

**Caribbean Planning for Adaptation to Global
Climate Change (CPACC)**

**POLICY FRAMEWORK FOR INTEGRATED
ADAPTATION PLANNING AND MANAGEMENT
(COMPONENT 4)**

Inception Mission Report

10th November 2000

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(CPACC)**

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Caribbean Planning for Adaptation to Global Climate Change (CPACC)

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Inception Mission Report

Section 1

1.0. Introduction

The Caribbean Planning for Adaptation to Climate Change Project (CPACC), funded by the Global Environment Facility (GEF) and executed by the Organization of American States (OAS), is assisting Caribbean countries in their preparation activities to cope with the adverse effects of global climate change (GCC). The project's overall objective is to support Caribbean countries in preparing to cope with the adverse effects of global climate change, particularly sea level rise, in coastal and marine areas, through vulnerability assessment, adaptation planning, and capacity building linked to adaptation planning. More specifically, the project is intended to assist national governments to:

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

The project is being executed through the cooperative effort of all twelve participating countries (Antigua and Barbuda, Commonwealth of the Bahamas, Barbados, Belize, Commonwealth of Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Republic of Trinidad and Tobago) through a combination of national pilot/demonstration actions and regional training and technology transfer linked to adaptation planning. Project execution is over a four-year period and involves both regional and national components. The four regional components include the following:

- (i) Design and Establishment of Sea Level/Climate Monitoring Network (Component 1);
- (ii) Establishment of Databases and Information Systems (Component 2);
- (iii) Inventory of Coastal Resources and Uses (Component 3); and
- (iv) Formulation of a Policy Framework for Integrated Adaptation Planning and Management (Component 4).

This report summarizes work during the Inception Mission initiated under Phase 2 of Component 4 of the CPACC project, which was undertaken to launch in each country a process aimed at the development of a policy framework for integrated adaptation planning and management.

1.1. Project Background

Component Four of the project is intended to support the development of a policy framework for integrated planning and management for cost-effective response and adaptation to the impacts of global climate change. The policy framework is to incorporate mechanisms (i.e. legal and institutional structures) for planning for adaptation to climate change, including specific tools such as land use guidelines and disaster contingency planning. More specifically, Component 4 of the Caribbean Planning for Adaptation to Climate Change Project (CPACC) is designed to assist the twelve participating Caribbean States with the formulation of:

- (a) a *National Climate Change Adaptation Policy* and Implementation Plan; and
- (b) a *Regional Climate Change Adaptation Policy* and Implementation Strategy.

Outputs from other national and regional components are to provide inputs into Component Four and be utilized in the formulation of an appropriate policy framework.

1.2. Project Elements

As highlighted in Sections 2, 3 and 4 of the *ATechnical Implementation Proposal* prepared for Component 4, the participating Caribbean countries will need to establish a number of management mechanisms for integrated adaptation planning and management to become a reality. Clearly, each of these mechanisms cannot be established concurrently, and in almost all instances considerable resources (human, technical, financial) will be required to establish the policy, legal and institutional structures that are necessary to give effect to these mechanisms. Most importantly, the implementation of appropriate management mechanisms needs to be achieved in a strategic manner, which recognizes existing conditions and restraints.

Accordingly, it is considered that the limited resources that are available under Component 4 of the CPACC project should best be utilized in assisting each participating Caribbean country with the formulation of a *National Climate Change Adaptation Policy* which will serve as the mechanism to facilitate integrated planning and management for cost effective response and adaptation to the impacts of global climate change.

1.3. Inception Mission

The CPACC Project Management Unit retained a small team of technical experts to assist each country with the formulation of their individual *National Climate Change Adaptation Policy* and Implementation Strategy. The technical team comprises the following:

- X George H. de Berdt Romilly - *Environmental Law, Policy and Institutional Specialist* (Component 4 Co-ordinator); and
- X Dr. Leonard Nurse - *Climate Change and Coastal Zone Specialist*.

Dr. Ulric O'D Trotz (*CPACC Project Manager*) accompanied the technical team on all in-country visits in order to mobilize the highest level of political support required for Component 4. Since broad-based public support and participation is essential for the development, adoption and implementation of the national climate change adaptation policies, it was considered that a public awareness and education campaign be established to run concurrently with Component 4 activities. Accordingly, either Judi Clarke or Rawleston Moore (*CPACC Information Officers*) accompanied the project team on all in-country meetings.

Component 4 was initiated by a series of in-country meetings that were held during the months of September and October 2000, convened by Country Focal Points, with participation by stake-holders from the public and private sector who have an interest in climate change issues. Prior to the arrival of the project team, the CPACC Regional Project Implementation Unit transmitted to the focal point in each country a number of background documents, including:

- (a) An letter outlining the proposed work program under Component 4 (see Annex 1);
- (b) the *Technical Implementation Proposal* for Component 4;
- (c) the *Guide to the Preparation of Country Papers on National Climate Change Issues* (see Annex 2);
- (d) a *Draft Agenda for Country Meetings* (see Annex 3); and

- (e) an *Overview of Initial Country Meetings* (see Annex 4).

