
Operating Plan

January – June 2001

Caribbean:
Planning for Adaptation to Global Climate Change
A Joint Project of OAS-CARICOM-UWICED-World Bank-GEF

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Acronyms

C1, 2, 3...	Component 1, Component 2, ... Component 9 (CPACC Project Components)
CARICOM Secretariat	Caribbean Community Secretariat
CARICOMP	Caribbean Community Productivity
CCCC	Caribbean Climate Change Centre
CCCDF	Canadian Climate Change Development Fund
CCDC	Caribbean Coastal Data Centre
CDM	Clean Development Mechanisms
CERMES	Centre for Resources Management and Environmental Studies
CGLIS	Certificate in Geographic and Land Information Systems
CIMH	Caribbean Institute of Meteorology and Hydrology
CMS	Centre for Marine Sciences
COP6	Sixth Conference of the Parties (UNFCCC)
CORS	Continuously Operating Reference Station
CPACC	Caribbean: Planning for Adaptation to Global Climate Change Project
CRISs	Coastal Resources Information Systems
CTO	Caribbean Tourism Organization
CZMU	Coastal Zone Management Unit
DPM	Deputy Manager
GEF	Global Environment Facility
GHG	Greenhouse Gases
GIS	Geographic Information Systems
GPS	Global Position System
GS/OAS	General Secretariat of the Organization of American States
ICZM	Integrated Coastal Zone Management
IMA	Institute of Marine Affairs
IMPACC	Implementing Adaptation to Climate Variability and Change in the Caribbean
ISC	Information Systems Coordinator
ISP	Internet Service Provider
LBS	Land Based Sources
MAREMP	Marine Resources Environmental Programme
MOU	Memorandum of Understanding
NFPs	National Focal Points
NGOs	Non-governmental Organizations
NICUs	National Implementing Coordination Units
NOAA	National Oceanic and Atmospheric Administration
OECS/NRMU	Organization of Eastern Caribbean States/Natural Resources Mgmt. Unit
PAC	Project Advisory Committee
PDF	Project Development Facility
PLC	Project Local Coordinator/Consultant
PRO	Public Relations Officer
QA/QC	Quality Assurance/Quality Control
RAC	Regional Archiving Centre
RNC	Regional Network Coordinator
RPIU	Regional Project Implementing Unit
SIDS	Small Island Developing States
SIDSnet	SIDS Network (UNDP project)
SST	Sea Surface Temperature
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
US NGS/NOAA	U.S. National Geodetic Services of NOAA
UWI	University of the West Indies
UWICED	University of the West Indies Centre for Environment and Development

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Executive Summary

Project Implementation

This period (January - June 2001) will be a period of much activity in the Caribbean: Planning for Adaptation to Global Climate Change Project (CPACC). It is expected that each component will largely complete all substantive activities, and will generate a draft of all final outputs. Significant efforts will also be directed toward the finalization of the Project Development Facility (PDF)-Block B for the Global Environment Facility (GEF) funding of Implementing Adaptation to Climate Variability and Change in the Caribbean (IMPACC), and the establishment of the Caribbean Climate Change Centre (CCCC). The following tasks will be undertaken:

Implementing Adaptation to Climate Variability and Change in the Caribbean (IMPACC)

The PDF – Block B grant proposal will be finalised for submission to the GEF for consideration at their GEF Council meeting in March. If approved work on the development of the IMPACC proposal is expected to commence in the second quarter.

Caribbean Climate Change Centre (CCCC)

A proposal to the Canadian Climate Change Development Fund (CCCDF) will be submitted in February. If accepted, implementation is expected to commence sometime in the second quarter of this year. The Legal Instruments for the establishment of the CCCC will be finalized. It is planned to have the Second Draft completed in time for it to be presented to the Heads of Government meeting in July. Consultations will also address the issue of financing the Centre, location and staffing.

CPACC Components. The following activities will be completed during this period:

Component 1: Design and Establishment of Sea Level/Climate Monitoring Network (Regional). The RAC will be fully operational, and will systematically address remaining data capture and transmission problems.. A workshop on Global Position System (GPS) will take place in St. Vincent and the Grenadines.

Component 2: Establish Database & Information Systems (Regional). Information System Coordinator will continue to provide technical support to the implementation of Component 3. The CPACC Web site will become an effective tool for compiling information for the final report. Web management and maintenance of the CPACC LAN and information systems will continue.

Component 3: Inventory of Coastal Resources and Uses (Regional). Capacity building activities in the area of Geographic Information Systems (GIS) will be finalized to support implementation of this component. Coastal Resources Inventory Systems (CRIS) process will be brought to a conclusion.

1 This report was prepared by Leisa Perch, CPACC Technical Coordinator at the GS/OAS and the CPACC/RPIU staff members, Ulric Trotz, Leslie Walling, Ian King, Rawlestone Moore, and Judi Clarke.

Component 4: National Climate Change Adaptation Policy and Implementation Strategy (Regional). Outstanding Issues Papers will be completed. Second series of country visits will commence. Public awareness program of activities will be initiated in each country.

Component 5: Coral Reef Monitoring for Climate Change (Bahamas, Belize, and Jamaica). Plans will be developed for the extension of Component 5 to CPACC countries with coral reefs. Strategies for the information generated by C5 activities to inform the climate change adaptation policy making process at the national and regional levels will be developed. Public awareness and education products will be developed.

Component 6: Coastal Vulnerability and Risk Assessment (Barbados, Grenada, and Guyana). Digitisation of maps and application of models to examine areas of vulnerability will be continued and completed. Adaptation options will be identified for infrastructure and socio-economic activities. A sub-regional workshop will be conducted where country teams will review work done and compare outputs.

Component 7: Economic Valuation of Coastal and Marine Resources (Dominica, Saint Lucia and Trinidad and Tobago). The collection and analysis of primary data will be completed. National consultations will be organized and the draft and final reports on pilot implementation should be produced, reviewed and finalized.

Component 8: Formulation of Economic/Regulatory Proposals (Antigua and Barbuda and St. Kitts and Nevis). The pilot implementation strategy will be further implemented including the finalization of recommendations, presentations to Cabinet and testing of pilot instruments. National consultations are expected to be organized to review and assess the instruments recommended and to develop a long-term strategy for implementing the recommendations emanating from the study for both pilot countries.

Component 9: Greenhouse Gases (GHG) Inventory and Agriculture and Water Resource Vulnerability Assessment (St. Vincent and the Grenadines). All activities under this Component have been completed.

It is expected that the National Implementing Coordinating Units (NICUs) will continue to be greatly involved in the implementation of all the project components.

