

Allocation of grant proceeds (Table C)

Table C: Allocation of Grant Proceeds

Expenditure Category	Amount in US$million	Financing Percentage
1. Goods	0.48	100
2. Consultants	2.93	100
3. Training	1.10	100
4. Operating Costs - PIU	0.23	100
5. Operating Costs - CARICOM	0.18	100
6. Unallocated	0.08	
Total Project Costs	5.00	
Total	5.00	

REPORTING AND MONITORING

Financial statements and reports will be prepared in formats satisfying CARICOM and the Bank's monitoring and fiduciary requirements.

On a monthly basis (at least), the CARICOM finance division will prepare the project's SOE, a matrix classifying receipts by financing source and expenditures by financing source, project component, and disbursement category, as required by CARICOM's operational guidelines for donor-funded projects. The expenditures would be compared with the projected budget prepared for the project.

In addition to SOEs, the monthly financial reports will include the Special Account Reconciliation Statements. Any difference in the amount of expenditures reported under the two financial statements would have to be clearly explained. The project financial statements, along with the physical progress and procurement sections of the Financial Monitoring Reports (FMRs), will be submitted to the Bank on a quarterly basis, and will be submitted no later than forty-five (45) days after the end of each six-monthly period. The contents of the FMRs have been discussed and the initial design of the reports has been agreed between the CARICOM finance division and the Bank. The format of the reports will be finalized by negotiations.

For Bank purposes, the annual financial statements will include the Schedule of SOEs presented during the year in support of Withdrawal Applications.

AGREED FINANCIAL MANAGEMENT ACTION PLAN

Action	*Responsible Entity*	*Completion Date*
1. Open dedicated bank account (Special Account) and provide comfort letter to Loan Department/Disbursement	CARICOM	Immediately after Effectiveness is declared
2. Letter of appoint for external auditors	CARICOM	Met
3. Signed MOU with Auditors	CARICOM	Met
4. Submit draft Project Monitoring Reports (FMRs).	CARICOM	Met

5. Submit first FMRs	CARICOM	45 days after the end of the calendar quarter after effectiveness

RISK ANALYSIS AND MITIGATORY ACTIONS

Since this is a project which will be implemented by CARICOM, which has no experience with implementation of Bank-funded projects, and given the moderate to high risk associated with various aspects of implementation, it is recommended that at least for the first year of implementation, financial management supervision should take place approximately every six months.

The risks emanating from the financial management assessment, and the agreed mitigation measures are summarized below.

Risk	*Risk Rating*	*Risk Mitigation Measures*
INHERENT RISK		
Country specific	High	Establishment of a dedicated project implementation unit within CARICOM and appointment of qualified staff as point of contact; restrict location of Special Account (SA); use of SOEs for disbursement with lower threshold in the SA
CONTROL RISK		
Implementing Entity - Lack of experience with Bank-financed projects.	Moderate to High	Build capacity to carry out procurement functions
Funds Flow – inadequate counterpart funding	High	Approval of budget units prior to commencement of fiscal year
Staffing	low	
Accounting policies and procedures	low	Implement adequate accounting system with sufficient internal controls
Internal Audit	N/A	N/A
External Audit – delay in completion of annual audit	Moderate	Appointment of auditors before effectiveness
Reporting and Monitoring - Finance division has experience preparing reports for multiple donors	Moderate	Bank support to generation of flexible draft FMRs prior to effectiveness

Annex 7: Project Processing Schedule
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Project Schedule	Planned	Actual
Time taken to prepare the project (months)	2	
First Bank mission (identification)	10/14/2000	10/14/2000
Appraisal mission departure	10/21/2002	09/11/2002
Negotiations	12/03/2002	02/06/2003
Planned Date of Effectiveness	03/01/2003	

Prepared by:
Regional Trade and Economic Integration Directorate, CARICOM

Preparation assistance:
PDF-B Grant

Bank staff who worked on the project included:

Name	Speciality
Benoit Blarel	Sector Leader, and Task Manager
Walter Vergara	Lead Chemical Engineer
Harideep Singh	Sr. Rural Development Specialist, and Co-Task Manager
Mark Austin	Project Management
Alejandro Deep	Consultant
Jackson Morrill	Consultant
John Morton	Consultant
Reynaldo Pastor	Counsel
Maurizzio Ragazzi	Counsel
Edward Daoud	Disbursement Officer
Enzo De Laurentiis	Sr. Procurement Specialist
Rajeev Swami	Financial Management Specialist
Nigel Twose	Program Manager, Corporate Social Responsibility

Annex 8: Documents in the Project File*
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

A. Project Implementation Plan

Project Procurement Plan
Project Implementation Plan
Operational Manual
Detailed Project Budget by Funding Source, Sequencing, Activity and Expense Category

B. Bank Staff Assessments

Procurement Assessment
Financial Management Assessment

C. Other

Institutional Review:

The Caribbean Community Climate Change Centre: Institutional Review, World Bank; August 2002.

Caribbean Climate Change Centre: Business Plan [working draft], de Romilly, G., de Romilly & de Romilly, Ltd.; March 2002.

Selecting an Executing Agency for the Mainstreaming Adaptation to Climate Change Project, Halter, F.; January 2002.

Institutional Baseline Survey for the Mainstreaming Adaptation to Climate Change Project, Touré, M.; January 2002.

Other:

Regional Public Education and Outreach Strategy, ACCC Regional Project Implementation Unit; 2002 [currently being updated].

Synthesis of MACC National Consultations, ACCC Regional Project Implementation Unit; 2002.

Catastrophe Insurance Market in the Caribbean Region: Market Failures and Recommendations for Public Sector Interventions, Auffret, P., World Bank; 2002

The Last Straw: Integrating Natural Disaster Mitigation with Environmental Management, Burton, I. and van Aalst, M., World Bank Disaster Risk Management Working Paper no. 5; July 2002.

Agreement Establishing the Caribbean Community Climate Change Centre (CCCCC), CARICOM; 2002.

Protocol on the Provisional Application of the Agreement Establishing the Caribbean Community Climate Change Centre, CARICOM; February 2002.

Climate Change and Disaster Management: Issues Paper, Caribbean Disaster Emergency Response Agency; 2002.

Report of the Brainstorming Workshop on Adaptation to Climate Change in Caribbean Disaster Risk Management, Caribbean Disaster Emergency Response Agency; 2002.

Natural Hazard Risk Management in the Caribbean: Revisiting the Challenge, Guinard, A., World Bank Discussion Draft for the Caribbean Group for Cooperation in Economic Development; June 2002.

Natural Hazard Risk Management in the Caribbean: Good Practices and Country Case Studies, Guinard, A., Technical Annex for the World Bank Discussion Draft for the Caribbean Group for Cooperation in Economic Development; June 2002.

Assessment of the Economic Impact of Climate Change on CARICOM Countries, Haites, E., Margaree Consultants, Inc.; July 2002.

Potential Impact of Climate Change on Tourism, Jackson, I.; 2002.

Potential Impact of Climate Change on Tourism: Workshop Report and Draft Plan of Action, Jackson, I.; 2002

Adaptation of Fisheries and Fishing Communities to the Impacts of Climate Change in the CARICOM Region: Issues Paper, Mahon, R.; May 2002.

Climate Change and CARICOM Fisheries [draft], Mahon, R. June 2002.

MACC Briefing Paper, Organization of American States; April 2002.

Integrated Resource Management Workshop and Launching of the Caribbean Dialogue on Water and Climate: Draft Final Report, Organization of American States; July 2002.

Climate Change Impacts on Land Use Planning and Coastal Infrastructure, U.S. National Oceanic and Atmospheric Administration; 2002.

Caribbean Planning for Adaptation to Climate Change Project: Implementation Completion Report, World Bank; 2002.
*Including electronic files

Annex 9: Statement of Loans and Credits

CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

06-Feb-2003

Belize

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P040150	1	ROADS AND MUNICIPAL DRAINAGE PROJECT	13.00	0.00	0.00	3.88	1.02	0.00
P039292	1997	BZ- SOCIAL INVEST. FUND	7.00	0.00	0.00	1.42	0.02	0.00
		Total:	20.00	0.00	0.00	5.31	1.04	0.00

CARIBBEAN
STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1998	Nova/Ambergris	4.77	0.00	0.00	0.00	4.77	0.00	0.00	0.00
	Total Portfolio:	4.77	0.00	0.00	0.00	4.77	0.00	0.00	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
2000	BAL	10.00	0.00	0.00	0.00
2001	Nova Bluewater	6.00	0.00	0.00	0.00
	Total Pending Commitment:	16.00	0.00	0.00	0.00

Greneda

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	SF	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P076715	2003	GR 2nd Phase APL HIV/AIDS Prev.&Control	3.00	3.04	0.00	0.00	0.00	6.23	0.00	0.00
P077682	2002	Grenada Emergency Recovery Project	1.14	2.66	0.00	0.00	0.00	2.43	-0.40	0.00
P069922	2001	GD Grenada Disaster Management	5.06	5.01	0.00	0.00	0.00	5.27	1.04	0.00
		Total:	9.20	10.71	0.00	0.00	0.00	13.94	0.64	0.00

STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
2002	Bel Air	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
	Total Portfolio:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
	Total Pending Commitment:	0.00	0.00	0.00	0.00

Guyana

Project ID	FY	Purpose	Original Amount in US$ Millions						Difference between expected and actual disbursements[a]	
			IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig	Frm Rev'd
P074762	2003	GY Public Sector Tech. Assistance Credit	0.00	4.76	0.00	0.00	0.00	4.94	0.00	0.00
P073851	2003	GY Poverty Red. Support Credit (PRSC)	0.00	12.00	0.00	0.00	0.00	12.51	0.00	0.00
P007269	1996	GY- SECONDARY EDUCATION	0.00	17.30	0.00	0.00	0.00	5.47	6.69	5.70
P007257	1994	GY WATER SUPPLY TA AND REHABILITATION	0.00	17.50	0.00	0.00	0.00	6.91	7.14	7.03
		Total:	0.00	51.56	0.00	0.00	0.00	29.83	13.83	12.73

STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1998	Guyam Bank	0.00	1.00	0.00	0.00	0.00	0.50	0.00	0.00
1998	SEF Cara Lodge	0.68	0.00	0.00	0.00	0.45	0.00	0.00	0.00
1998	SEF IDS	1.23	0.00	0.00	0.00	1.23	0.00	0.00	0.00
	Total Portfolio:	1.91	1.00	0.00	0.00	1.68	0.50	0.00	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
	Total Pending Commitment:	0.00	0.00	0.00	0.00

Jamaica

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	SF	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P076837	2003	JM National Community Devt. Project	15.00	0.00	0.00	0.00	0.00	15.00	0.03	0.00
P071589	2003	JM- Reform of Secondary Ed. (ROSE II)	39.80	0.00	0.00	0.00	0.00	39.80	0.50	0.00
P067774	2002	JM- Social Safety Net Project	40.00	0.00	0.00	0.00	0.00	38.60	-1.40	0.00
P074641	2002	2ndAPL_JM:HIV/AIDS PREV.AND CONTROL DO	15.00	0.00	0.00	0.00	0.00	14.28	-0.72	0.00
P007490	1997	JM PUB SCTR MODERNIZ	28.40	0.00	0.00	0.00	0.00	7.50	7.50	7.50
		Total:	138.20	0.00	0.00	0.00	0.00	115.19	5.92	7.50

STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

		Committed IFC				Disbursed IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1995	Jam Energy Prtnr	13.72	0.00	0.00	30.50	13.72	0.00	0.00	30.50
2002	MBJA Limited	20.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00
2001/02	Mossel	12.00	8.00	0.00	0.00	12.00	8.00	0.00	0.00
	Total Portfolio:	45.72	8.00	0.00	55.50	25.72	8.00	0.00	30.50

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
	Total Pending Commitment:	0.00	0.00	0.00	0.00

St. Kitts and Nevis

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	SF	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P076798	2003	KN: HIV/AIDS PREVENTION AND CONTROL P	4.04	0.00	0.00	0.00	0.00	4.05	0.00	0.00
P075978	2002	6O-KN EDUCATION (APL01)	5.00	0.00	0.00	0.00	0.00	4.95	0.03	0.00
P077684	2002	St. Kitts and Nevis Emergency Recovery P	4.40	0.00	0.00	0.00	0.00	3.25	-0.18	0.00
P062668	1999	KN 6o Disaster Mgt Project	14.07	5.50	0.00	0.00	0.00	3.36	1.39	1.11
		Total:	27.51	5.50	0.00	0.00	0.00	15.61	1.25	1.11

STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

FY Approval	Company	Committed IFC Loan	Equity	Quasi	Partic	Disbursed IFC Loan	Equity	Quasi	Partic
	Total Portfolio:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FY Approval	Company	Approvals Pending Commitment Loan	Equity	Quasi	Partic
	Total Pending Commitment:	0.00	0.00	0.00	0.00

St. Lucia

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	SF	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P077712	2002	6O LC Education (APL01)	6.00	6.00	0.00	0.00	0.00	12.56	0.19	0.00
P070244	2002	Water Sector Reform Technical Assistance	1.30	1.30	0.00	0.00	0.00	2.55	0.10	0.00
P077687	2002	St. Lucia Emergency Recovery Project	1.89	4.41	0.00	0.00	0.00	2.99	-2.54	0.00
P054939	2000	LC- POVERTY REDUCTION FUND	1.50	1.50	0.00	0.00	0.00	1.39	1.31	0.00
P070430	1999	Saint Lucia Disaster Management	3.04	2.95	0.00	0.00	0.00	2.89	2.84	0.57
		Total:	13.73	16.16	0.00	0.00	0.00	22.38	1.90	0.57