The introductory letter (Annex 1) indicated that it was the responsibility of each country Focal Point to prepare such an *AIssues Paper*≡ that shall:

- (i) Identify the national context within which adaptation and vulnerability issues will, where possible, be discussed during the Inception Mission. These issues shall include the physical character, local climatology, important ecological attributes, a brief socio-economic profile of the country, and a statement of other factors which can exacerbate vulnerability to climate change;
- (ii) Identify the critical issues, factors and processes that require urgent attention if meaningful policies and strategies for adaptation to climate change are to be designed and implemented;
- (iii) Prioritize identified issues of concern; and
- (iv) Summarize institutional and legal structures for responding to identified issues of concern.

Each country Focal Point was requested to submitted an *AIssues Paper*≡ to the CPACC project office no later than one week prior to the commencement of the inception mission. In order to initiate appropriate *Abuy-in*≡ and *Aownership*≡ at the national level, it was recommended that the Focal Point in each participating country actively participate in the development of the country-specific *AIssues Paper*≡ with technical support and guidance provided by other stakeholders in the country and by the CPACC RPIU. It was foreseen that the project co-ordinating committee in each participating country will embark upon an extensive consultative process to facilitate the development and subsequent approval (by government and the public at large) of the *National Climate Change Adaptation Policy* and Implementation Strategy. With this in mind, it was considered that the *AIssues Paper*≡ should be presented in a format suitable for use in the consultation process.

Prior to the initiation of the in-country visits, the Component Co-ordinator and members from the CPACC Regional Project Implementation Unit consulted with country focal points to ensure that all necessary activities were being undertaken to ensure the success of the inception mission. In this regard, and under the direction of the CPACC Project Manager, the Component Co-ordinator and Members of the CPACC RPIU:

- (A) In consultation with Country Focal Points, established the timetable and meeting dates for the inception mission (see Annex 3);
- (B) Finalized the meeting agenda and list of participants to be invited to the inception meeting;
- (C) Ensured that each Country Focal Point had, where possible, prepared and returned in reasonable time the country-specific relevant issues paper;
- (D) Ensured that each country Focal Point had completed all arrangements for the inception meetings, including the transmission of invitations to appropriate participants and the circulation of copies of the meeting agenda, the issues paper and other relevant documents.

The project team received initial briefing from the CPACC Project Manager, and thereafter undertook an inception mission to each participating Caribbean country. The objective of the meetings was to review the material that had been circulated (see “Powerpoint” presentation - Annex 5), and discuss the nature of activities that will be necessary for the formulation of a *National Climate Change Adaptation Policy* and Implementation Strategy. Specifically, the purpose of the one-day in-country meetings was:

- X to initiate work on Component 4 by briefing participants as to the scope, purpose and objective of this project, and facilitating discussion on the proposed work-plan;
- X to initiate the consultation process leading to the development of the *National Climate Change Adaptation Policy* and Implementation Plan;
- X to discuss with meeting participants an appropriate process that will lead to the development of the *National Climate Change Adaptation Policy* and Implementation Plan;
- X to discuss with meeting participants an appropriate public awareness and education program in support of national climate change adaptation activities;
- X determine what progress has been made in the preparation of the “Issues Paper”,

and what activities (if any) may be required to finalize these documents.

The meetings were chaired by Country Focal Points, with members from the CPACC technical team facilitating discussion on the above items.

The expected outputs from the one day in-country meetings were:

- X general agreement amongst meeting participants on an appropriate process to develop the *National Climate Change Adaptation Policy* in each participating State;
- X general agreement amongst meeting participants on an appropriate public education/awareness program to support the development and implementation of the *National Climate Change Adaptation Policy* in each participating State;
- X general agreement amongst meeting participants on the steps (if any) necessary to complete the Issues Papers;
- X general agreement amongst meeting participants on the next steps in the implementation of Component 4.

Section 2 of this report contains a summary of the in-country meetings, together with a report on the country-specific work-plan to implement Component 4 that was agreed with meeting participants. Section 3 of the report outlines the work-plan that shall be undertaken to support and facilitate:

- (a) the development and implementation of the *National Climate Change Adaptation Policy* and Implementation Plan in each participating State; and
- (b) the formulation of a *Regional Climate Change Adaptation Policy* and implementation strategy.

Where possible, the summaries of the one-day in-country meetings have been reviewed by Country Focal Points prior to inclusion in the Inception Report.

Section 2.

Summary of In-Country Meetings

(See over)

Antigua and Barbuda

Date and Venue

Friday, 20th October 2000 – Cortsland Hotel Conference Room, St. John's.