CPACC Administration

Executive Agency: OAS

The General Secretariat of the Organization of American States (GS/OAS) will continue the overall management of CPACC implementation. As executing agency, the GS/OAS will continue its responsibilities for financial disbursements to the Regional Project Implementing Unit (RPIU), technical supervision, and overall project quality assurance, as well as acting as liaison between the RPIU, the World Bank, the GEF and the United Nations Framework Convention for Climate Change (UNFCCC) Secretariat. Specifically, during the next six months, the GS/OAS will:

- In co-ordination with the World Bank, plan and co-ordinate the preparation of the Implement Completion Report (ICR) for the CPACC project.
- Support the field review activities necessary for the preparation of the ICR.
- Coordinate, together with RPIU staff, technical and managerial implementation of Components 1, 7 and 8.
- Coordinate, together with RPIU staff, the World Bank's supervision mission, scheduled for April 2001.
- Prepare and submit in co-ordination with the RPIU, financial reports for replenishment from the World Bank.
- Prepare and submit, in co-ordination with the RPIU, progress reports and operating plans.
- Participate in international workshops and conferences relevant to CPACC.
- Co-ordinate, together with the World Bank, the University of the West Indies Centre for Environment and Development (UWICED) and the RPIU, the formulation and implementation of the PDF-B for the preparation of IMPACC.
- Collaborate with the RPIU and the CARICOM Secretariat on the establishment of the CCCC, and further efforts to attract donor support for IMPACC and associated activities.
- Participate in the UNFCCC Seventh Conference of the Parties (COP7) and co-ordinate activities to showcase CPACC.
- Follow-up with the XXXth OAS General Assembly resolution on the topic of climate change.

Regional Project Implementation Unit: RPIU Staff

During the last reporting period discussions continued with an officer from the Centre for Training and Development of the OAS regarding internal staff operation and personnel management issues at the RPIU. Some of the recommendations arising from this interaction will be put in place during this working period and are aimed at improving operational efficiency of staff in the RPIU.

The services of an assistant will be engaged to support the Accounts Technician. Although required resource constraints will prevent the RPIU from utilizing the services of any other staff.

All components are now in full implementation, involving a considerable amount of travelling to pilot countries. This has become an essential element in project implementation and has proven to be the most effective means of keeping country teams on track with implementation schedules.

Financial Procedures and Reporting

Internal procedures have been instituted for the internal financial transactions of the RPIU. It is expected that this will facilitate the expeditious reporting by the RPIU and reciprocally the timely disbursement of Funds from the OAS. RPIU annual audit is expected to take place in March.

Project Sustainability

It continues to be a very crucial period for laying the groundwork for project sustainability. The following actions are anticipated:

- Funding for the follow-up and continued maintenance for the sea-level networking system established by CPACC will be sought through the supplemental funds available under the GEF Enabling Activities.
- The final proposal to the CCCDF will be submitted in time to meet the deadline of 11th February. It is expected that a decision on this proposal will be forthcoming by March – April. If successful implementation is expected to commence sometime in the second quarter of this year.
- The PDF – Block B grant proposal will be finalized for submission to the GEF in time for their Council meeting in March. If approved work on the development of the IMPACC proposal is expected to commence in the second quarter.
- The Legal Instruments for the establishment of the Climate Change Centre will be finalized. The Second Draft is now in circulation and a set of consultations with several stakeholders is planned during the forthcoming period – governments, NICU's, institutions, private sector and donor agencies. These instruments should be completed in time for it to be presented to the Heads of Government meeting in July.
- Consultations will also address the issue of financing the Centre, location and staffing.

Education and public relations program

The following activities are expected to be carried out during the next six months:

- Project Manager will continue to make public presentations on Climate Change and CPACC (UWI Masters Programme, Secondary Schools (organized by National Council for Science and Technology), Treading Lightly (NGO) – whenever the opportunity arises.
- Effort to be made to have activities for earth day on April 22, 2001.
- Liaison with CXC for inclusion of Climate Change Science in syllabus.
- Arrange for Climate Change to be one of the topics in the Ministry of Environment, Energy and Natural Resources Schools Environmental Lecture Series – (This is now scheduled for November 13, 2001).
- Several national consultations in all CPACC countries under C4 will provide an excellent platform to launch local public awareness and education activities and this will be taken advantage of.
- With private sector plans one will advance to share a private sector workshop on Risk Management for Climate Change Impacts.
- Further promotion of CPACC through radio clips, interviews and the programme “Stitch in Time”.
- Continued effort to prepare articles for publication in the press.
- Effort will be made to have climate change adopted as the theme for the 2001 World Environment Day celebration.
- Liaising with the Ministry of Environment to participate in presentations to primary schools October 2001.
- Participation in Greening Expo, Barbados March 2001.

CPACC Support for Climate Change Activities in the Region

- CPACC will continue to be involved in the regional CDM project aimed at developing regional baselines and identifying a portfolio of regional projects eligible for funding under the CDM.

- Consultations with UNDP and IDB re Assessment of regional needs for Climate Change Adaptation and Risk Management.
- Collaboration with UNEP ROLAC office to develop a report on Climate Change impacts in the Caribbean based on the 3rd Assessment report.
- Facilitation of consultations for the continuation of COP6.

Project Advisory Committee (PAC)

These will be critical meetings to consider project closure and the initiation of new projects (CCCCDF, preparation of IMPACC) and the establishment of the Climate Change Centre. Resources from the PDF-B may have to be utilized to facilitate extra meetings of the PAC whose guidance at this period will be critical. . This PAC will set the stage for further preparations for the next phase of CPACC and the establishment of the CCCC. With this in mind, it is expected that high-level representatives of national and regional institutions will attend the PAC meeting.

Regional Workshops

Regional workshops are scheduled for all the pilot projects and for C4. It is planned to organize these so that they take place at the same time. This may afford a forum for highlighting CPACC's capacity building thrust and for wider consultation on issues such as the Climate Change Centre and IMPACC.

National Implementation Coordinating Units

National Focal Points (NFPs) and the NICUs will play a critical role in ensuring the successful implementation of all the project components. They will be involved in:-

- a) Organising and coordinating local activities for the implementation of pilot components.
- b) Developing effective public awareness activities through the process of C4 national consultations to define the National Adaptation Policy.
- c) Acting as the main catalyst for the integration of climate change adaptation into national policy formulation.
- d) Providing inputs into the development of IMPACC and the finalisation of the Articles of Association for the Climate Change Centre.
- e) Possible implementation of the project submitted to the CCCCDF if successful.

Next six months

The period January – June 2001 will bring the closing of much of the pilot activities, with final outputs and planning for the September 2001 regional workshops. The PDF-B will be under implementation and the Climate Change Centre will be near establishment.

Financial Plans

The table next page shows a snapshot of expenditures cleared by the OAS Financial Services as of December 2000 (this includes expenditures at UWI). In addition, the last two columns on the right show the new disbursement profile for the last year of the project (January – December 2001) and the total project expenditure.