CARIBBEAN
STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

FY Approval	Company	Committed IFC Loan	Equity	Quasi	Partic	Disbursed IFC Loan	Equity	Quasi	Partic
	Total Portfolio:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FY Approval	Company	Approvals Pending Commitment Loan	Equity	Quasi	Partic
	Total Pending Commitment:	0.00	0.00	0.00	0.00

St. Vincent and the Grenadines

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	SF	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P069923	2002	VC Disaster Management	3.00	2.91	0.00	0.00	0.00	6.07	0.90	0.00
P076822	2002	St Vincent Emergency Recovery Project	0.96	2.24	0.00	0.00	0.00	2.11	-0.53	0.00
		Total:	3.96	5.15	0.00	0.00	0.00	8.18	0.37	0.00

CARIBBEAN
STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

FY Approval	Company	Committed IFC Loan	Equity	Quasi	Partic	Disbursed IFC Loan	Equity	Quasi	Partic
	Total Portfolio:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FY Approval	Company	Approvals Pending Commitment Loan	Equity	Quasi	Partic
	Total Pending Commitment:	0.00	0.00	0.00	0.00

Trinidad and Tobago

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	SF	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P040108	1999	POSTAL SERV. REFORM	14.85	0.00	0.00	0.00	3.40	5.72	8.96	0.00
P035312	1996	TT- BASIC EDUCATION	51.00	0.00	0.00	0.00	0.00	14.31	14.31	0.00
		Total:	65.85	0.00	0.00	0.00	3.40	20.03	23.27	0.00

STATEMENT OF IFC's
Held and Disbursed Portfolio
June 30 - 2002
In Millions US Dollars

		Committed IFC				Disbursed IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1996	Caribbean Ispat	13.70	0.00	0.00	18.33	13.70	0.00	0.00	18.33
2002	Republic-CL/CMBS	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	Royal Merchant	20.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00
2002	Unicell	5.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00
	Total Portfolio:	58.70	0.00	4.00	18.33	33.70	0.00	0.00	18.33

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
2001	Royal Merchant	20.00	0.00	0.00	0.00
2002	Republic Bank	20.00	0.00	0.00	0.00
	Total Pending Commitment:	40.00	0.00	0.00	0.00

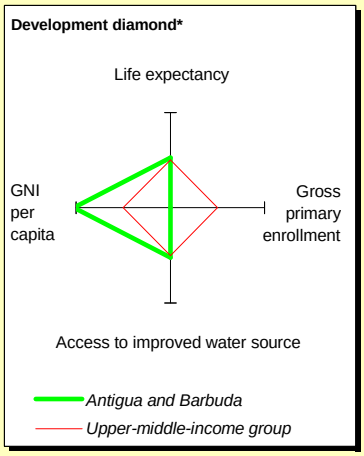
Annex 10: Country at a Glance

CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Antigua and Barbuda at a glance

9/23/02

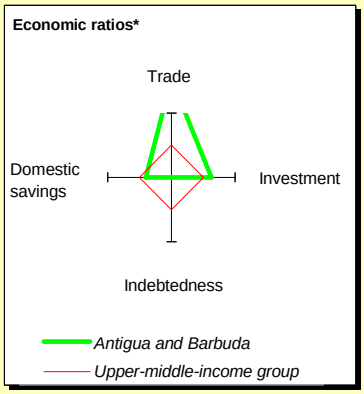
POVERTY and SOCIAL	Antigua and Barbuda	Latin America & Carib.	Upper-middle-income
2001			
Population, mid-year *(millions)*	0.07	524	504
GNI per capita *(Atlas method, US$)*	9,150	3,560	4,460
GNI *(Atlas method, US$ billions)*	0.63	1,862	2,248
Average annual growth, 1995-01			
Population *(%)*	0.8	1.5	1.3
Labor force *(%)*	..	2.2	1.8
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	37	76	77
Life expectancy at birth *(years)*	75	70	71
Infant mortality *(per 1,000 live births)*	16	29	24
Child malnutrition *(% of children under 5)*	..	9	9
Access to an improved water source *(% of population)*	91	85	87
Illiteracy *(% of population age 15+)*	..	11	10
Gross primary enrollment *(% of school-age population)*	..	130	127
Male	..	131	128
Female	..	128	126



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

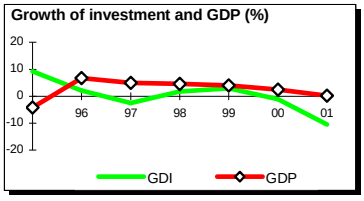
	1981	1991	2000	2001
GDP *(US$ billions)*	0.12	0.41	0.66	0.68
Gross domestic investment/GDP	41.9	37.6	30.5	27.2
Exports of goods and services/GDP	73.2	90.1	68.0	68.9
Gross domestic savings/GDP	19.6	37.0	20.7	16.8
Gross national savings/GDP	26.3	31.4	15.3	10.5
Current account balance/GDP	-26.3	-8.1	-15.2	-12.8
Interest payments/GDP	..	..	..	..
Total debt/GDP	..	..	..	..
Total debt service/exports	..	..	..	..
Present value of debt/GDP	..	..	..	..
Present value of debt/exports	..	..	..	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	6.9	3.4	2.5	0.2	..
GDP per capita	6.4	2.7	1.6	-0.5	..
Exports of goods and services	10.0	0.7	-10.0	1.5	..

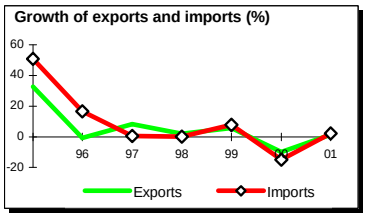


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	6.8	4.2	3.9	4.0
Industry	18.5	20.9	20.2	21.1
Manufacturing	5.0	3.0	2.3	2.3
Services	74.8	75.0	75.8	74.9
Private consumption	61.5	45.5	55.7	55.4
General government consumption	18.9	17.5	23.6	27.9
Imports of goods and services	95.6	90.7	77.8	79.3



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	2.4	0.8	5.6	0.9
Industry	10.9	5.0	6.3	3.3
Manufacturing	2.7	1.8	3.0	3.2
Services	6.0	3.1	1.3	-0.7
Private consumption	1.6	6.9	-8.1	-0.4
General government consumption	6.2	7.3	7.4	18.3
Gross domestic investment	9.2	1.3	-1.1	-10.5
Imports of goods and services	6.6	3.1	-14.9	2.2

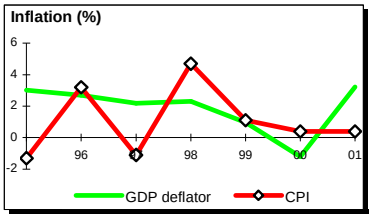


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

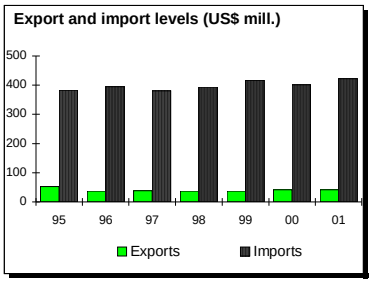
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	..	1.5	0.4	0.4
Implicit GDP deflator	8.6	2.7	-1.2	3.2
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	17.9	18.2
Current budget balance	..	..	-5.8	-4.8
Overall surplus/deficit	..	..	-8.1	-10.3



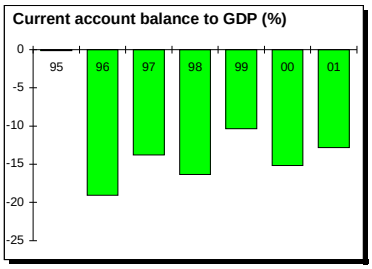
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	..	..	42	42
n.a.	..	..	..	..
n.a.	..	..	..	..
Manufactures	..	..	..	..
Total imports (cif)	..	299	402	422
Food	..	..	..	..
Fuel and energy	..	..	..	..
Capital goods	..	..	..	..
Export price index *(1995=100)*	..	..	..	..
Import price index *(1995=100)*	..	..	..	..
Terms of trade *(1995=100)*	..	..	..	..



BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	104	418	449	470
Imports of goods and services	145	429	513	514
Resource balance	-41	-10	-65	-45
Net income	-2	-32	-43	-42
Net current transfers	10	9	7	-1
Current account balance	-33	-33	-100	-88
Financing items (net)	..	38	94	81
Changes in net reserves	..	-5	6	6
Memo:				
Reserves including gold *(US$ millions)*	..	..	63	57
Conversion rate *(DEC, local/US$)*	2.7	2.7	2.7	2.7



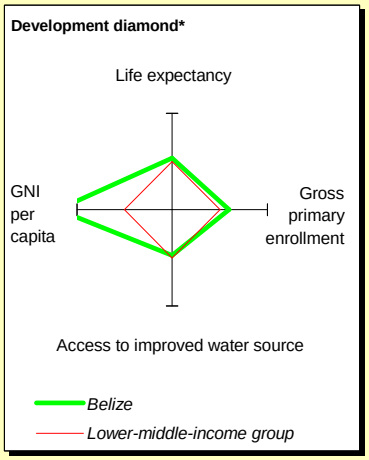
EXTERNAL DEBT and RESOURCE FLOWS

	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	..	..	..	..
IBRD	..	..	..	..
IDA	..	..	..	..
Total debt service	..	..	..	..
IBRD	..	..	..	..
IDA	..	..	..	..
Composition of net resource flows				
Official grants	..	..	..	..
Official creditors	..	..	..	..
Private creditors	..	..	..	..
Foreign direct investment	..	..	..	..
Portfolio equity	..	..	..	..
World Bank program				
Commitments	..	..	..	..
Disbursements	..	..	..	..
Principal repayments	..	..	..	..
Net flows	..	..	..	..
Interest payments	..	..	..	..
Net transfers	..	..	..	..

Belize at a glance

9/12/02

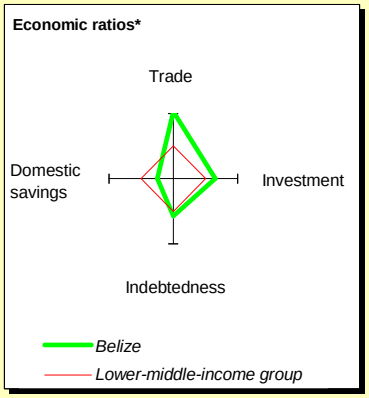
POVERTY and SOCIAL	Belize	Latin America & Carib.	Lower-middle-income
2001			
Population, mid-year *(millions)*	0.25	524	2,164
GNI per capita *(Atlas method, US$)*	2,980	3,560	1,240
GNI *(Atlas method, US$ billions)*	0.74	1,862	2,677
Average annual growth, 1995-01			
Population *(%)*	3.3	1.5	1.0
Labor force *(%)*	4.3	2.2	1.2
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	48	76	46
Life expectancy at birth *(years)*	74	70	69
Infant mortality *(per 1,000 live births)*	31	29	33
Child malnutrition *(% of children under 5)*	..	9	11
Access to an improved water source *(% of population)*	76	85	80
Illiteracy *(% of population age 15+)*	7	11	15
Gross primary enrollment *(% of school-age population)*	127	130	107
Male	130	131	107
Female	125	128	107



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

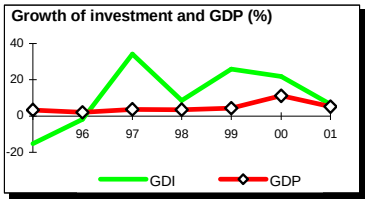
	1981	1991	2000	2001
GDP *(US$ billions)*	0.19	0.43	0.76	0.79
Gross domestic investment/GDP	26.0	29.7	34.6	35.0
Exports of goods and services/GDP	53.4	56.0	59.1	56.5
Gross domestic savings/GDP	4.1	18.8	13.5	14.9
Gross national savings/GDP	15.7	22.8	14.1	12.9
Current account balance/GDP	-2.3	-6.8	-20.5	-22.2
Interest payments/GDP	0.9	1.4	3.0	4.4
Total debt/GDP	31.2	39.6	66.0	73.6
Total debt service/exports	3.8	7.8	14.6	18.5
Present value of debt/GDP	..	..	63.2	..
Present value of debt/exports	..	..	104.9	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	5.8	4.1	11.1	5.1	..
GDP per capita	3.1	1.5	7.5	2.1	..
Exports of goods and services	6.9	4.5	6.9	0.5	..