Participants:

Steve Archibald	-	Fisheries Division
Lyndell Butler	-	State Insurance Corporation
Brian Challenger	-	Co-ordinator Climate Change, Office of the Prime Minister
Nealyn George	-	Fisheries Division
Philmore Jones	-	CPACC Focal Point, Fisheries Division
Carlton Lake	-	Department of Tourism/Antigua and Barbuda Development Bank
Ato Lewis	-	Environment Division
Felicia Lovell	-	Fisheries Division
Keithley Meade	-	Meteorological Office
Arthur Nibb	-	Chairman, Barbuda Council
Hendren Parker	-	Ministry of Finance
Earl Skerritt	-	Ministry of Education
Frederick Southwell	-	Development Control Authority
Deborah Thomas	-	Development Control Authority
Dr. U O'D Trotz	-	CPACC RPIU
Judi Clarke	-	CPACC RPIU
Dr. Leonard Nurse	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex A (Antigua and Barbuda)

Commentary:

The following comments were made during the meeting by various participants:

- A National Climate Change Committee has been established. Work on the Issues Paper has not been completed.
- The coastal zone in Antigua and Barbuda is controlled by a large variety of agencies under a number of laws (see “*Allocation of Responsibilities: Coastal Management*” and “*Legislation and Statutory Provisions*” attached as Annex B and C). The Development Control Authority (DCA) exercises planning control, and a National Land Use Plan has been prepared and is presently going through public consultation process. The Land Use Plan is to be reviewed periodically. It is an iterative process and can effectively integrate climate change into land use planning activities and address issues such a threats to biodiversity and the need to enhance the resilience of natural eco-systems that are impacted by climate change. The National Land Use Plan is based on a GIS platform (arc/INFO).
- Many laws dealing with natural resources and land use are very old and have not been developed with adaptation to climate change as a consideration (e.g.

Fisheries Act, National Parks Act, Beach Control Ordinance). A new bye-law is being developed in Barbuda for the management of mangrove areas, but no consideration had been given to the aspects of climate change and what changes in the legal framework may be required to ensure that adaptation planning forms an integral part of all planning processes. The *Land Development Control Regulations 1996* establish coastal zone set-backs, which are now being reviewed to address an anticipated increase in storm surges. In 1995, the *Land Development Control Act* was enacted which established compliance with the *Building Code* as a legal requirement. However, enforcement is a problem with the result that some buildings which cannot sustain hurricane or severe storm conditions continue to be constructed.

- It is recognized that policy makers have to be sensitized on the urgent need to develop an integrated approach to climate change adaptation planning and management. It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. It was considered that the launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change.
- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation. It is considered that a strong commitment is required from political directorate if the Policy is to be implemented. Public awareness on the need for a strategic approach to climate change will be critical to obtaining the level of political support that is required to effectively implement the Policy. Some work on sensitizing the public to climate change impacts and issues has already been undertaken, but there is a need to target the insurance/finance and tourism sectors. There is a need to target senior level policy makers as part of the consultation process leading up to the development of the *National Climate Change Adaptation Policy*. It is considered that a presentation to Cabinet should be undertaken at an early stage in the process.
- There is a need to “internalize” climate change into all sectoral planning activities, and technical knowledge on climate change adaptation should be developed within all sectors. Planning for climate change adaptation should also be cross-sectoral and promote an holistic and integrated approach.
- The UNFCCC Focal Point and the CPACC Country Focal Point are not the same individual, with the result that co-ordination of climate change activities is not always efficiently undertaken.
- Work on the *National Communication* has been started, and it is anticipated that the development of the “Vulnerability and Adaptation” section of the *National Communication* will assist in the formulation of the “Issues Paper” and *National Climate Change Adaptation Policy* formulated under Component 4.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the Climate Change Committee and the CPACC Country Focal Point would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) Work on finalizing the Issues Paper should be completed within 2 weeks, with particular attention being focused on identifying current and proposed policies, initiatives and legislation which are relevant to climate change adaptation planning and management. A short-term local consultancy may be required to undertake the review of laws, policies and institutional structures from a climate change perspective. The evaluation of legal, policy and institutional frameworks may need to be reviewed externally, with support provided by CPACC. Thereafter, the Committee would circulate the draft Issues Paper to various government agencies and departments to obtain their input and comments on any outstanding issues that should be included.
- (c) The Climate Change Committee and the CPACC Country Focal Point would develop a work plan and public education program and within 30 days submit to the CPACC RPIU a breakdown of the resources that will be required to support these initiatives.
- (d) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting should be held in mid-January 2001 - comprising 2 half-day sessions. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Climate Change Committee and the CPACC Country Focal Point would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (e) It is anticipated that resources would be required from CPACC to assist with the costs associated with:
 - (i) undertaking the legal, policy and institutional review;
 - (ii) printing and disseminating the Draft Policy document; and
 - (iii) facilitating the public consultation process.
- (f) The Climate Change Committee and the CPACC Country Focal Point would review comments submitted during the public consultation process, and make any necessary changes to the draft Policy document.
- (g) Once the draft Policy Paper had been formulated, the Climate Change Committee and the CPACC Country Focal Point would undertake the development of an Implementation Plan.
- (h) The draft policy paper and implementation Plan would be submitted to CPACC RPIU for review by a panel of technical experts. Comments arising from this technical review will be submitted to the Climate Change Committee and the CPACC Country Focal Point for consideration.
- (i) Once agreement has been reached, the Climate Change Committee and the CPACC Country Focal Point shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to the appropriate Ministry for onward transmission to Cabinet for review and eventual approval. It is anticipated that the Final Draft *Climate Change Adaptation Policy* and Implementation Plan would be ready for submission to Cabinet by the mid-to-end of 2001.
- (j) Assistance would be provided by CPACC to develop a “powerpoint” presentation and other materials that would assist in presentations to the Minister and other parliamentarians in order to obtain their support for the development and implementation of the *Climate Change Adaptation Policy* and Implementation Plan. Additionally, it was considered that an Information Note should be forwarded to Cabinet to advise them of the proposed activities to be undertaken in the formulation of the *Climate Change Adaptation Policy* and Implementation Plan.