Expenditures (reported) According to Project Components

Component	Cumulative since project effectiveness (April 97 – Dec 2000)	Expenditures as a% of total budget	Planned 2001 (January – December 2001)	Project Total
1. Design /Establishment of Sea Level/Climate Monitoring Network	\$728,089	89.7	\$83,410	\$811,500
2. Establish Database and Information System	\$253,027	64.8	\$136,897	\$389,925
3. Inventory of Coastal Resources and Use	\$321,384	44.9	\$394,315	\$715,700
4. Formulation of a National Climate Change Adaptation Policy	\$119,824	39.4	\$184,025	\$303,850
5. Coral Reef Monitoring	\$188,777	47.9	\$204,847	\$393,625
6. Coastal Vulnerability and Risk Assessment	\$204,186	48.8	\$214,113	\$418,300
7. Economic Valuation of Coastal and Marine Resources	\$119,934	38.8	\$189,065	\$309,000
8. Economic and Regulatory Proposals	\$53,290	27.7	\$138,709	\$192,000
9. Greenhouse gases inventory/agri-water resources assessment	\$98,782	81.6	\$22,217	\$121,000
RPIU	\$1,561,701	75.4	\$507,798	\$242,980
Executing Agency	\$563,990	82.6	\$118,129	\$682,000
Contingencies	\$176,313	72.5	\$59,229	\$2,070,000
Total Project	\$4,389,302	66	\$2,260,197	\$6,649,880

CPACC Technical Activities

Component 1: Design and Establishment of Sea Level/Climate Monitoring Network

Regional Archiving Centre (RAC)

During last period, an agreement was signed with the Centre of GeoSpatial Studies, UWI/St. Augustine, Trinidad and Tobago for the establishment of the CPACC Regional Archiving Centre (RAC) at that institution. A Co-ordinator for the RAC has been contracted, and the transfer of the satellite ground station from the site of VITEL to UWI/St. Augustine was initiated. This transfer will be completed during the first quarter of 2001. A web server and network interface has been installed, and data archive/retrieval will be initiated as soon as the ground station is in operation. Data archiving of the existing data is currently underway.

The responsibilities of the RAC Coordinator include Initial Quality Assurance/Quality Control (QA/QC) of the sea level meteorological data; summary and analysis of sea level and sea surface temperature data; to ensure data delivery through interaction with the Regional Network Coordinator (RNC) at CIMH; and the National Meteorological Offices. The RAC Coordinator will also support the development of applications of sea-level data including tidal predications for the countries involved in the project.

RAC Website. The RAC Website will be restructured completely in January 2001 and it is planned to be publish by February 2001, and executing any necessary changes by March. Completion of the RAC Website involves the restructuring of the existing RAC Demo web site to facilitate the new database and improved web efficiency. Once completed the RAC website will be published on the Internet for worldwide access. It is hoped that the website will be published internally (UWI, St. Augustine) via the server at the Faculty of Engineering. If this option cannot be facilitated an alternative method of contracting an Internet Service Provider (ISP) will be executed. The Website will serve as the data repository for all C1 generated data.

RAC Office. The RAC Office will be established in February 2001. More specifically, the Satellite station will be set-up as well as the inner office continues to being set-up. The refinement of the office set-up it is planned to occur on March. The installation of the satellite bas station is dependent on the execution of minor structural changes to the RAC site by the University of the West Indies, St. Augustine, Works Department. Upon the execution of the changes required the relevant personnel would be contacted to execute the installation. After installation a testing period will be initiated to ensure proper functionality.

Operation, Maintenance and Calibration of monitoring systems

During last period, the Caribbean Institute of Meteorology and Hydrology (CIMH) took over the responsibilities as RNC for CPACC. Procedures were established for monitoring station trouble shooting and instrument calibration verification. During this period, the RAC Coordinator and the RNC technical Officer will be working systematically to address all instrumentation and data transmission problems that were observed in a number of the monitoring stations. The RNC Technical Officer will implement the instrument rotation schedule to verify proper calibration of the instruments, and to take corrective action if required.

Hardening of selected Monitoring Sites

The existing C1 sites in St. Kitts (Basseterre) and Antigua (Parham Harbour) have suffered some damage in recent storms. Given the interest of the local meteorological and disaster management communities in being able to count on readings during extreme events, a hardening of these sites is planned, on a pilot basis. This will involve structural strengthening of the support towers, and re-positioning of some of the instruments. The hardening of these two stations is to be financed by the Post-Georges Disaster Mitigation project managed by the OAS for USAID.

Capacity building at National and Regional levels

- Training of counterparts at the national offices responsible for C1 stations will continue through systematic communication with the RNC, and around visits by the RNC Technical Officer and RNC Advisor to selected countries. The RAC Coordinator will work with the same national offices on strengthening their capacity in retrieving and using data from the monitoring stations.
- Training Manual. The RNC Advisor, the RPIU Public Relations Officer (PRO) and the CIMH RNC Technical Officer will produce a training manual on how to maintain and operate the monitoring stations. It is expected that this manual will be produced as a CD-ROM for easy distribution.

In addition, the following activities will be supported:

- Prepare country specific revenue generation strategies to cover the cost of the long-term maintenance and operations of the monitoring sites;
- Increase participation by land survey departments in the implementation of Component 1;
- Increase private sector involvement in the implementation of C1; and
- Conduct demonstration of “add-on” and “voice” options to the monitoring stations.

Data Acquisition and Archiving System

GPS Data. The GPS data archiving responsibility will be transferred to RAC. Data from NOAA will be transferred to the RAC and the data results of the 1998 campaign will be made available via the RAC Web Site. A GPS processing capacity will be developed for future GPS campaigns.

Sea-level data. The archiving of Sea level data will proceed along the following plan:

- During January 2001 sea level data from: Parham, Antigua 1999; Lee Stocking Is. 1998; Charlotteville, Tobago 1998; and Charlotteville, Tobago 1999.
- During February 2001 sea level data from: Port of Spain, Trinidad 1998; Nassau, Bahamas 1999; Bridgetown, Barbados 1999; and Belize City, Belize 1998.
- During March 2001 sea level data from: Roseau, Dominica 1998; Prickley Bay, Grenada 1998; Parika, Guyana 1999; Rosignol, Guyana 1998; and Discovery Bay, Jamaica 1998.

Data Archiving will proceed systematically, starting with data extrapolation from the compressed database compiled by VITEL, followed by sequential data extraction and final QA/QC.

It is also expected that the preliminary local Tidal datums for each of the CPACC country stations will be determined based on the availability of data.

Component 2: Establishment of Databases and Information Systems

Assessment of current needs

Completed.

Information System Coordinator (ISC)

The ISC will continue to provide technical support to the implementation of Component 3 and has assumed responsibility for the completion of related activities. Travel associated with this activity will include support and oversight at training events, participation in related initiatives, liaising with country representatives and promoting the CRIS in each of the countries.

System Design and Databases

Completed

System Procurement

Any remaining computer systems for Component 1 contacts and NFPs not purchased and delivered by the end of 2000 will be completed by February 2001.