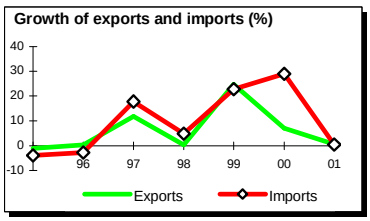


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	26.1	18.7	21.1	20.3
Industry	27.5	26.3	25.2	33.0
Manufacturing	20.3	14.8	16.6	14.5
Services	46.4	55.0	53.7	46.8
Private consumption	76.9	67.8	72.6	71.1
General government consumption	19.0	13.4	13.9	14.0
Imports of goods and services	75.3	66.9	80.2	76.6



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	3.7	6.2	4.2	12.3
Industry	4.4	4.8	17.8	52.9
Manufacturing	2.1	3.8	19.5	1.9
Services	6.1	3.4	10.5	2.0
Private consumption	4.1	4.8	31.6	2.9
General government consumption	1.0	3.3	4.3	6.0
Gross domestic investment	10.8	5.9	21.8	6.4
Imports of goods and services	5.3	5.6	28.9	0.5

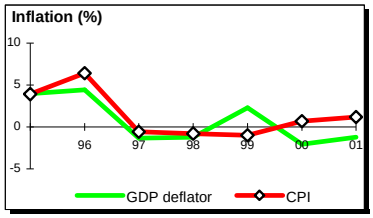


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

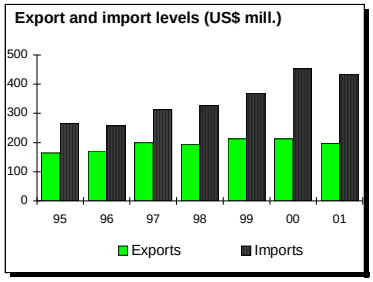
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	..	3.2	0.7	1.2
Implicit GDP deflator	-2.2	3.3	-2.1	-1.2
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	22.9	24.0
Current budget balance	..	..	3.6	3.4
Overall surplus/deficit	..	..	-10.5	-10.9



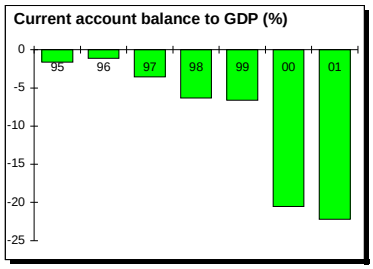
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	75	129	212	198
Sugar	..	42	37	30
Banana	..	7	33	21
Manufactures	..	19	20	16
Total imports (cif)	..	251	453	434
Food	..	..	62	57
Fuel and energy	..	..	37	31
Capital goods	..	59	142	114
Export price index *(1995=100)*	..	101	78	73
Import price index *(1995=100)*	..	102	96	91
Terms of trade *(1995=100)*	..	99	81	80



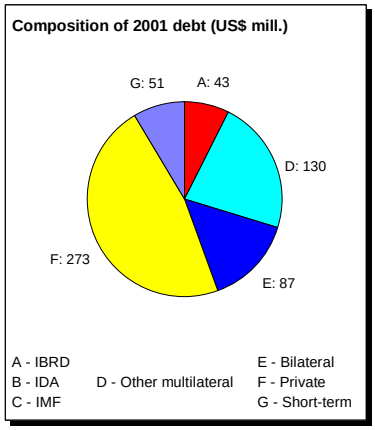
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	103	241	452	449
Imports of goods and services	130	288	613	608
Resource balance	-27	-47	-161	-160
Net income	-2	-11	-55	-65
Net current transfers	24	28	59	49
Current account balance	-5	-30	-157	-176
Financing items (net)	3	8	208	165
Changes in net reserves	2	22	-51	11
Memo:				
Reserves including gold *(US$ millions)*	..	..	115	104
Conversion rate *(DEC, local/US$)*	2.0	2.0	2.0	2.0



EXTERNAL DEBT and RESOURCE FLOWS

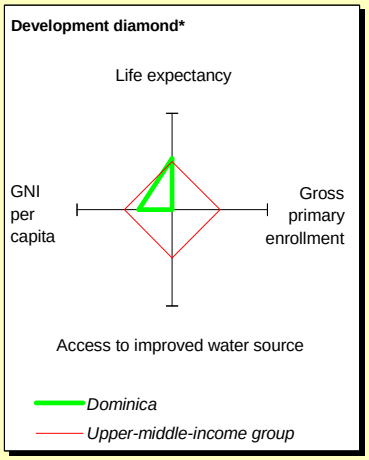
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	60	171	505	584
IBRD	0	19	40	43
IDA	0	0	0	0
Total debt service	4	20	67	85
IBRD	0	3	7	7
IDA	0	0	0	0
Composition of net resource flows				
Official grants	7	3	11	..
Official creditors	7	10	10	28
Private creditors	4	3	145	50
Foreign direct investment	0	14	18	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	0	0	13	1
Disbursements	0	2	2	7
Principal repayments	0	1	4	3
Net flows	0	1	-1	3
Interest payments	0	1	3	3
Net transfers	0	-1	-5	0



Dominica at a glance

9/16/02

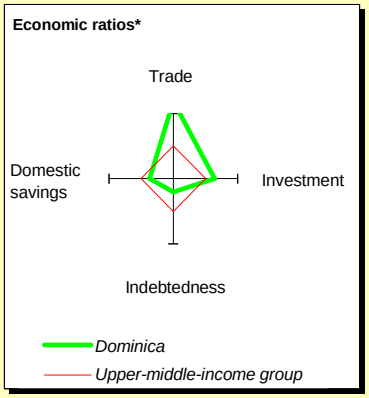
POVERTY and SOCIAL	Dominica	Latin America & Carib.	Upper-middle-income
2001			
Population, mid-year *(millions)*	0.07	524	504
GNI per capita *(Atlas method, US$)*	3,140	3,560	4,460
GNI *(Atlas method, US$ billions)*	0.23	1,862	2,248
Average annual growth, 1995-01			
Population *(%)*	0.0	1.5	1.3
Labor force *(%)*	..	2.2	1.8
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	71	76	77
Life expectancy at birth *(years)*	76	70	71
Infant mortality *(per 1,000 live births)*	16	29	24
Child malnutrition *(% of children under 5)*	..	9	9
Access to an improved water source *(% of population)*	..	85	87
Illiteracy *(% of population age 15+)*	..	11	10
Gross primary enrollment *(% of school-age population)*	..	130	127
Male	..	131	128
Female	..	128	126



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

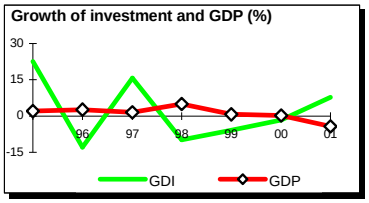
	1981	1991	2000	2001
GDP *(US$ billions)*	0.07	0.18	0.27	0.26
Gross domestic investment/GDP	33.9	31.6	24.7	27.8
Exports of goods and services/GDP	34.6	51.2	54.6	51.2
Gross domestic savings/GDP	-10.2	12.8	11.5	15.2
Gross national savings/GDP	13.8	12.6	6.4	11.4
Current account balance/GDP	-19.3	-18.1	-18.3	-16.4
Interest payments/GDP	0.3	1.1	1.1	2.9
Total debt/GDP	21.7	53.0	60.3	82.1
Total debt service/exports	1.8	5.4	6.6	10.1
Present value of debt/GDP	..	..	30.0	..
Present value of debt/exports	..	..	49.2	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	4.6	1.7	0.2	-4.3	..
GDP per capita	5.0	1.5	0.2	-4.5	..
Exports of goods and services	9.2	2.8	-5.5	-10.3	..

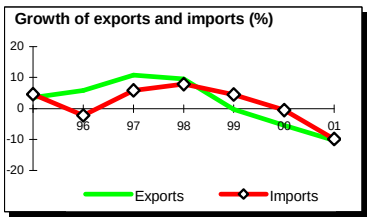


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	31.7	23.8	18.2	17.2
Industry	20.3	18.7	23.4	22.8
Manufacturing	6.7	7.5	8.8	7.9
Services	48.0	57.5	58.4	60.0
Private consumption	84.8	66.2	65.6	61.6
General government consumption	25.4	21.0	22.9	23.3
Imports of goods and services	78.7	70.0	67.8	63.8



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	2.4	-2.0	-1.1	-11.4
Industry	6.0	2.3	4.3	-6.6
Manufacturing	5.4	0.6	8.5	-14.8
Services	4.8	2.9	0.1	-1.9
Private consumption	2.8	1.0	4.9	-10.1
General government consumption	2.1	3.1	1.5	-2.6
Gross domestic investment	5.9	0.3	-1.6	7.8
Imports of goods and services	5.4	1.8	-0.5	-9.9

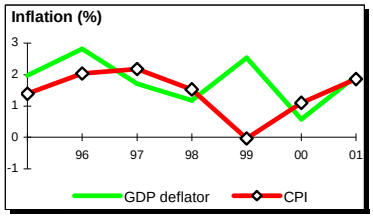


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

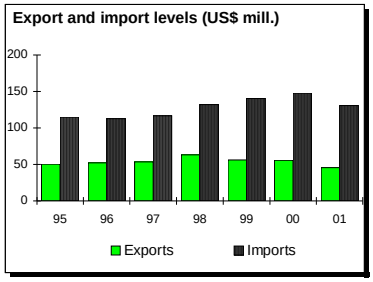
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	11.5	5.5	1.1	1.9
Implicit GDP deflator	0.0	7.8	0.6	1.9
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	28.2	34.3	32.5
Current budget balance	..	1.7	3.5	0.3
Overall surplus/deficit	..	-8.0	-11.1	-10.9



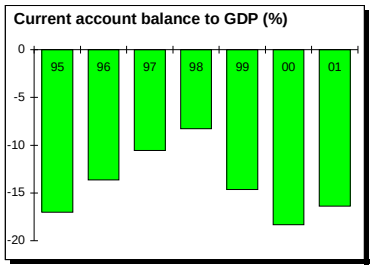
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	..	56	56	45
Bananas	..	32	12	8
Other agricultural exports	..	2	7	6
Manufactures	..	19	37	31
Total imports (cif)	..	97	148	131
Food	..	20	30	26
Fuel and energy	..	6	15	13
Capital goods	..	..	39	34
Export price index *(1995=100)*	..	96	80	78
Import price index *(1995=100)*	..	89	103	100
Terms of trade *(1995=100)*	..	107	77	78



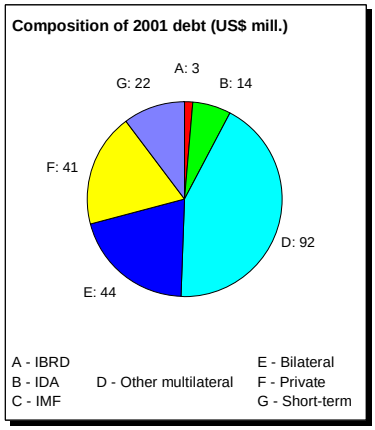
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	23	94	147	135
Imports of goods and services	52	126	183	168
Resource balance	-29	-32	-35	-33
Net income	1	-8	-32	-28
Net current transfers	15	7	18	19
Current account balance	-13	-33	-49	-43
Financing items (net)	4	37	47	45
Changes in net reserves	9	-5	2	-2
Memo:				
Reserves including gold *(US$ millions)*	-2	18	30	32
Conversion rate *(DEC, local/US$)*	2.7	2.7	2.7	2.7



EXTERNAL DEBT and RESOURCE FLOWS

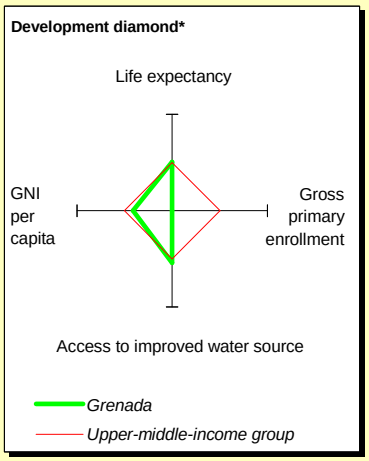
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	14	96	163	216
IBRD	0	0	2	3
IDA	0	11	14	14
Total debt service	1	6	11	15
IBRD	0	0	0	0
IDA	0	0	0	0
Composition of net resource flows				
Official grants	8	3	5	..
Official creditors	2	8	19	14
Private creditors	0	0	30	12
Foreign direct investment	0	15	11	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	0	0	0	0
Disbursements	0	1	1	1
Principal repayments	0	0	0	0
Net flows	0	1	1	1
Interest payments	0	0	0	0
Net transfers	0	1	0	1



Grenada at a glance

9/23/02

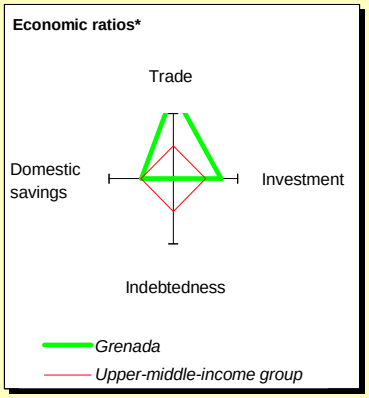
POVERTY and SOCIAL	Grenada	Latin America & Carib.	Upper-middle-income
2001			
Population, mid-year *(millions)*	0.10	524	504
GNI per capita *(Atlas method, US$)*	3,660	3,560	4,460
GNI *(Atlas method, US$ billions)*	0.36	1,862	2,248
Average annual growth, 1995-01			
Population *(%)*	0.8	1.5	1.3
Labor force *(%)*	..	2.2	1.8
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	38	76	77
Life expectancy at birth *(years)*	72	70	71
Infant mortality *(per 1,000 live births)*	13	29	24
Child malnutrition *(% of children under 5)*	..	9	9
Access to an improved water source *(% of population)*	94	85	87
Illiteracy *(% of population age 15+)*	..	11	10
Gross primary enrollment *(% of school-age population)*	..	130	127
Male	..	131	128
Female	..	128	126



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

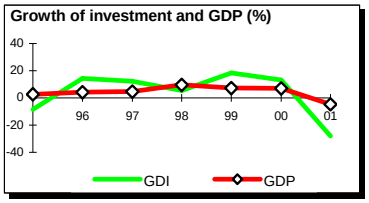
	1981	1991	2000	2001
GDP *(US$ billions)*	0.09	0.24	0.41	0.40
Gross domestic investment/GDP	41.3	37.9	42.5	32.0
Exports of goods and services/GDP	44.7	40.7	58.0	58.8
Gross domestic savings/GDP	-3.5	16.9	25.6	20.7
Gross national savings/GDP	..	17.9	22.1	19.9
Current account balance/GDP	-18.8	-15.4	-20.3	-17.6
Interest payments/GDP	0.5	0.7	0.7	1.4
Total debt/GDP	41.2	60.3	48.0	57.8
Total debt service/exports	3.6	3.8	..	..
Present value of debt/GDP	..	..	40.8	..
Present value of debt/exports	..	..	..	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	6.3	3.8	6.9	-4.7	..
GDP per capita	5.7	3.3	5.8	-5.7	..
Exports of goods and services	6.7	7.8	-0.7	-3.5	..