Training Program

Completed

System Implementation, maintenance and upgrading

Web Management. The web site serves as a major tool for information dissemination to project constituents and the wider public. A UWI student assists the Information Systems Coordinator (ISC), on a part-time basis, in maintaining and upgrading the web site. Activities will include maintaining the CPACC web site, updating the calendar of events, and uploading reports. The Website will be used as a repository for Project reports, which will facilitate the eventual organization and publishing of Project documents.

Maintenance of the CPACC LAN and information systems. The ISC will continue to maintain and trouble shoot problems at the RPIU, including maintaining and securing systems through data back up and virus protection. Any equipment purchase for the RPIU is expected to be restricted to repairs and replacement of failed equipment.

Coordination of National Workshops in Internet Use/SIDSNet

Completed.

Component 3: Inventory of Coastal Resources and Use

GIS Installation and Upgrade

CPACC will finalize all capacity building activities in the area of GIS primarily focusing on C3 repository agencies to support the implementation of this component. This will include the provision of computer hardware and software where necessary as well as training outside of the structured process associated with the development of CRISs for each country. Specific activities include:

- Complete the purchase and delivery of computer and software hardware to support C3 related agencies. This activity is to support those agencies to properly function as repositories for the C3 data. Additionally, GIS software purchases will be started and completed in this period.
- Some countries have requested technical support related to areas such as configuring existing equipment, which will be used in conjunction with the CPACC-provided equipment. This support will be provided during the period.
- The opportunity may exist for providing technical support to one or two countries in convening local workshops based on the material provided during the regional training workshops convened during 1999 and 2000.

Coastal Resource Inventory Systems

The period in question will be very important, as it will bring the CRIS process to a conclusion. During the period, the following activities will be undertaken:

- Finalization of the design and population of the CRIS. The delivery of the individual country CRISs and the appropriate documentation will be a significant step during this period with most of the associated activities carried out during March 2001.

- CPACC will support small demonstration projects by C3 counterparts that will demonstrate applications of the CRIS. Counterparts have been requested to identify the support needed to facilitate these activities. If successful, this approach will generate a number of demonstration activities that can be used in the various countries to promote the CRIS as a decision support tool. Under this area, feature extraction from the IKONOS imagery will be undertaken.
- National seminars will be conducted in each participating country to promote the CRIS, utilizing the pilot activities identified earlier. This strategy is to be supported by material developed by the consultants. It is likely that the activity will be combined with other CPACC activities such as C4 consultations to take advantage of the synergies presented.
- Satellite Imagery. All of the IKONOS satellite imagery will be delivered by February 2001. Specific government agencies will be designated as the licensees of the imagery. This process will be linked with the CRIS, as the repository will be responsible for both items.

Component 4: National Climate Change Adaptation Policy and Implementation Strategy

Draft National Policy and Implementation plan

Outstanding Issues Papers will be completed by March 2001. The second series of country visits by the RPIU technical team (RPIU and consultants) will commence in February. Countries have already developed plans for drafting their National Policies and Implementation Plans. It is anticipated that the country visits and consultations will lead to the development of the draft National Policy.

Each country will be required to further develop the draft policy through a series of consultations with the national stakeholders who will be identified during the country visit. The individual drafts will be reviewed by a RPIU managed technical team and finalized in full consultation with the respective countries.

Regional policy

The National policy documents, once developed, will inform policy analysis and development at the regional level which is critical if any national policy is to be effective. The policy documents will form the basis of a Regional workshop that will define a draft Regional Climate Change Adaptation Policy. The workshop will also serve as a forum for exchanging country experiences in elucidating National policies and identifying areas of commonality in the respective implementation plans, which may form the basis of input into IMPACC.

At the end of this reporting period it is anticipated that:

- All draft National Climate Change Adaptation policies and Implementation plans will be completed;
- Most of these will be finalized and ready for adoption by the local decision-making machinery;
- A regional workshop to develop a regional policy will be completed; and
- A draft Regional Policy will be ready for finalization.

Through the national consultations a comprehensive public awareness programme of activities will have been initiated in each country

Strategies required to achieve the adoption of the policies into the national decision-making (system) will have been identified.

Component 5: Coral Reef Monitoring for Climate Change (The Bahamas, Belize, and Jamaica)

Introduction

The goals for 2001 will be to:

- Present reports on the results of Component 5 Coral reef Monitoring activities conducted in 2000. Repeat the coordinated monitoring of reefs in the three pilot countries, the Bahamas, Belize and Jamaica.
- Review and improve the implantation of C5 in the pilot countries.
- Plan and initiate the extension of C5 to the eight remaining CPACC countries with coral reefs.
- Develop strategies for the information generated by C5 activities to inform the climate change adaptation policymaking process at the national and regional levels.
- Develop public awareness and education products tailored to inform the general and technical communities of coral reef management issues as they relate to global climate change and C5 activities.

Component 5 Planning and Review

The three-tiered planning and review process will be completed in the first quarter of 2001. Phase I will involve the RPIU and the OAS in budgetary and operations plan development and review. Phase II will be completed in January 2001, and will involve the Deputy Project Manager/Coastal Zone Management Specialist, DPM/CZMS), the C5 Coordinator, the Director of the Centre for Marine Sciences, UWI, Mona, the Data Manager at the CMS and a technical consultant, Dr. J.D. Woodley. The purpose of Phase II will be to refine the technical aspects operations plan.

Phase III involves the Pilot Country team members in the review and refinement of the Operations Plan. Phase III purpose is to ensure consensus on the operational approach; that planned activities meet the needs of country partners, and that planned activities are tailored for successful execution in the context of the respective national realities. Phase III will begin immediately after Phase II has been concluded. The review and discussion of the Component operations plan for 2001 will be initiated through the CC-Reefs e-group. The C5 Technical Workshop will serve as the forum in which the operations plan will be finalized. Phase III will be completed by the end of March 2001.

The following specific tasks are planned under Phase II:

- Sign MOU between CPACC and the Centre for Marine Sciences (CMS), UWI, Mona;
- Discuss CPACC/CMS project proposal for building CMS capacity to support ongoing C5 development;
- Plan C5 Technical Workshop, prepare and circulate notice and preliminary agenda to C5 team members for comment;
- Review monitoring data from pilot countries and finalize arrangements for the preparation of reports on 2000 coral reef monitoring data;
- Public awareness: the Production of a C5 compact disk and book;
- Plan Jamaica's 2001 monitoring campaign; and
- Discuss United Nations Environment Programme (UNEP)/CPACC collaboration.

Under Phase III (C5 Planning and Technical Review Workshop – March 26th to 29th, 2001) the following activities will be carried out:

- Progress on the establishment of IMPACC and the CCCC.
- Planning for the expansion of C5 to other CPACC and non-CPACC countries during IMPACC.
- Country reports on management and monitoring for 2000.

- Review monitoring data and results
- Review methods and procedures and Component design.
- Developing models for indicators of coral reef health and integrity.
- Public awareness and education strategies and materials – The production of a C5 Compact Disk and book.
- Linkages with C3 – Utilization of the CRIS.
- Linkages with C4 – Policy Interface.
- Linkages with C7 – Economic indicators of reef condition.
- Design and Plan Regional C5 Workshop.