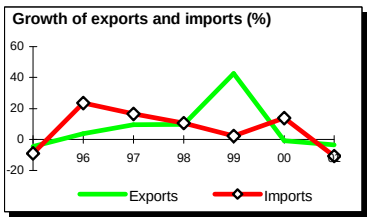


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	25.4	13.1	8.2	8.2
Industry	14.6	20.0	23.8	23.2
Manufacturing	3.5	6.5	8.8	8.4
Services	59.9	66.8	68.0	68.6
Private consumption	83.4	62.1	60.0	62.2
General government consumption	20.1	21.0	14.4	17.1
Imports of goods and services	89.5	61.7	74.8	70.1



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	-0.4	-1.0	-2.2	-3.3
Industry	7.6	6.5	14.5	-5.6
Manufacturing	12.2	6.4	13.8	-7.6
Services	6.9	3.7	5.1	-2.6
Private consumption	2.6	3.2	20.2	-1.2
General government consumption	7.5	1.0	7.5	13.5
Gross domestic investment	5.9	5.3	13.2	-28.1
Imports of goods and services	3.0	6.3	13.9	-10.7

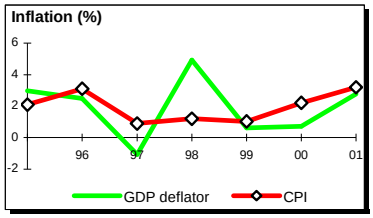


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

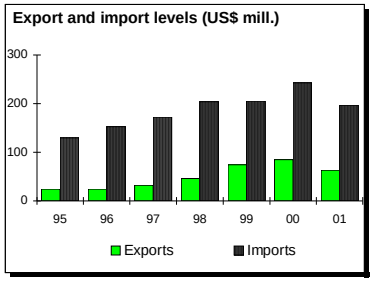
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	18.9	2.6	2.2	3.2
Implicit GDP deflator	4.2	6.8	0.7	2.8
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	24.0	27.1	26.3
Current budget balance	..	-0.5	6.1	2.3
Overall surplus/deficit	..	-9.0	-6.2	-12.8



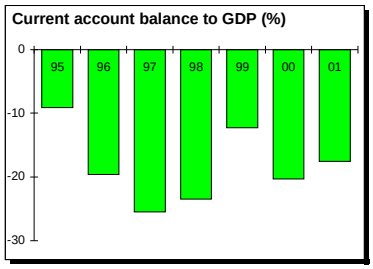
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	..	25	85	64
Cocoa	..	4	12	14
Bananas	..	2	3	4
Manufactures	..	8	60	34
Total imports (cif)	..	121	243	196
Food	..	28	39	38
Fuel and energy	..	9	24	22
Capital goods	..	28	75	65
Export price index *(1995=100)*	..	101	116	117
Import price index *(1995=100)*	..	92	95	92
Terms of trade *(1995=100)*	..	110	122	128



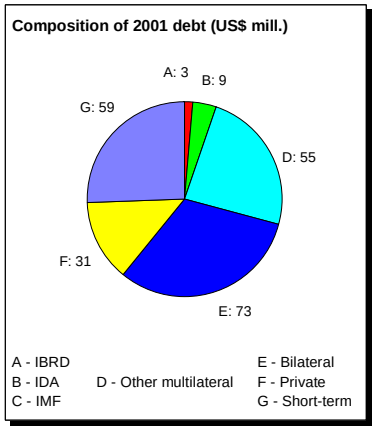
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	39	114	235	208
Imports of goods and services	79	154	304	275
Resource balance	-39	-40	-69	-67
Net income	..	-8	-34	-26
Net current transfers	23	10	20	23
Current account balance	-17	-37	-83	-70
Financing items (net)	19	38	89	76
Changes in net reserves	-2	0	-7	-6
Memo:				
Reserves including gold *(US$ millions)*	..	19	59	65
Conversion rate *(DEC, local/US$)*	2.7	2.7	2.7	2.7



EXTERNAL DEBT and RESOURCE FLOWS

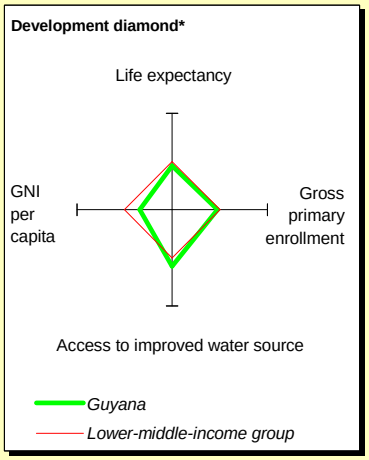
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	36	146	195	230
IBRD	0	0	2	3
IDA	0	7	10	9
Total debt service	1	5	14	16
IBRD	0	0	0	0
IDA	0	0	0	0
Composition of net resource flows				
Official grants	2	9	7	..
Official creditors	10	3	13	14
Private creditors	1	11	28	-4
Foreign direct investment	0	15	37	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	0	0	10	0
Disbursements	0	2	3	1
Principal repayments	0	0	0	0
Net flows	0	2	3	1
Interest payments	0	0	0	0
Net transfers	0	2	3	1



Guyana at a glance

9/16/02

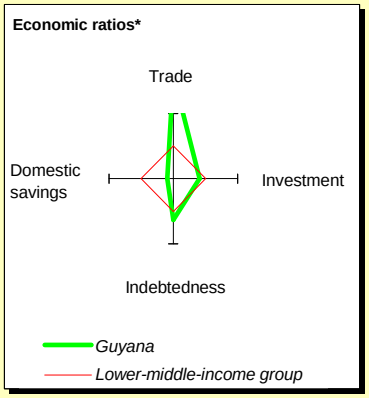
POVERTY and SOCIAL	Guyana	Latin America & Carib.	Lower-middle-income
2001			
Population, mid-year *(millions)*	0.77	524	2,164
GNI per capita *(Atlas method, US$)*	840	3,560	1,240
GNI *(Atlas method, US$ billions)*	0.64	1,862	2,677
Average annual growth, 1995-01			
Population *(%)*	0.5	1.5	1.0
Labor force *(%)*	1.5	2.2	1.2
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	38	76	46
Life expectancy at birth *(years)*	63	70	69
Infant mortality *(per 1,000 live births)*	54	29	33
Child malnutrition *(% of children under 5)*	12	9	11
Access to an improved water source *(% of population)*	94	85	80
Illiteracy *(% of population age 15+)*	1	11	15
Gross primary enrollment *(% of school-age population)*	102	130	107
Male	103	131	107
Female	101	128	107



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

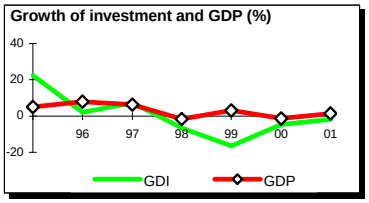
	1981	1991	2000	2001
GDP *(US$ billions)*	0.57	0.34	0.71	0.70
Gross domestic investment/GDP	31.4	42.2	22.6	21.9
Exports of goods and services/GDP	68.9	116.5	96.1	94.9
Gross domestic savings/GDP	8.0	17.9	8.0	5.6
Gross national savings/GDP	..	-5.3	7.3	3.1
Current account balance/GDP	-32.4	-45.3	-15.3	-18.8
Interest payments/GDP	6.3	14.0	6.3	6.5
Total debt/GDP	159.5	589.2	205.8	201.6
Total debt service/exports	..	26.5	15.9	15.0
Present value of debt/GDP	..	..	118.3	..
Present value of debt/exports	..	..	115.6	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	-2.5	4.5	-1.4	1.5	2.7
GDP per capita	-2.0	4.1	-2.0	0.8	1.8
Exports of goods and services	-1.0	1.7	-1.9	0.2	1.3

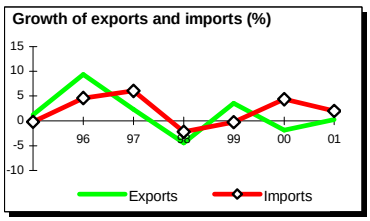


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	22.2	38.4	31.1	31.3
Industry	30.5	32.0	29.0	28.3
Manufacturing	14.9	12.9	8.2	8.2
Services	47.3	29.6	39.9	40.4
Private consumption	63.0	60.9	67.3	69.0
General government consumption	29.1	21.2	24.7	25.4
Imports of goods and services	92.3	140.9	110.7	111.3



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	-0.5	3.9	-9.1	3.4
Industry	-5.2	6.6	-1.6	0.2
Manufacturing	-8.6	7.4	-13.8	2.5
Services	-1.1	3.7	5.1	1.0
Private consumption	-4.7	5.5	1.1	4.1
General government consumption	4.1	6.8	28.2	4.4
Gross domestic investment	-2.8	-2.3	-4.6	-1.9
Imports of goods and services	-2.2	1.2	4.4	2.0

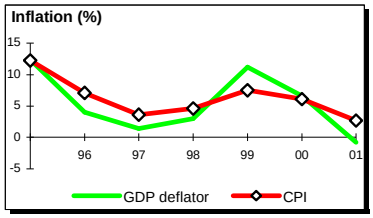


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

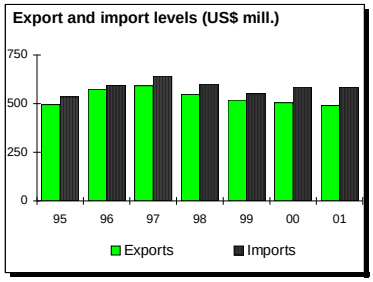
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	..	101.5	6.1	2.7
Implicit GDP deflator	4.3	126.7	6.6	-0.8
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	49.2	39.5	39.8
Current budget balance	..	14.3	4.7	4.0
Overall surplus/deficit	..	0.6	-7.5	-8.6



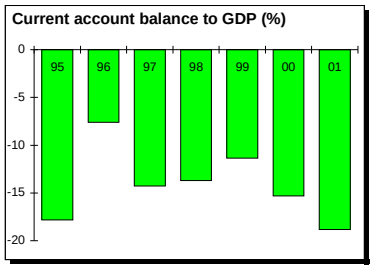
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	346	254	505	490
Rice	..	18	52	50
Sugar	..	90	119	109
Manufactures	..	20	78	77
Total imports (cif)	428	307	585	584
Food	..	23	69	69
Fuel and energy	..	67	121	132
Capital goods	..	139	132	115
Export price index *(1995=100)*	..	108	81	84
Import price index *(1995=100)*	..	83	100	95
Terms of trade *(1995=100)*	..	131	81	88



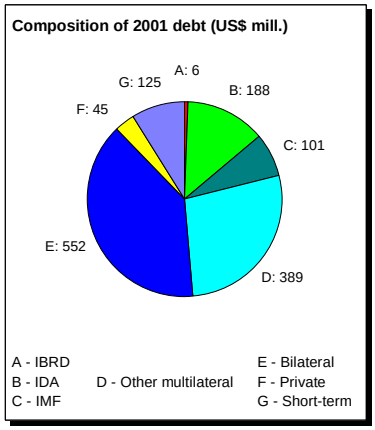
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	369	357	685	662
Imports of goods and services	499	431	789	776
Resource balance	-129	-75	-104	-114
Net income	-55	-107	-52	-61
Net current transfers	..	29	47	44
Current account balance	-185	-153	-109	-131
Financing items (net)	..	193	171	147
Changes in net reserves	..	-41	-62	-16
Memo:				
Reserves including gold *(US$ millions)*	..	123	297	285
Conversion rate *(DEC, local/US$)*	2.8	111.8	182.6	187.6