Sustainability, Intra- and Inter-Institutional Arrangements for Coral Reef Monitoring

(a) The CMS, UWI, Mona, Jamaica.

The nature of the role that the CMS is expected to play in providing technical support for the implementation and expansion of C5 has been set out in an MOU that will be signed by February 2001. Further discussions have been held on developing a proposal to access the funds that will be necessary to ensure that the CMS has the capacity to provide the necessary technical support to the expanded, regional C5 programme.

The current draft proposal envisages the adoption of the CPACC coral reef monitoring protocol by the Caribbean Community Productivity (CARICOMP) network. The CPACC protocol is seen as a means to facilitate the wider sampling of coral reefs in the region, while addressing some of the manpower constraints being experienced by some of the research facilities currently involved in the monitoring programme.

The CMS has suggested that the sea surface and coral reef monitoring data that has been collected over the past 10 years by CARICOMP and stored at the Caribbean Coastal Data Centre (CCDC) could be used to augment data collected through the CPACC Project. Data sharing arrangements between the CPACC and CARICOMP monitoring networks should be discussed at the CPACC Caribbean/Global Networks meeting on March 2nd, 2001.

(b) UNEP-Caribbean Regional Co-ordinating Unit (CAR/RCU)

The UNEP-CAR/RCU has expressed an interest in being involved in the follow-up to the CPACC Project. Particular interest has been expressed in two areas of coral reef monitoring, and information management.

The Caribbean Environment Programme (CEP) has reiterated its commitment to continue supporting coral reef monitoring in the region as a contribution to the Global Coral Reef Monitoring Network.

Under C5 there is an opportunity to formalize arrangements with the UNEP-CEP/RCU to have CPACC/CMS function as the node for the Northern Caribbean Region and to coordinate coral reef monitoring and reporting for the Northern Caribbean. The CPACC/IMPACC collaboration with the Data Management Centre at the CMS/UWI is viewed by the UNEP-CEP/RCU as the ideal mechanism to support both functions.

Discussions will be held with Alessandra Vanzella-Khouri of UNEP-CEP/RCU in Kingston Jamaica, during the C5 Planning and Review Mission to Jamaica from January 23rd to 27th, 2001.

UNEP-CEP/RCU is also interested in collaborating with CPACC/IMPACC in the area of information management under the C3-CRIS and CEPNET Program. It has been suggested that there might be collaboration in a number of areas including, databases development, the development of national and regional web-based State of the Coasts reports, training and capacity building within national agencies for environmental information management.

Another area for possible collaboration would be land-based sources (LBS) of marine pollution as it relates to adaptation planning for the sustainable management of coral reefs.

Although the CEP does not currently include climate change as one of its areas of focus the abovementioned activities provide obvious links.

(c) NOAA

Geo-referenced C5 monitoring sites will be registered with the NOAA Hot Spots Programme to derive ongoing site-specific information on thermal stress being experienced by coral reefs. The NOAA satellite-derived Degree Heating Week (DHW) is an experimental product designed to indicate the accumulated thermal stress that coral reefs experience. This information will provide a useful contextual dimension for the interpretation of coral reef monitoring data.

Discussions will be held with Dr. Clement Lewsey and Dr. Steve Rohmann (NOAA National Ocean Service) in early March 2001 to discuss the offer of possible assistance in developing digital maps for the characterization of coral reefs in the Eastern Caribbean moderate and high resolution remotely sensed imagery.

The opportunity will also be taken to discuss opportunities for participating in the NOAA Coral Health and Monitoring Programme. The mission of the NOAA Coral Health and Monitoring Program is to provide services to help improve and sustain coral reef health throughout the world.

(d) Sub-regional Node for C5 in the Eastern Caribbean

The eight CPACC countries that will join the C5 programme are located in the Eastern Caribbean. The establishment of a sub-regional node for C5 in the Eastern Caribbean would compliment the function currently performed by the CMS for the Northern Caribbean. There would be logistic and strategic advantages to such an arrangement. The function of C5 sub-regional node would be in keeping with the role that the Coastal Zone Management Unit (CZMU) has adopted.

The Marine Resources Environmental management Programme (MAREMP), formerly Centre for Resources Management and Environmental Studies (CERMES), at the Cave Hill Campus of the UWI in Barbados should also be considered for the role of sub-regional node.

(e) Links With C3

Discussions will be held with C5 country representatives to determine how they will actively use the C3 CRIS to support C5 work, and what specific data and information products will be required to support the coastal resource management decision and policy making process.

Preliminary discussions have been held with the ESSA Technologies Consultant Colin Daniel on configuring the CRIS to generate annual coral reef monitoring reports, and national state of the reef reports for C5 countries.

The manually prepared 2000 coral reef monitoring report for Jamaica will be used to guide the design process for the design and content of CRIS C5 reports.

(f) Linkages with C4 – Developing the interface between research and the climate change adaptation policymaking process.

The strategy by which C5 will inform adaptation policy and planning at both the national and regional levels must be defined with the guidance of the C4 Coordinator and consultants during the first quarter of 2001.

The C4 Consultants Dr. Leonard Nurse and George de Romilly will be asked to participate in the C5 technical Workshop scheduled to be held in Jamaica from March 27th to 30th, 2001. Specifically de Romilly will be asked to:

- Describe the rationale behind C4, its aims and objectives
- Discuss the concept and the need for an interface between coral reef pre and applied environmental (coral reef) research and the policy and management processes in the context of policy failure
- Describe the C4 process
- Update participants on progress in C4 implementation in the C5 Pilot Countries

- Lead discussions on the role of the national C5 institutions in the C4 process for developing National Adaptation Policy and Strategy, and strategies for informing the process in respect of coastal marine resources and ecosystems, and the public awareness and public education process.
- Post C4 notices, progress reports and schedules to C5 team members via the CC-Reefs e-group.
- The C4 and C5 Coordinators plan and facilitate the involvement of C5 team members in the national consultative processes of their respective pilot countries.
- Assess the feasibility of the C5 Coordinator participating in C4 visits to the C5 Pilot Countries.

(g) Links with C7 – Economic indicators for describing impacts to coral reefs.

Issues relating to the strategy for communicating coral reef monitoring information to decision makers for adaptation policy development and planning, and the form and content of the information communicated, require the coordinated effort across components, requiring particular support from C4 and C7.

Discussions on the future needs of C5 have identified a need to develop a model that facilitates the transformation of data on coral reef status or condition into an index of economic value or potential. The model would provide a link between parameters of coral reef condition such as percentage coral cover, fleshy algal cover, presence or absence of certain species, and reef fish populations, and a coral reef health/integrity indicator which would in turn be transformed into an economic indicator for the benefit of decision makers.

The development of a model for generating an index or indices of coral reef health/integrity will be discussed with Dr. J. Woodley during C5 planning meetings scheduled for Jamaica for the period January 23rd to 26th, 2001. Further review of the issue will take place via CC-Reefs in February 2001. A strategy for implementation will be developed at the C5 Technical Workshop scheduled for March 26th to 30th, 2001.

(h) Memorandum of Understanding (MOU) between CPACC/IMPACC and National Governments Institutions Responsible for Execution of C5.

A draft MOU will be tabled for discussion at the C5 Planning and Technical Review Workshop in March 2001. Consensus among C5 Pilot countries on the final document should be reached before the CPACC Regional Workshops where the MOU will be discussed with the appropriate representatives of prospective C5 countries.

Monitoring

Coral reef monitoring for 2001 will be scheduled to take place from April and August 2001.

Data Processing and Analysis

Based on the gains in experience achieved during the 2000 monitoring year, pilot country lead agencies will be requested to undertake all of the data processing and at least 50% of the analysis associated with the monitoring data collected during 2001. A completion deadline of September 2001 will be necessary to provide time for report completion in November 2001. These matters will be discussed and finalized at the C5 Technical Workshop in March 2001.

Public Education and Awareness

(a) The Internet

CC-Reefs. Discussions on how to improve the management and utilization of the CC-Reefs e-group will be held during Phases II and III of the Planning and Review process. The goal will be to (a) increase the level of usage for discourse and decision-making among professionals involved in CPACC and coral reef management; (b) give the e-group a stronger climate change image; and (c) define the management and resource requirements necessary to achieve these goals. These matters will be discussed and finalized at the C5 Technical Workshop in March 2001

CPACC Web Site. Coral reef subject matter provides an excellent vehicle for the presenting climate change issues in a Small Island Developing States (SIDS) context. The design, cost and development of a dedicated C5/Coral Reefs and Climate Change area within the CPACC Web Site will be discussed with the ISC and subsequently with the participants of the C5 Technical Workshop in March 2001. Implementation would be considered under IMPACC, although improvements on the current CPACC site could be incorporated into the ongoing strategy.

(b) Component 5 Book

Details on the design and content of the C5 publication will be finalized by the end of March 2001. Options for technical review, editing, publication and production will be reviewed and presented by the end of March 2001. A preliminary outline of the contents will be circulated for discussion and amendment.

(c) Component 5 Compact Disk

A CD will be produced to provide an efficient means of disseminating and communicating the information and experiences of C5. Consideration is being given to employing the C3 CRIS as the framework in which documentary, graphic, attribute and geo-referenced information will be presented. The deadline for delivery has been set for October 2001.

Component 6: Coastal Vulnerability and Risk Assessment (Barbados, Grenada, and Guyana)

Refinement of Methodology

Completed.

Collection of Information

Most of the information in countries has been collected. There is still some additional hydrological data, which has to be collected in each country, as well as some beach erosion, which has to be collected in Barbados. Maps for Grenada also have to be acquired and digitised.

Vulnerability Assessments

The digitisation of maps and application of models to examine the areas of vulnerability will be completed during the reporting period. Further, infrastructure areas, which could be affected by inundation and erosion as well as analysis of the effect of sea level rise on coastal wells and aquifers and the other freshwater resources of the area will be identified. There will also be an analysis of the effect of sea level rise on critical coastal ecosystems such as coral reefs and sea grasses. Socio-economic analysis will continue to assess the effect that sea level rise will have on activities within those pilot areas under study.

Adaptation Analysis

Adaptation options, aimed at reducing vulnerability, will be identified where appropriate, particularly for infrastructure and socio-economic activities. Cross linkages with C4-formulation of adaptation policy will be explored so that the outputs from C6 can be used in the formulation of adaptation policies.

Study tours will occur to the countries to aid in additional data gathering as well as to identify initial adaptation options. Consultants will be hired where appropriate for the adaptation activities and to review the vulnerability assessments.

A sub-regional workshop will be held during July or August 2001 for the purpose of reviewing the outputs achieved under pilot project implementation as well as to share and compare outputs and experiences amongst the participating countries.

Component 7: Economic Valuation of Coastal and Marine Resources (Dominica, St. Lucia, and Trinidad and Tobago)

Although it was expected that Component 7 would be completed by March 2001, implementation experienced delays in locating and accessing some critical data in some of the pilot countries. Some time during November - December 2000 was dedicated to the re-assessment of needs and deciding on viable proxy data, which could still provide the information required. In some instances as well, the design of data collection instruments as an iterative and consultative process took longer than first anticipated.

Status of Completed Activities as of December 2000:

- Methodology Definition
- Development of implementation methodology
- Initial Training on Economic Valuation Techniques
- Collection of secondary data (80% collected)
- Joint workshop with C8 on Economic Decision-making Tools for Climate Change adaptation
- Sharing of information amongst pilot countries
- Establishment of forum for sharing information amongst interested parties
- Design of data collection instruments

Execution of C7 was revised at a Coordinators Meeting in December 2000, and is now scheduled for completion in June 2001, ending with national consultations to discuss lessons learnt and to share the experiences of the three participating countries. Over the next six months implementation of the pilot study is expected to continue.

Specifically, the following tasks/activities are to be undertaken:

- Finalization of secondary data collection (February 2001)
- Complete Primary data collection (March 2001)
- Analysis of data (January – April 2001)
- C7 Coordinators Meeting (March 2001)
- Country Reports 1 (April 2001)
- Participation in the Institute of Ecological Economics (June 2001)
- Sub-regional meeting/workshop on outputs (June 2001)

Finalization of Secondary Data collection

(a) Secondary Data Collection

Most of this data has been collected in the three participating countries, but some remains to be collected in Trinidad and Tobago due to the difficulty in extracting information from the commercial and industrial sectors. The process is to be reviewed in a follow-up to the Coordinators meeting in Trinidad and Tobago in January 2001.

If any additional data requirements are determined, the consultants will, in collaboration with the country team, determine how best to address these. It is very likely that surveys or interviews will be conducted to satisfy the additional data requirements. At this stage the consultants will design and implement any further survey instruments with the cooperation of each country team.

As part of this process, follow-up country visits are to be conducted during February and March 2001 as deemed necessary. Any outstanding issues regarding data that has been determined to be necessary will be resolved during or after these visits. Continued contact will be maintained with the country team to facilitate this process.

(b) Primary Data collection

Primary data collection instruments remain to be implemented in all three countries.

Saint Lucia. The beach use site surveys and telephone surveys have been completed. Efforts are ongoing to finalize the contracts with local surveyors, and to begin the process as soon as possible with the Central Statistics Office. This is to be completed by March 2001. The surveys in St. Lucia will document beach and coastal area use in the Vigie to Pigeon Point area, mainly to assess change in beach use due to changing characteristics of the beach and surrounding area and beach experience.

Dominica. Administration of the primary data collection activity in Dominica is to be co-ordinated by the Project Local Co-ordinator/Consultant (PLC) in collaboration with the National Component Team. The objective has changed after a recent country visit and now will be limited to assessing the value of use through an assessment of the dive operation businesses in the Marine Park. As part of this effort, public awareness activities will also be carried out.