EXTERNAL DEBT and RESOURCE FLOWS

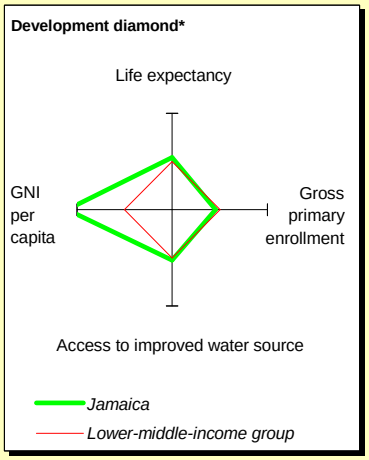
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	910	1,984	1,465	1,406
IBRD	42	55	8	6
IDA	26	134	180	188
Total debt service	97	102	116	105
IBRD	3	11	4	4
IDA	0	1	2	3
Composition of net resource flows				
Official grants	9	158	39	..
Official creditors	111	67	23	..
Private creditors	-15	-13	0	0
Foreign direct investment	-2	0	67	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	23	18	0	0
Disbursements	15	40	6	10
Principal repayments	1	6	4	5
Net flows	14	34	2	5
Interest payments	2	6	2	2
Net transfers	12	28	0	3



Jamaica at a glance

9/18/02

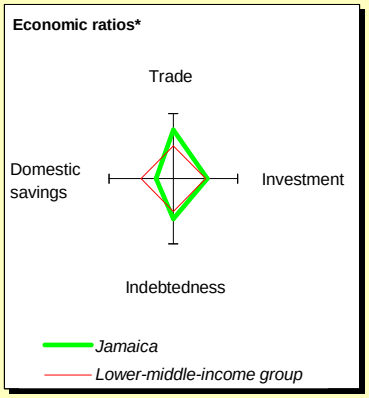
POVERTY and SOCIAL	Jamaica	Latin America & Carib.	Lower-middle-income
2001			
Population, mid-year *(millions)*	2.7	524	2,164
GNI per capita *(Atlas method, US$)*	2,740	3,560	1,240
GNI *(Atlas method, US$ billions)*	7.3	1,862	2,677
Average annual growth, 1995-01			
Population *(%)*	0.9	1.5	1.0
Labor force *(%)*	1.5	2.2	1.2
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	17	..	..
Urban population *(% of total population)*	57	76	46
Life expectancy at birth *(years)*	75	70	69
Infant mortality *(per 1,000 live births)*	25	29	33
Child malnutrition *(% of children under 5)*	4	9	11
Access to an improved water source *(% of population)*	84	85	80
Illiteracy *(% of population age 15+)*	13	11	15
Gross primary enrollment *(% of school-age population)*	98	130	107
Male	97	131	107
Female	98	128	107



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

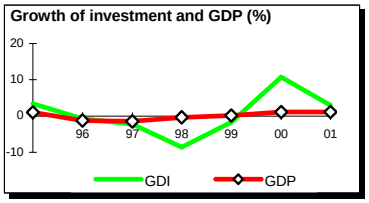
	1981	1991	2000	2001
GDP *(US$ billions)*	3.0	4.0	7.6	8.0
Gross domestic investment/GDP	20.3	24.6	28.3	28.5
Exports of goods and services/GDP	47.2	51.0	46.7	42.0
Gross domestic savings/GDP	11.7	23.4	17.2	15.8
Gross national savings/GDP	9.8	17.7	22.7	21.1
Current account balance/GDP	-10.5	-6.3	-5.6	-7.3
Interest payments/GDP	3.7	4.8	2.6	3.2
Total debt/GDP	77.6	109.2	55.9	61.3
Total debt service/exports	25.4	30.8	16.8	17.4
Present value of debt/GDP	..	..	56.9	..
Present value of debt/exports	..	..	113.2	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	2.7	1.1	1.1	1.1	2.4
GDP per capita	1.6	0.5	0.5	0.5	1.7
Exports of goods and services	6.0	0.3	3.6	-4.3	3.0

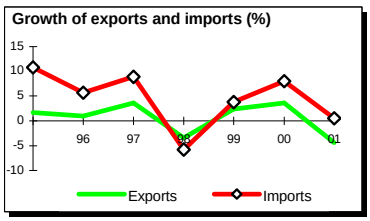


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	7.5	7.3	6.4	6.5
Industry	35.6	42.4	27.2	30.2
Manufacturing	16.7	18.0	10.1	12.9
Services	57.0	50.4	66.4	63.3
Private consumption	67.7	64.8	67.1	67.3
General government consumption	20.6	11.8	15.7	16.9
Imports of goods and services	55.8	52.2	57.7	54.6



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	1.4	0.0	-7.3	3.0
Industry	3.2	-0.3	0.8	1.0
Manufacturing	2.6	-1.5	0.8	1.0
Services	2.4	5.2	2.1	1.0
Private consumption	3.3	4.6	0.8	3.9
General government consumption	5.8	4.8	-3.7	8.8
Gross domestic investment	2.3	3.1	10.7	3.0
Imports of goods and services	8.0	4.4	8.0	0.5

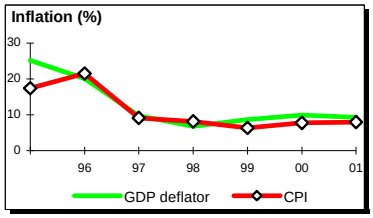


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

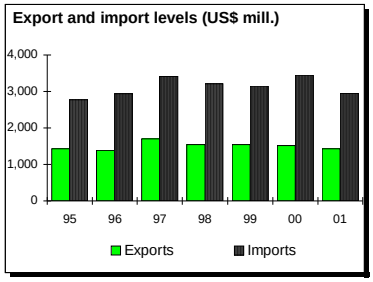
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	11.9	51.0	7.7	8.0
Implicit GDP deflator	8.4	49.2	9.9	9.3
Government finance				
(% of GDP, includes current grants)				
Current revenue	28.3	29.2	29.5	27.7
Current budget balance	-4.0	7.4	1.3	-2.9
Overall surplus/deficit	-16.0	4.3	-0.9	-5.7



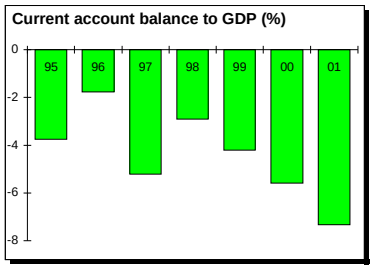
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	974	1,151	1,515	1,436
Alumina	588	543	676	630
Bauxite	172	113	56	98
Manufactures	69	63	43	47
Total imports (cif)	1,471	1,829	3,451	2,949
Food	102	91	262	..
Fuel and energy	489	325	618	..
Capital goods	295	398	497	541
Export price index *(1995=100)*	58	90	118	116
Import price index *(1995=100)*	58	90	117	116
Terms of trade *(1995=100)*	100	100	101	101



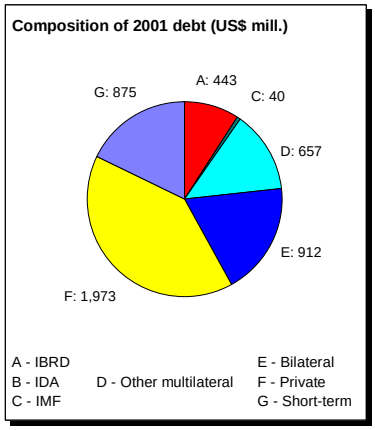
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	1,406	2,183	3,562	3,360
Imports of goods and services	1,663	2,207	4,406	4,368
Resource balance	-257	-24	-844	-1,008
Net income	-179	-484	-414	-458
Net current transfers	124	253	831	879
Current account balance	-312	-256	-427	-587
Financing items (net)	224	402	1,010	985
Changes in net reserves	88	-146	-583	-398
Memo:				
Reserves including gold *(US$ millions)*	..	..	1,368	1,748
Conversion rate *(DEC, local/US$)*	1.8	12.1	44.1	46.5



EXTERNAL DEBT and RESOURCE FLOWS

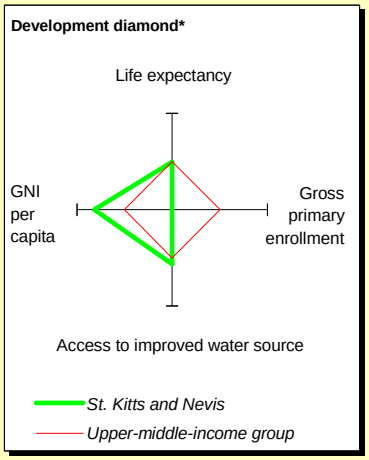
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	2,313	4,413	4,269	4,900
IBRD	212	664	415	443
IDA	0	0	0	0
Total debt service	382	692	643	645
IBRD	21	121	83	74
IDA	0	0	0	0
Composition of net resource flows				
Official grants	11	282	39	42
Official creditors	338	121	29	-112
Private creditors	-43	-63	442	773
Foreign direct investment	-12	133	529	448
Portfolio equity	0	0	-62	-54
World Bank program				
Commitments	45	42	75	75
Disbursements	43	43	98	91
Principal repayments	7	62	60	52
Net flows	36	-19	37	39
Interest payments	14	59	22	22
Net transfers	22	-78	15	17



St. Kitts and Nevis at a glance

9/19/02

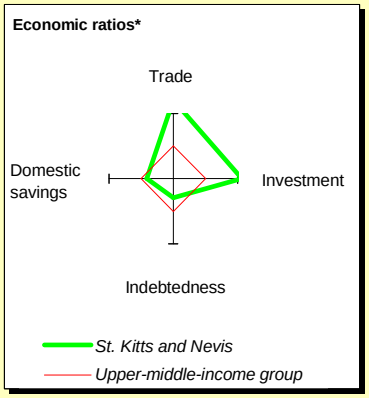
POVERTY and SOCIAL	St. Kitts and Nevis	Latin America & Carib.	Upper-middle-income
2001			
Population, mid-year *(millions)*	0.04	524	504
GNI per capita *(Atlas method, US$)*	7,270	3,560	4,460
GNI *(Atlas method, US$ billions)*	0.30	1,862	2,248
Average annual growth, 1995-01			
Population *(%)*	0.0	1.5	1.3
Labor force *(%)*	..	2.2	1.8
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	34	76	77
Life expectancy at birth *(years)*	71	70	71
Infant mortality *(per 1,000 live births)*	19	29	24
Child malnutrition *(% of children under 5)*	..	9	9
Access to an improved water source *(% of population)*	98	85	87
Illiteracy *(% of population age 15+)*	..	11	10
Gross primary enrollment *(% of school-age population)*	..	130	127
Male	..	131	128
Female	..	128	126



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

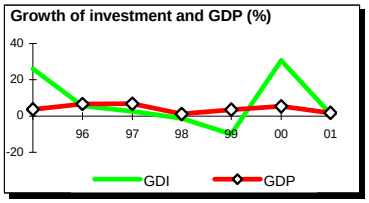
	1981	1991	2000	2001
GDP *(US$ billions)*	0.06	0.16	0.33	0.34
Gross domestic investment/GDP	30.2	42.9	46.3	46.0
Exports of goods and services/GDP	60.4	58.9	43.3	44.1
Gross domestic savings/GDP	1.1	21.4	-0.3	17.2
Gross national savings/GDP	20.9	21.9	9.9	13.1
Current account balance/GDP	-8.1	-17.6	-17.7	-32.9
Interest payments/GDP	0.2	0.8	2.2	3.3
Total debt/GDP	14.5	30.3	47.0	55.2
Total debt service/exports	..	3.3	12.5	13.2
Present value of debt/GDP	..	..	35.2	..
Present value of debt/exports	..	..	71.7	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	6.7	4.6	5.3	1.7	..
GDP per capita	7.5	4.8	5.0	1.5	..
Exports of goods and services	7.4	1.4	-5.4	3.5	..

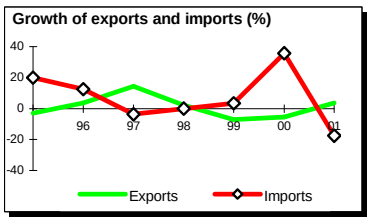


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	11.1	6.7	2.8	2.9
Industry	24.4	26.5	29.0	29.2
Manufacturing	14.4	12.0	10.5	10.2
Services	64.5	66.8	68.3	68.0
Private consumption	72.9	61.0	75.7	59.8
General government consumption	26.0	17.6	24.6	23.0
Imports of goods and services	89.5	80.4	89.9	72.9



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	-2.3	0.2	-6.5	6.9
Industry	5.9	7.0	24.0	2.0
Manufacturing	2.6	4.8	10.8	-1.5
Services	8.6	4.0	2.9	1.8
Private consumption	2.8	6.6	27.3	-19.7
General government consumption	2.5	8.0	20.3	-4.7
Gross domestic investment	13.1	5.2	30.5	1.0
Imports of goods and services	6.1	5.2	35.6	-17.5

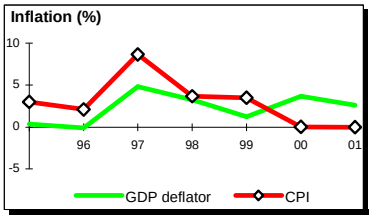


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

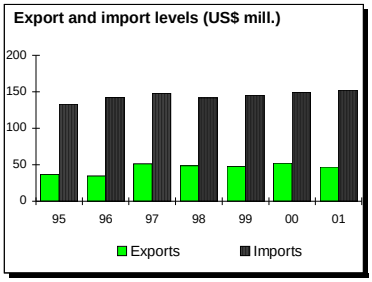
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	10.5	4.2	0.0	0.0
Implicit GDP deflator	16.5	3.0	3.7	2.6
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	23.1	29.2	28.5
Current budget balance	..	0.8	2.3	2.5
Overall surplus/deficit	..	-2.8	-2.7	-1.9



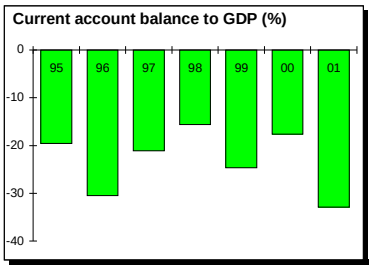
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	..	34	52	47
Sugar	..	11	8	7
Beverages and tobacco	..	2	1	1
Manufactures	..	21	24	22
Total imports (cif)	..	110	149	152
Food	..	18	27	25
Fuel and energy	..	9	13	13
Capital goods	..	26	21	24
Export price index *(1995=100)*	..	..	..	..
Import price index *(1995=100)*	..	..	..	..
Terms of trade *(1995=100)*	..	..	..	..