Trinidad and Tobago. Two sets of surveys are to be carried out in the pilot area. 1) An assessment of user-value and preservation value of the temple/religious area near Waterloo and 2) An assessment of user value of the wetlands amongst the various users in the surrounding communities. The design of these surveys and methodologies for their administration will be addressed during country visit scheduled from January 15th to 16th, 2001 in Trinidad and Tobago. After a review of general data collection, other options for collecting some of the secondary data from the industrial sectors will also be explored.

Data Analysis

As data is collected, data tabulation and analysis is conducted. Most of the significant work in this area is expected to take place upon the completion of all of the fieldwork. As at all previous stages, the consultants will keep each country team informed about the progress. In so doing, when data analysis is begun, country teams will have been satisfied with the quality of data as well as the valuation methods that will be used. This will ensure that objectives of the project component and the expectations of team members of each country will not be compromised.

At the end of this stage, a technical country report is to be drafted and submitted for each country.

Assessment and Findings (March – June 2001)

Upon completion of the analysis and formalization of outputs, the consultants and the country teams will start producing draft outputs for each country and will make them available for review. Team members will be expected to review draft outputs as well as coordinate a wider review within the country. At this stage, the cooperation of team members will be crucial to guarantee that the final document meets or exceeds the expectations of each country team. At the meeting in Trinidad in January 2001, a format for the reports will be explored and defined.

Further Reports on i) Data Gaps and Availability and ii) Methodologies for the use of Economic Valuation in Policy-making are to be delivered at the end of March 2001. In addition, the consultants will produce an assessment of existing data and identify data needs for economic valuation for the Caribbean region. All of these outputs are to be developed in collaboration with the respective country teams. These outputs and other draft recommendations from the studies are expected to make input into the further design of the national adaptation policies under C4.

As part of the review and finalization process, national consultations will be organized in April 2001 to discuss the findings of the studies and develop draft recommendations with inputs from other agencies and stakeholders. For Dominica particularly a workshop being planned by the University of Maryland's Institute of Ecological Economics is expected to provide a forum for further exploring the outputs of the study in relation to looking at Sustainable Tourism in Small Island Developing States.

Capacity- building (Ongoing)

Training continues to be a key element of the Component and will continue to be conducted as part of the country visits, which are anticipated to occur during the remaining six months of pilot implementation.

Additionally, a sub-regional workshop will be organized to share developments and perspectives between participating countries. Further, it is expected that a regional workshop will be organized in the third quarter of 2001 to present C7 findings and their linkages to other components.

Efforts will continue to harmonize and share information with the C8 pilot countries where possible.

The report from the Joint C7 and C8 Workshop on Economic Tools for Decision-making (August 28th - September 1st, 2000) will be finalized and distributed in early 2001.

Component 8: Formulation of Economic/Regulatory Proposals (Antigua and Barbuda and St. Kitts/Nevis)

Component 8 was originally planned for completion by December 2000, ending with a regional workshop to discuss lessons learned and to share the experiences of the two participating countries. However, the consultative process involved both nationally and within the overall coordination team has necessitated a slower paced approach to ensure that the final recommendations are viable in the long-term.

Completed activities as of Dec 2000:

- Methodology Definition
- Review of Legal Regulations and Options for Coastal Zone Management
- Joint workshop with C7 on Economic Decision-making Tools for Climate Change Adaptation Policy
- Cross-sectoral consultation of stakeholders
- Development of National Capacity (still ongoing)
- Development of draft recommendations for pilot instruments
- Begun seeking high-level support for recommendations

Over the next six months implementation will be mainly focused on the completion of the pilot study.

The following activities are to be carried out in this period under Task II: Implementation of Pilot Study:

- Finalization of recommendations and pilot study pilot implementation strategies (February 2001)
- Follow-up country visits (March 4 –9, 2001)
- Implement pilot implementation studies (March – June 2001)
- National Consultations on the proposed pilot studies (April/May 2001)
- Preparation of Pilot Implementation Technical Country Reports 1 (May 2001)
- Review of applicability of economic instruments for the region (May 2001)
- Sub-regional meeting/workshop – preparation and development of technical report (June 2001)

Finalization of Pilot Implementation Strategies

Efforts will be focused on finalizing the project implementing strategy for the participation countries. Both countries will continue to encourage wide participation and to finalize decisions on which instrument or combination of policy instruments is to be piloted over the next six months. This activity will be finalized by the end of February 2001.

The definitive strategy would detail innovative approaches to address the two priority issues selected by the countries: (i) sand management and (ii) beach conservation.

Awareness and Capacity-Building (Ongoing)

A critical aspect of the Pilot Implementation Strategy in Antigua and Barbuda is the continuing effort to educate the public on sand as a resource. Part of the ongoing efforts in this area will be focused on innovative public awareness and disseminations activities.

Equally efforts will be maintained to share and disseminate information between the implementation teams of C7 and C8 and relevant materials will be distributed. The Project has subscribed both countries to Environmental Finance – a British publication addressing various options such as market trading, Clean Development Mechanism (CDM), new development in stocks and derivatives associated with climate change and weather markets, taxes, etc., and is intended to support the countries as they continue to look for innovative approaches to implementing climate change adaptation policy. This will be maintained for the life of the project.

Further efforts will continue to access other relevant materials and research in this area.

Ensuring Sustainability of the Project (Ongoing)

A meeting and consultative session with Government Ministers on the proposed pilot instruments has been identified as a critical step early on in the project. Although this has occurred at informal levels and through Ministerial participation in meetings and through briefing sessions, this has not as yet been executed at a formal level in either country. A focused effort will be maintained during early 2001 to ensure that a formal meeting is held on pilot recommendations. This consultative process will be the basis of an effort to develop a core of support at the political level towards ensuring the sustainability by the efforts in the project to use economic instruments to achieve environmental goals.

In addition, a presentation to Cabinet will be prepared, including the recommending appropriate methodologies for the design of modelling of instruments and their long-term applicability to implementing environmental policy. This activity should be completed by April 2001.

Implementation of the Pilot Studies (March – June 2001)

After the identification of specific issues and instruments, countries will develop operating plans for implementation of specific aspects of the pilot strategy. This will include continued efforts in building public awareness and political support in terms of sustainability of project efforts.

Further, specific instruments will be tested during the next six months and both countries will present the results of these efforts at national workshops.

Other outputs expected from the Project are:

1. Pilot implementation technical report (for each country); and
2. Review of applicability of economic instruments for the region.

Remote sensing imagery acquired as part of C3 allows for the mapping of the pilot areas in order to document the loss of sand and degradation of beaches and coastal areas. This is expected to provide a data set, which countries can build upon in terms of future monitoring and evaluating the impact of policies on environmental management, as well as the environmental efficiency of present and future environmental policies.