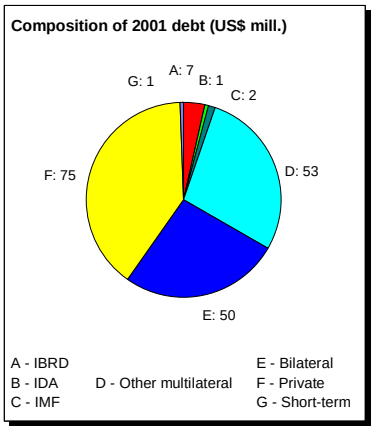
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	39	103	156	151
Imports of goods and services	55	132	247	250
Resource balance	-16	-30	-91	-99
Net income	1	-7	-29	-34
Net current transfers	10	8	63	20
Current account balance	-5	-29	-58	-113
Financing items (net)	9	30	58	112
Changes in net reserves	-5	-1	0	0
Memo:				
Reserves including gold *(US$ millions)*	..	23	52	48
Conversion rate *(DEC, local/US$)*	2.7	2.7	2.7	2.7



EXTERNAL DEBT and RESOURCE FLOWS

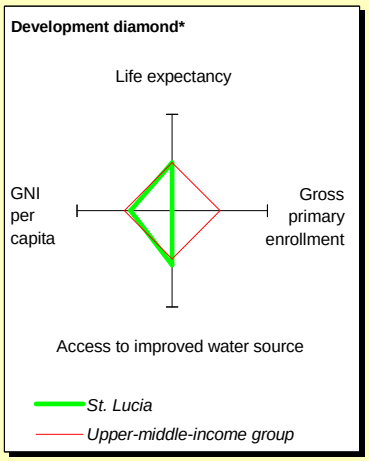
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	8	50	155	189
IBRD	0	0	5	7
IDA	0	0	1	1
Total debt service	0	4	20	21
IBRD	0	0	0	1
IDA	0	0	0	0
Composition of net resource flows				
Official grants	2	2	2	..
Official creditors	1	3	3	9
Private creditors	0	1	14	27
Foreign direct investment	1	21	96	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	0	3	0	0
Disbursements	0	0	1	2
Principal repayments	0	0	0	0
Net flows	0	0	1	2
Interest payments	0	0	0	0
Net transfers	0	0	1	2



St. Lucia at a glance

9/16/02

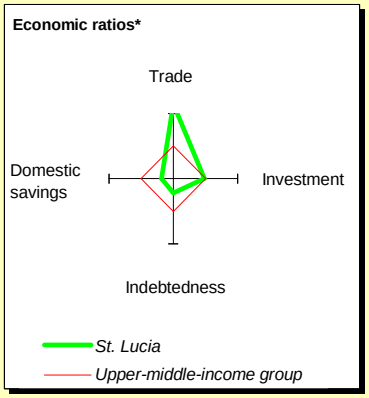
POVERTY and SOCIAL	St. Lucia	Latin America & Carib.	Upper-middle-income
2001			
Population, mid-year *(millions)*	0.16	524	504
GNI per capita *(Atlas method, US$)*	3,910	3,560	4,460
GNI *(Atlas method, US$ billions)*	0.62	1,862	2,248
Average annual growth, 1995-01			
Population *(%)*	1.4	1.5	1.3
Labor force *(%)*	..	2.2	1.8
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	38	76	77
Life expectancy at birth *(years)*	71	70	71
Infant mortality *(per 1,000 live births)*	13	29	24
Child malnutrition *(% of children under 5)*	..	9	9
Access to an improved water source *(% of population)*	98	85	87
Illiteracy *(% of population age 15+)*	..	11	10
Gross primary enrollment *(% of school-age population)*	..	130	127
Male	..	131	128
Female	..	128	126



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

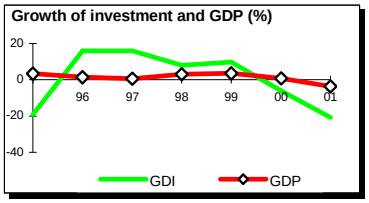
	1981	1991	2000	2001
GDP *(US$ billions)*	0.15	0.43	0.69	0.66
Gross domestic investment/GDP	34.2	25.3	25.6	21.0
Exports of goods and services/GDP	51.8	69.9	55.8	48.9
Gross domestic savings/GDP	0.6	11.9	8.9	7.6
Gross national savings/GDP	7.9	8.3	6.1	5.1
Current account balance/GDP	-32.3	-17.0	-8.9	-9.9
Interest payments/GDP	0.3	0.9	2.4	1.3
Total debt/GDP	10.2	19.1	34.5	36.0
Total debt service/exports	1.4	3.2	9.6	6.7
Present value of debt/GDP	..	..	32.2	..
Present value of debt/exports	..	..	52.9	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	8.1	2.0	0.7	-3.7	..
GDP per capita	6.5	0.4	-0.8	-5.0	..
Exports of goods and services	12.4	-1.0	-1.2	-15.6	..

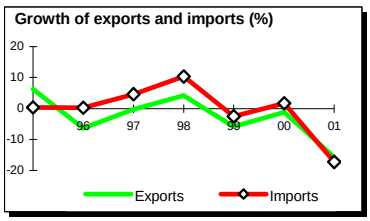


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	13.1	13.1	8.3	6.6
Industry	22.9	18.9	19.8	18.2
Manufacturing	9.3	7.9	5.5	4.4
Services	64.0	67.9	71.9	75.2
Private consumption	82.4	73.5	74.6	74.6
General government consumption	17.0	14.6	16.6	17.9
Imports of goods and services	85.4	83.4	72.6	62.4



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	7.1	-4.7	7.4	-19.2
Industry	9.7	2.1	-1.9	-6.1
Manufacturing	10.8	-1.4	-4.1	-17.8
Services	7.0	3.0	0.7	-1.6
Private consumption	7.6	2.2	16.3	-6.1
General government consumption	4.7	4.3	4.9	3.9
Gross domestic investment	7.8	2.0	-6.2	-20.9
Imports of goods and services	10.1	0.6	1.6	-17.2

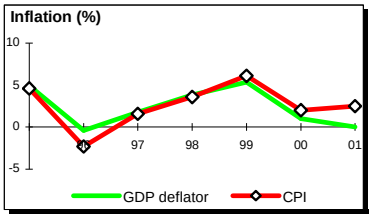


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

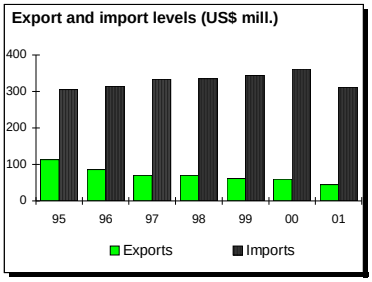
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	15.1	6.2	2.0	2.5
Implicit GDP deflator	10.2	5.8	1.0	0.0
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	25.5	26.2	24.8
Current budget balance	..	6.4	4.7	1.7
Overall surplus/deficit	..	0.2	-1.5	-4.5



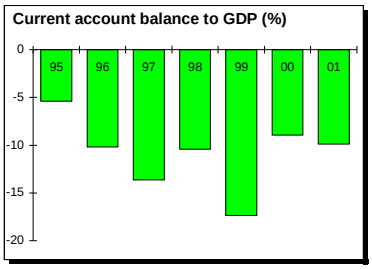
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	42	113	60	45
Bananas	15	56	33	33
Fruits and vegetables	0	1	1	1
Manufactures	13	28	16	0
Total imports (cif)	129	295	362	311
Food	26	59	65	65
Fuel and energy	13	21	18	15
Capital goods	26	62	82	61
Export price index *(1995=100)*	..	116	97	95
Import price index *(1995=100)*	..	95	87	84
Terms of trade *(1995=100)*	..	122	111	113



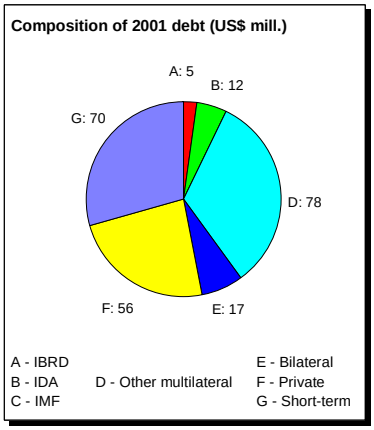
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	84	302	389	343
Imports of goods and services	144	360	431	384
Resource balance	-60	-58	-42	-41
Net income	-2	-33	-37	-46
Net current transfers	14	17	18	21
Current account balance	-49	-73	-61	-65
Financing items (net)	44	78	76	75
Changes in net reserves	5	-5	-15	-10
Memo:				
Reserves including gold *(US$ millions)*	5	51	87	97
Conversion rate *(DEC, local/US$)*	2.7	2.7	2.7	2.7



EXTERNAL DEBT and RESOURCE FLOWS

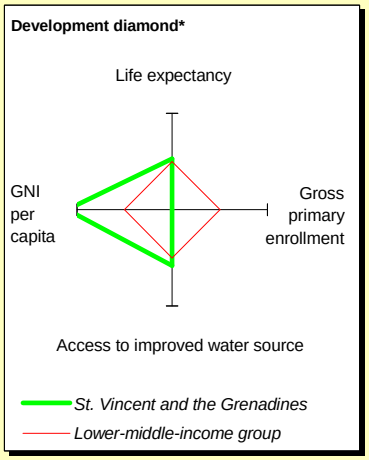
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	16	82	237	238
IBRD	0	0	6	5
IDA	0	1	12	12
Total debt service	1	10	40	25
IBRD	0	0	1	1
IDA	0	0	0	0
Composition of net resource flows				
Official grants	6	7	10	..
Official creditors	2	5	5	-4
Private creditors	0	-1	24	-6
Foreign direct investment	38	58	49	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	0	0	0	3
Disbursements	0	1	2	1
Principal repayments	0	0	1	1
Net flows	0	1	1	0
Interest payments	0	0	0	0
Net transfers	0	1	1	0



St. Vincent and the Grenadines at a glance

9/16/02

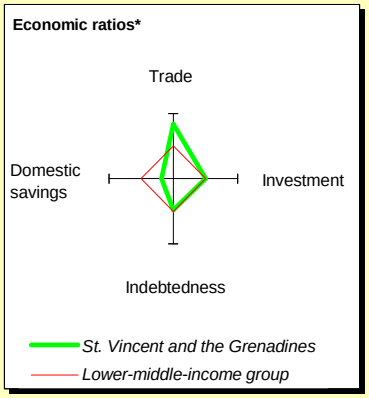
POVERTY and SOCIAL	St. Vincent and the Grenadines	Latin America & Carib.	Lower-middle-income
2001			
Population, mid-year *(millions)*	0.12	524	2,164
GNI per capita *(Atlas method, US$)*	2,740	3,560	1,240
GNI *(Atlas method, US$ billions)*	0.32	1,862	2,677
Average annual growth, 1995-01			
Population *(%)*	0.7	1.5	1.0
Labor force *(%)*	..	2.2	1.2
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	56	76	46
Life expectancy at birth *(years)*	73	70	69
Infant mortality *(per 1,000 live births)*	20	29	33
Child malnutrition *(% of children under 5)*	27	9	11
Access to an improved water source *(% of population)*	93	85	80
Illiteracy *(% of population age 15+)*	..	11	15
Gross primary enrollment *(% of school-age population)*	..	130	107
Male	..	131	107
Female	..	128	107



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

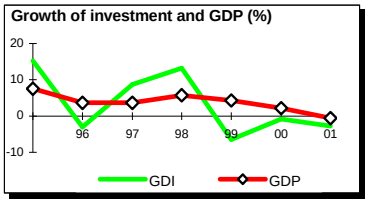
	1981	1991	2000	2001
GDP *(US$ billions)*	0.07	0.21	0.34	0.35
Gross domestic investment/GDP	31.5	29.4	27.7	27.1
Exports of goods and services/GDP	57.4	52.8	52.8	46.0
Gross domestic savings/GDP	0.4	2.4	20.5	10.8
Gross national savings/GDP	20.1	6.2	20.0	9.3
Current account balance/GDP	-6.1	-20.4	-9.6	-16.9
Interest payments/GDP	0.5	0.8	1.5	1.5
Total debt/GDP	25.1	31.9	57.9	54.7
Total debt service/exports	1.5	4.3	7.4	7.6
Present value of debt/GDP	..	..	47.0	..
Present value of debt/exports	..	..	87.7	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	6.0	3.3	2.1	-0.6	..
GDP per capita	5.1	2.6	1.3	-1.3	..
Exports of goods and services	6.3	2.5	1.9	-13.3	..