In addition, the Post-Georges Disaster Mitigation Project (PGDM), funded by USAID-Jamaica/Caribbean Regional Programme and executed by the OAS, is working on similar areas as are focused on in C8, and is expected to produce valuable maps and information on coastal erosion and risk and hazard. This information is critical to C8 in providing a sound basis for recommendations and informing discussions and establishing critical baselines for further policy development. Greater communication is expected between the two projects and information sharing is ongoing. It is hoped that PGDM will be able to directly contribute to C8 training and discussions.

A continued and regular exchange between the two country teams is seen as being critical in building a sub-regional coordinated effort and support mechanism. As such, meetings and regular communications between the two countries will be supported by the OAS/RPIU.

In addition, an e-group will be established early in this period to foster a forum for discussion between the two countries as well as between the other components and other interested parties.

As part of the pilot implementation process it is expected that the C8 Project team will participate in the United Nations Educational, Scientific and Cultural Organization (UNESCO) Coast and Beach Stability in the Caribbean (COSALC) project workshop on Managing Beach Ecosystems in the Caribbean in June 2001 in Puerto Rico.

Component 9: Greenhouse Gases Inventory and Agriculture and Water Resource Vulnerability Assessment (St. Vincent and the Grenadines)

This component was completed during the previous reporting period.

Annexes

Annex 1: New Disbursement Profile according to Technical Components (Revised January 2001)

Annex 1: New Disbursement Profile according to Technical Components (Revised January 2001)

2000 – 2001 (Estimate)

Component	Cumulative since project effectiveness April 1997 – June 2000	Reported Expenditure July-Dec (RPIU) Jul – Dec (OAS)	Cumulative since project effective to Dec 2000	Percentage Expanded as of December 2000	Remaining balance	2001				Total 2001	Total Project
						Jan. – March	Apr. – June	July – Sept.	Oct. – Dec.		
1	\$720,068	\$8,021.37	\$728,089.37	89.7%	\$83,410.63	\$11,325	\$68,047.99	\$1,925	\$2,112.64	\$83,410.63	\$811,500
2	\$201,182	\$51,845.97	\$253,027.97	64.8%	\$136,897.03	\$29,100	\$26,500	\$20,297.03	\$61,000	\$136,897	\$390,000
3	\$232,426	\$88,958.50	\$321,384.50	44.9%	\$394,315.50	\$220,100	\$127,500	\$16,715.50	\$30,000	\$394,315.50	\$715,700
4	\$73,085	\$46,739.43	\$119,824.43	36.4%	\$184,025.57	\$12,000	\$148,000	\$24,025		\$184,025	\$303,850
5	\$160,540	\$28,237.20	\$188,777.20	47.9%	\$204,847.80	\$47,850	\$29,181.30	\$74,966.50	52,850	\$204,847.80	\$393,625
6	\$159,520	\$44,666.99	\$204,186.69	48.8%	\$214,113.31	\$12,000	\$64,500	\$137,613		\$214,113	\$418,300
7	\$88,565	\$31,369.71	\$119,934.71	38.8%	\$189,065.29	\$51,553	\$43,512.29	\$74,000	\$20,000	\$189,065.29	\$309,000
8	\$23,920	\$29,370.15	\$53,290.15	27.7%	\$138,709.85	\$79,253	\$39,456.85	\$20,000	---	\$138,709.85	\$192,000
9	\$74,559	\$24,223.63	\$98,782.63	81.6%	\$22,217.37	\$8,200	\$5,219.33	\$8,798.04	---	\$22,217.37	\$121,000
Contingencies	\$150,218	\$26,095.41	\$176,313.41	72.5%	\$66,666.59	\$46,666.59		\$20,000	---	\$66,666.59	\$242,980
OAS	\$459,229	\$104,761.20	\$563,990.20	82.6%	\$118,129.80	\$30,574.22	\$19,858.66	\$21,308.50	\$46,388	\$118,129.80	\$682,000
RPIU	\$1,383,137	\$178,564.15	\$1,561,701.15	75.4%	\$507,798.85	\$277,798.95		\$230,000		\$507,798.85	\$2,070,000
Total	\$3,726,449	\$662,853.41	\$4,389,302.41	66.0%	\$2,260,197.59	\$1,404,950.08		\$ 855,247.11		2,260,197.59	\$6,649,880

Notes on Overall Profile

Disbursement from the World Bank on claimed expenditure from July – December 2000 totalling: US\$824,802.85

It should be noted that there is a two-three month lag between disbursement and reporting on expenditure.

Notes on Jan – June 2001 Projected Expenditures

- (1) US NOAA/NGS (benchmark geofixing campaign) (\$56,000) and contract for consultant at UWI-Trinidad and Tobago (\$12,000); Equipment for RAC (\$7,000); Travel of RAC (\$5,000); Follow-up by RNC (\$15,000)
- (2) Purchase orders for computers for Components 1 and 3 counterpart institutions (\$25,000); Costs associated with the running of the Regional Archiving Centre at UWI-Trinidad and Tobago (\$18,000); LAN and Network maintenance for RPIU (\$10,000)
- (3) Purchase order for remote sensing data (\$150,000); completion of APA contract (\$125,000); purchase order for GIS equipment and software (\$50,000); workshops and training materials (\$20,000)
- (4) Completion of Issues Papers (\$12,000); Workshop (\$40,000); Consultancies (both local and international) covering fees and travel and per diem (60,000); local consultants (\$19,000); Technical Review (\$25,000)
- (5) Preparation of book and CD (\$25,000; Technical Workshop (\$35,000) ; contract (fees and travel) for data analyst (\$21,000); data collection and database contract (\$11,000)
- (6) Collection of data and analysis including contract (\$12,000); Vulnerability Assessment (\$64,500)
- (7) International consultants (\$32,000); Data collection – Trinidad (\$2,400); Data collection – St. Lucia (\$7,000); Follow-up with countries (\$7,000); Public Awareness (\$7,500); Establishment of sub-regional virtual office (\$16,000); Analysis of data (\$10,000); Report Review and Consultations (\$28,000)
- (8) Contract payments for US NOAA (\$74,000); local consultants (\$17,000); workshop (\$14,000); travel and per diem (\$3,000)

- (9) Contributions to Component 3 (\$14, 799.49) and Public Awareness (\$7,417)
- (10) Support for IMPACC/Climate Change Centre (\$10,000); C3 Training (\$18,000); equipment for RPIU (\$9,000)
- (11) Technical coordinator and administrative support salaries and benefits (\$53,854); OAS operating expenses (\$23,000)
- (12) Salaries and benefits for RPIU staff (\$166,036); CPACC grants to National Focal Points (\$74,000); PAC4 (\$4,000); CARICOM (\$10,000); RPIU operating expenses (\$17,200)

**OPERATING PLAN: ACTIVITIES SCHEDULED FOR JANUARY – JUNE,
2001 (all ongoing and planned activities by component)**

(Based on Monitoring and Evaluation Plan, Annex 12 and Detailed Project Costs, Annex 14 of Project Document)