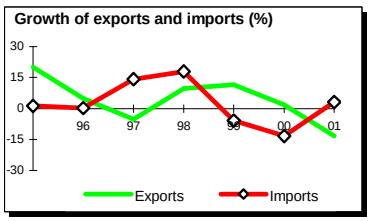


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	15.8	18.6	10.8	10.3
Industry	25.7	23.5	23.4	24.4
Manufacturing	10.8	8.9	5.3	5.4
Services	58.5	57.9	65.8	65.3
Private consumption	76.5	77.1	53.1	62.0
General government consumption	23.2	20.5	26.4	27.2
Imports of goods and services	88.5	79.9	60.1	62.3



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	5.9	-1.3	6.6	-5.0
Industry	6.0	2.3	-7.2	2.5
Manufacturing	4.1	-1.2	-14.0	1.0
Services	6.0	4.6	4.7	-0.8
Private consumption	4.9	1.2	-14.4	7.9
General government consumption	3.4	6.1	4.3	2.5
Gross domestic investment	6.7	3.9	-0.8	-2.8
Imports of goods and services	4.9	2.1	-13.4	3.1

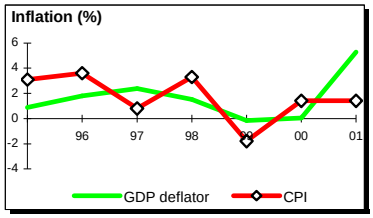


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

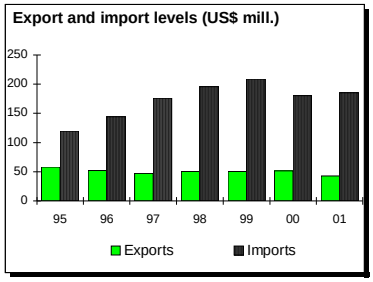
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	12.7	5.6	1.4	1.4
Implicit GDP deflator	16.9	6.6	0.1	5.3
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	27.4	23.8	23.5
Current budget balance	..	4.6	-0.5	4.1
Overall surplus/deficit	..	-6.6	-3.7	-0.5



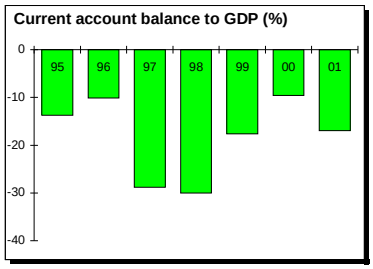
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	..	64	51	43
Bananas	..	35	19	13
Eddoes and dasheens	..	2	3	2
Manufactures	..	18	26	21
Total imports (cif)	..	123	180	186
Food	..	26	45	48
Fuel and energy	..	11	16	17
Capital goods	..	27	60	62
Export price index *(1995=100)*	..	107	108	..
Import price index *(1995=100)*	..	101	99	..
Terms of trade *(1995=100)*	..	106	109	..



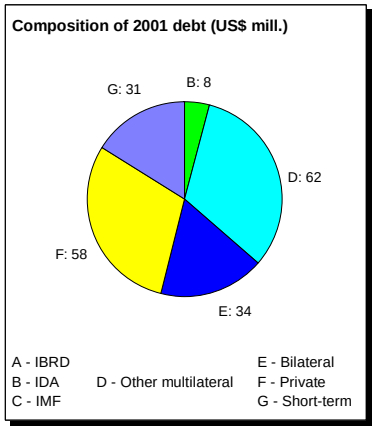
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	45	110	178	174
Imports of goods and services	64	161	209	229
Resource balance	-19	-51	-31	-54
Net income	-2	-11	-20	-23
Net current transfers	17	19	19	18
Current account balance	-5	-43	-32	-60
Financing items (net)	4	39	45	55
Changes in net reserves	1	4	-12	5
Memo:				
Reserves including gold *(US$ millions)*	..	28	..	61
Conversion rate *(DEC, local/US$)*	2.7	2.7	2.7	2.7



EXTERNAL DEBT and RESOURCE FLOWS

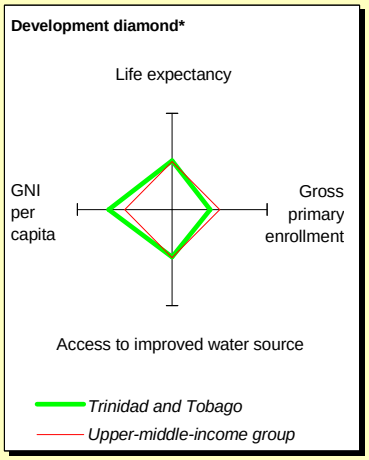
	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	19	68	195	193
IBRD	0	0	0	0
IDA	0	8	7	8
Total debt service	1	5	13	14
IBRD	0	0	0	0
IDA	0	0	0	0
Composition of net resource flows				
Official grants	4	3	4	..
Official creditors	7	6	3	2
Private creditors	1	0	0	0
Foreign direct investment	1	9	28	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	0	0	0	0
Disbursements	0	2	0	1
Principal repayments	0	0	0	0
Net flows	0	2	0	1
Interest payments	0	0	0	0
Net transfers	0	2	0	1



Trinidad and Tobago at a glance

9/23/02

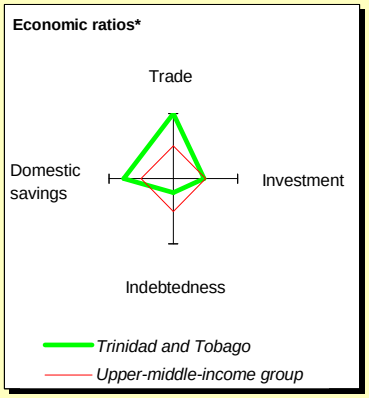
POVERTY and SOCIAL	Trinidad and Tobago	Latin America & Carib.	Upper-middle-income
2001			
Population, mid-year *(millions)*	1.3	524	504
GNI per capita *(Atlas method, US$)*	5,970	3,560	4,460
GNI *(Atlas method, US$ billions)*	7.8	1,862	2,248
Average annual growth, 1995-01			
Population *(%)*	0.6	1.5	1.3
Labor force *(%)*	2.0	2.2	1.8
Most recent estimate (latest year available, 1995-01)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	74	76	77
Life expectancy at birth *(years)*	73	70	71
Infant mortality *(per 1,000 live births)*	16	29	24
Child malnutrition *(% of children under 5)*	..	9	9
Access to an improved water source *(% of population)*	86	85	87
Illiteracy *(% of population age 15+)*	6	11	10
Gross primary enrollment *(% of school-age population)*	102	130	127
Male	102	131	128
Female	101	128	126



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

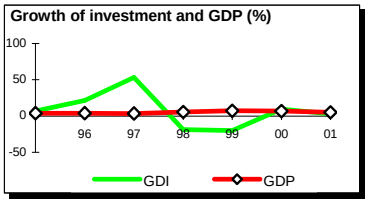
	1981	1991	2000	2001
GDP *(US$ billions)*	7.0	5.2	8.2	8.9
Gross domestic investment/GDP	27.8	16.6	18.2	20.8
Exports of goods and services/GDP	43.8	41.8	58.9	54.0
Gross domestic savings/GDP	36.2	24.5	31.8	31.9
Gross national savings/GDP	30.2	15.8	24.7	27.0
Current account balance/GDP	..	-0.9	6.5	6.2
Interest payments/GDP	1.2	3.2	1.4	1.3
Total debt/GDP	15.0	48.1	30.0	27.3
Total debt service/exports	4.1	19.2	10.2	4.0
Present value of debt/GDP	..	..	31.1	..
Present value of debt/exports	..	..	51.9	..

	1981-91	1991-01	2000	2001	2001-05
(average annual growth)					
GDP	-1.3	4.0	6.9	5.0	5.0
GDP per capita	-2.3	3.3	6.2	4.3	4.1
Exports of goods and services	7.7	5.5	2.8	-7.7	6.8

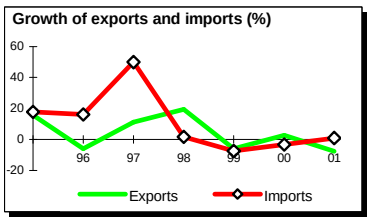


STRUCTURE of the ECONOMY

	1981	1991	2000	2001
(% of GDP)				
Agriculture	2.3	2.5	1.6	1.6
Industry	58.4	42.7	44.0	44.9
Manufacturing	6.7	9.4	7.5	7.7
Services	39.3	54.9	54.4	53.5
Private consumption	51.3	62.6	59.0	57.2
General government consumption	12.6	13.0	9.2	10.8
Imports of goods and services	35.5	33.9	45.3	42.8



	1981-91	1991-01	2000	2001
(average annual growth)				
Agriculture	-4.6	3.5	18.7	4.0
Industry	-4.8	4.8	8.9	6.7
Manufacturing	-7.5	7.4	12.3	7.0
Services	3.8	3.2	8.3	3.6
Private consumption	-1.9	1.6	4.1	5.1
General government consumption	-3.9	1.8	3.5	5.1
Gross domestic investment	-9.5	12.8	9.7	3.3
Imports of goods and services	-0.2	8.0	-3.2	0.9

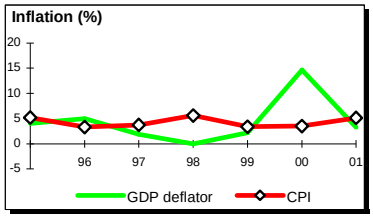


Note: 2001 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

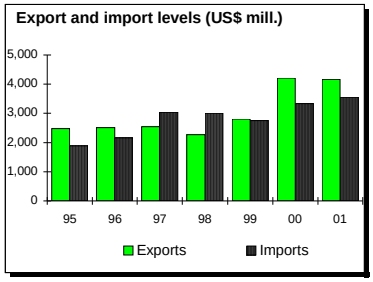
PRICES and GOVERNMENT FINANCE

	1981	1991	2000	2001
Domestic prices				
(% change)				
Consumer prices	14.3	3.8	3.5	5.1
Implicit GDP deflator	7.9	0.0	14.6	3.3
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	30.5	27.2	25.0
Current budget balance	..	3.3	2.9	0.7
Overall surplus/deficit	..	-0.2	1.3	-3.9



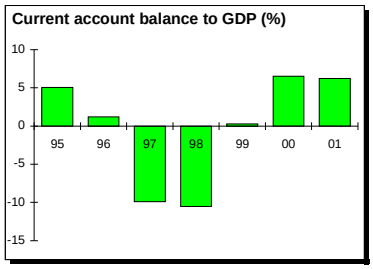
TRADE

	1981	1991	2000	2001
(US$ millions)				
Total exports (fob)	..	1,753	4,213	4,159
Fuels	..	985	2,798	2,623
Chemicals	..	353	737	809
Manufactures	..	99	199	209
Total imports (cif)	..	1,437	3,333	3,552
Food	..	145	187	213
Fuel and energy	..	52	1,061	935
Capital goods	..	472	973	1,234
Export price index *(1995=100)*	..	95	140	143
Import price index *(1995=100)*	..	94	83	80
Terms of trade *(1995=100)*	..	101	169	178



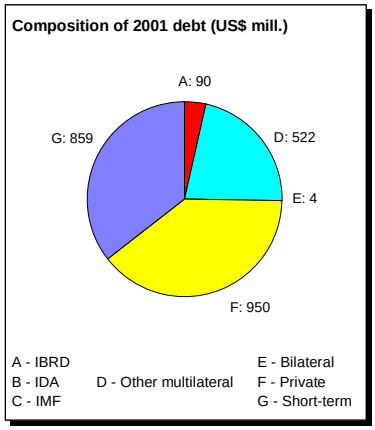
BALANCE of PAYMENTS

	1981	1991	2000	2001
(US$ millions)				
Exports of goods and services	3,144	2,173	4,842	4,791
Imports of goods and services	2,478	1,766	3,721	3,799
Resource balance	665	407	1,121	992
Net income	-198	-439	-621	-472
Net current transfers	-69	-14	38	33
Current account balance	..	-46	538	553
Financing items (net)	..	-251	-97	-84
Changes in net reserves	-569	297	-441	-469
Memo:				
Reserves including gold *(US$ millions)*	3,350	340	1,386	1,859
Conversion rate *(DEC, local/US$)*	2.4	4.3	6.3	6.3



EXTERNAL DEBT and RESOURCE FLOWS

	1981	1991	2000	2001
(US$ millions)				
Total debt outstanding and disbursed	1,050	2,503	2,467	2,425
IBRD	54	38	89	90
IDA	0	0	0	0
Total debt service	142	428	500	196
IBRD	10	9	17	17
IDA	0	0	0	0
Composition of net resource flows				
Official grants	0	2	1	..
Official creditors	84	25	-41	-14
Private creditors	16	-139	23	-5
Foreign direct investment	258	169	650	..
Portfolio equity	0	0	0	..
World Bank program				
Commitments	0	21	0	0
Disbursements	3	2	14	11
Principal repayments	6	6	10	10
Net flows	-3	-4	4	1
Interest payments	5	3	7	7
Net transfers	-7	-7	-3	-6



Additional GEF Annex 4: STAP Roster Technical Review
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

STAP Reviewer : Bhawan Singh, Professor/Climatologist, University of Montreal

The project will attempt to mainstream adaptation to climate change among CARICOM member countries. Water resources, agriculture and land use are the main targeted sectors. A component involving modeling (downscaling GCM data) and monitoring is also included.

Special emphasis on water resources management is laudable. Statistical trends show declining rainfall, especially in the Northern Caribbean. Inter-annual variability of rainfall, linked mainly to the ENSO cycle, is also increasing. Furthermore, climate models (AOGCM's) project declining and more variable rainfall in the region. This problem will very likely be exacerbated by higher ET rates and the increasing competition for water among user sectors, including agriculture, industry and domestic use. Bringing these issues to the fore, in terms of regional governments policy, as being proposed by MACC, is of paramount importance.

All in all, the project is timely, of significant merit and responds to a number of pressing needs insofar as capacity building in the area of adaptation to climate change is concerned.

However, the following are comments and suggestions that may help focus and strengthen the proposal:

1. Based on experiences gleaned from working with a number of Caribbean countries through research (Barbados and Trinidad and Tobago) and the preparation of National Communications (Antigua and Barbuda, Guyana, St. Lucia, St. Kitts and Nevis, Dominica, Haiti) there is a pressing need for capacity in the region for determining vulnerability to climate change and impacts assessments for critical sectors such as agriculture (crop yield changes, irrigation requirements), water resources (rainfall variability and extreme events-flooding/drought, ET losses) and coastal resources, including tourism. Some significant capacity building took place under CPACC in the areas of climate and sea level monitoring, including coral reef monitoring, coastal resource management and coastal vulnerability assessment.

   Mainstreaming adaptation to climate change in the above focal areas will contribute significantly to building the required awareness, expertise and autonomy to fill whatever gaps in knowledge and vulnerability assessments that might exist upon the completion of CPACC, and eventually MACC.

2. Given the crucial role of tourism for the economies of islands such as Antigua and Barbuda, Barbados, the Bahamas and St. Lucia, it is important to lay emphasis on this sector.

   By adopting a natural resource management approach, instead of the traditional sector approach, focussing on water resources and land and biomass management, MACC provides an interesting alternative that has the advantage of streamlining the diagnosis of the problem, namely vulnerability and adaptation to GHG climate change.

   By focusing on the natural resource base and how its sustainability might be affected by climate change, MACC will provide a very useful mechanism for important sectors such as housing, tourism, banking and trade to assess their vulnerability to climate change and provide guidance

on how they may adapt to ensure their sustainability.

3. Elaborating on details relating to the mechanisms and methodologies for mainstreaming adaptation measures amongst Caribbean governments is crucial and necessary in light of the very diverse economies of Caribbean countries (e.g. heavy industrialization in Trinidad and Tobago, tourism and off-shore banking in the Bahamas and Barbados, agriculture in Guyana). Vulnerabilities to climate change and variability also vary in regard to geographical location (e.g.. hurricanes in the Northern Caribbean).

CPACC addressed this issue to some extent in its country-by-country workshops on climate change vulnerabilities and adaptation.

4. Our experience, even with developed countries, is that it is very difficult to mainstream adaptation policies by themselves. It is very often easier to link climate change with other challenges to facilitate its acceptance. Caribbean countries often claim that there are more pressing economic and environmental problems than climate change. In agriculture, for instance, linking climate change with crop yield and farm profitability, as well as examining the influence of markets and other factors on farm subsidies and unemployment, may be advisable.

By bringing climate change issues closer to the minds and agendas of policy makers in the region, MACC can potentially play a significant role in addressing this issue.

5. The component on monitoring and modeling will have to be more clearly defined. Given the fact that MACC is being proposed as a stage II activity with a 4-year time frame, it would be advisable to steer away from complicated modeling efforts (AOGCM, RCM) that have a long gestation time and focus on statistical downscaling techniques (50x50 km) to achieve the spatial scales of climate change scenarios applicable to Caribbean SIDS.

It may also be highly advisable to involve tertiary institutions in the region (UWI, CIMH) in these efforts. For example, UWI is about to embark on a program of graduate studies in Environment with climate change as one of the core streams.

6. Sensitization of Caribbean governments and peoples to climate change and variability, including sea level rise and their potential impacts, is highly necessary to promote sustainable development in the face of GHG climate change.

Some degree of sensitization, especially relating to adaptation issues, has already been achieved by CPACC. The MACC project being proposed here will almost certainly continue to contribute in a significant manner.

The budget amount, the allocation of funds and the Financial Plan seem appropriate and adequate, given the broad, regional coverage.

Response from the Team

The STAP review is highly supportive of the project concept. STAP review suggestions have been incorporated where applicable. Several of the comments relate to the need for additional details, which will be secured during project preparation. Specifically:

Need for capacity in the region for determining vulnerability to climate change and impact assessments

for critical sectors. The project will support vulnerability assessments and has been restructured to provide for a more direct linkage to critical sectors of the economy. The preparation work will identify capacity building needs.

- Need for an emphasis on the tourism sector Component (a) of the project includes now a direct activity linked to the tourism sector.

- Need to elaborate on details related to the mechanisms and methodologies for mainstreaming adaptation measures.

This is part of the preparation agenda. Details will be discussed at the National and regional workshops envisaged under the preparation activities being supported through the PDF-B. Need to define the monitoring and modeling activity in more detail.

> This will also be addressed as part of preparation activities. Particular attention will be provided to available tools and there will be an effort to steer away from complicated modeling efforts. Tertiary institutions in the region will be involved (UWI-CIMH)

Additional GEF Annex 12: Eligibility of Island Nations and Territories for Adaptation Funds under the UNFCCC
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Country-Territory	Non Annex 1[1]	CPACC member	Completed 1st Communication[2]	MACC Participation	SIDS[3]
Antigua & Barbuda	Yes	Yes	Yes	Yes	Yes
Dominica	Yes	Yes	No[4]	Yes	Yes
Bahamas	Yes	Yes	Yes	Yes	Yes
Barbados	Yes	Yes	Yes	Yes	Yes
Jamaica	Yes	Yes	Yes	Yes	Yes
St. Lucia	Yes	Yes	Yes	Yes	Yes
St. Vincent	Yes	Yes	Yes	Yes	Yes
St. Kitts and Nevis	Yes	Yes	Yes	Yes	Yes
Belize	Yes	Yes	Yes	Yes	Yes
Guyana	Yes	Yes	Yes	Yes	Yes
Trinidad and Tobago	Yes	Yes	Yes	Yes	Yes
Grenada	Yes	Yes	Yes	Yes	Yes
French Island Territories	No	No	No	No	No
Dutch Island Territories	No	No	No	No	No
US Territories	No	No	No	No	No
Central America	Yes	Yes	Yes	No	No
Cuba	Yes	No	Yes	No	No
Haiti	Yes	No	No	No	No
Dominican Republic	Yes	No	No	No	No

[1] In order to be eligible for GEF funds, a country must be non-annex 1 as per provisions of the United Nations Framework Convention on Climate Change (UNFCCC) subscribed to by the community of nations in 1992.

[2] In order to be eligible to recieve stage II adaptation resources, a country must have completed and submitted to the convention its 1st Communication. This must be done prior to submission of the proposal to the GEF, as per instructions provided by the Conference of Parties to the Convention to the GEF.

[3] In order to recieve priority for adaptation funds, a country must be a Small Island or Low Lying area (SIDS).

[4] Dominica is in the process of officially submitting its communication.

Additional GEF Annex 13: Caribbean: Planning for Adaptation to Global Climate Change Project
(CPACC)
CARIBBEAN: Mainstreaming Adaptation to Climate Change Project

Summary

The GEF-funded CPACC Project (1997-2001) was implemented by the Organization of American States (OAS), in partnership with University of the West Indies Center for Environment and Development (UWICED), with the World Bank acting as the GEF Implementing Agency. CPACC's overall objective was to support Caribbean countries in preparing to cope with the adverse effects of global climate change (GCC). As a *Stage I Enabling Activity*, the project focused on creating awareness; organizing training in skills relevant to impact assessment and adaptation planning; collecting and disseminating sea-level and climate data in each country; conducting impact and vulnerability studies; and identifying policy options to address adaptation issues. The project has been rated *successful*, fully achieving its objectives.

Specific achievements of the CPACC project are:

a) Establishment of a sea-level and climate monitoring system that contributes to global and regional assessment of the issues. The monitoring stations and related information network installed in 12 countries have improved the CC monitoring and evaluation capacity in the region. The primary utility of the data is to document sea-level rise and changes in sea surface temperature (SST), thus assisting in the global monitoring of the impacts of climate change. Additional applications in areas such as shipping, tourism and monitoring of extreme events were promoted.

b) Improved access to and availability of data. The project developed an extensive database for coastal zone management and climate change monitoring, accessible to a wide range of environment and development agencies in each country.

c) Increased appreciation of climate change issues at the policy-making level and technical support to better define the regional position at the Convention. CPACC introduced climate change concerns to policy-makers, decision-makers and technical personnel. It also increased the appreciation for the complexity and integrated nature of climate change issues. The project enabled a more unified and better-documented regional position to be taken before the UNFCCC Convention and the Conference of Parties.

d) Meeting country needs for expanded vulnerability assessment. Pilot vulnerability studies introduced basic vulnerability assessment tools and methods and increased awareness of the most physically vulnerable sectors in the Caribbean sub-region

e) Establishment of coral reef monitoring protocols. Coral reefs have proven to be key indicators of climate change. As a result of ongoing efforts within CPACC, monitoring and early warning capabilities were enhanced. The data has assisted in the documentation of the pace of coral bleaching and impacts on coral reefs caused by changes in sea surface temperatures, SST. As with SST and sea-level change, efforts were initiated to link the CPACC coral reef monitoring activities with the global networks.

f) Creation of a network for regional harmonization. Through collaborative efforts with a number of existing agencies (i.e. the Caribbean Tourism Organization (CTO), the Caribbean Alliance for

Sustainable Tourism (CAST), the Center for Resource Management and Environmental Studies (CERMES) of the University of the West Indies, the Caribbean Energy Information System (CEIS), the Caribbean Development Bank (CDB), the Caribbean Conservation Association (CCA), the Caribbean Environmental Health Institute (CEHI), the Caribbean Disaster and Emergency Response Agency (CDERA), private sector interests such as Petrotrin of Trinidad and Tobago as well as the insurance and banking sector) CPACC created awareness of climate change as a factor to incorporate in these agencies' agendas, and began establishing programmatic linkages between CC and other activities.

g) Increased capacity and appreciation of economic decision-making tools. CPACC supported capacity building at the regional and national level in economic tools (economic valuation of natural resources and the formulation of economic instruments) for decision-making and opportunities to strengthen policy design through pilot activities. Specifically the project developed basic methodologies, provided training and supported the countries in designing and implementing pilot studies.

To date, there have been three comprehensive evaluations of the project:

(a) *World Bank Mid-Term Evaluation.* The mid-term review of CPACC (September 1999) concluded that implementation performance throughout the first half of the project was satisfactory and constituted a sound basis on which to continue CPACC activities.

(b) *GEF Secretariat Review of GEF-Funded Climate Change Projects in the Caribbean.* The GEF Secretariat commissioned (first quarter 2000) an evaluation of the GEF-UNDP funding for National Communications, the GEF-UNDP National Communications Support Program (a regional project), and the CPACC (A Synthesis of Performances and Experiences of Caribbean States Participating in GEF-Financed Climate Change Projects, Impact Consultancy Services, July 2000). The report states that the GEF funded efforts are meeting the objectives of assisting CARICOM countries to: (a) develop the capacity to assess and adapt to the possible adverse impacts of Climate Change, and (b) to meet their respective obligations under the UNFCCC, with respect to Initial National Communications. The report points out that prior to the start of CPACC, the Caribbean was characterized by a general weakness in policy and institutional arrangements for environmental management and sustainable development, constraining the effect of the capacity building activities of CPACC. The report credits the CPACC project with an increase in awareness and technical capacity in the region.

(c) *World Bank Implementation Completion Report*. The final evaluation of the implementation of the CPACC project incorporated the Banks owns perception and analysis of the project, as well as the regions assessment of main achievements and lessons learnt from the project. The overall outcome has been rated *satisfactory*. The institutional development impact was rated *substantial* as a functional institutional framework for climate change was established and capacity was built in the region. The sustainability rating was *likely*. Actions initiated under the project facilitated the formulation and implementation, currently under way, of the Adaptation to Climate Change in the Caribbean, ACCC, project, and the approval by the GEF council of a follow on project, MACC. Overall borrower performance was rated *satisfactory*, highlighting the *highly satisfactory* performance of the executing agency, the OAS, and the collaboration of CARICOM and participating governments during project preparation. The reports list 12 lessons learnt, including:

- 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.
- In situations where national capacity is weak in regional and global issues, a responsive,

flexible, regional coordinating mechanism is an effective means of engaging the collective capacity of existing institutions and building capacity by acting as a clearinghouse for information and resources.

- 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. Equally, there is a need to change/develop economic instruments and incentives to promote the climate change agenda.
- Maximizing national participation while not overloading institutions is a major implementation challenge in regions with limited capacity. This can be dealt with through: careful assessment of capacity; ensuring government commitment; and providing support that is responsive to the circumstances in the country through a regional institution.
- 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 limited capacity in the region is a challenge.
- 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.
- 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 core capacity that could bring together the limited institutional assets for work on climate change issues.
- 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 concern 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 as a mechanism by which adaptation needs are understood, formulated, internalized and acted upon. To address this challenge, additional efforts need to be invested in awareness –building among key policy makers and stakeholders.