Public Awareness and Education

Currently there is no public awareness and education campaign that includes climate change issues. The strategy developed by Trinidad and Tobago was shared with the acting focal point who will use it as a template for developing one for Antigua and Barbuda. However, the Ministry of Tourism has an ongoing public awareness campaign that can be useful.

Proposed Public Awareness and Education Activities

- **It was suggested that climate change be introduced in the initiatives from the Ministry of Tourism, particularly to show policy makers how climate change can impact on this crucial industry.**
- **It was agreed that to get policy makers on board, the campaign should highlight climate change impacts on the public sector, particularly how the economy of the country can be affected.**

Next Steps

- **Mr. Philmore James will select a committee who will develop a public awareness and education program, as well identify the resources needed. CPACC has committed to assisting in this regard.**

Annexures A, B, and C

(See over)

The Bahamas

Date and Venue

Monday, 9th October 2000 – Oceanview Terrace Conference Room, Breezes Hotel, Nassau.

Participants:

Timothy Bethel	-	The Bahamas National Trust
John Bowley	-	Water and Sewerage Corporation
Godfrey Burnside	-	Department of Meteorology
Eric Carey	-	Department of Agriculture
David Cates	-	Cabinet Office
Jacklyn Chisolm	-	College of The Bahamas
Dwayne Curtis	-	Department of Environmental Health Services
Jerome Elliot	-	The Bahamas Electricity Corporation
Terrance Fountain	-	Ministry of Health
Lynn Gape	-	The Bahamas National Trust
Nakira Gaskin	-	The Bahamas Environment, Science and Technology Commission
Dr. John Hammerton	-	Secretary, National Climate Change Committee
Dr. Maurice Isaacs	-	Department of Agriculture
Coral Knowles-Miller	-	Department of Environmental Health Services
Glen Laville	-	Water and Sewerage Corporation
Eugene F. Newry	-	Ministry of Foreign Affairs
Eleanor Philips	-	Department of Fisheries
Christopher Russell	-	Department of Lands and Surveys
Beverley J. Taylor	-	Ministry of Education
Philip Weech	-	Chair, National Climate Change Committee
Dr. U O'D Trotz	-	CPACC RPIU
Rawleston Moore	-	CPACC RPIU
Dr. Leonard Nurse	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex A (The Bahamas)

Commentary:

The first part of the meeting involved a chapter-by-chapter review of the draft *The Bahamas First National Communication* to facilitate the finalization of the document. Thereafter presentations were made outlining the purpose, goal and scope of Component 4 under the CPACC project.

The following comments were made during the meeting by various participants:

- Further work needs to be undertaken in order to ensure that the areas of
 - (a) biodiversity, and
 - (b) public education and awareness,are adequately addressed in the draft *The Bahamas First National Communication*.
- Recording stations have been established on 8 islands to monitor climatic

conditions under the CPACC project, but these are insufficient to adequately monitor weather patterns. It is considered that up to 60 stations may be required.

- Systematic hydrological data has been collected since 1971, but there has been no systematic water monitoring program which essentially undermines any attempt to accurately assess vulnerability. The establishment of a comprehensive water resources management regime is a critical requirement, together with the stringent control of water extraction.
- 3 sea-level rise monitoring stations have been established, but these are insufficient to adequately monitor sea-level patterns. Additionally, there are no wave recorders in The Bahamas to measure sea swells, or wave height/length or wave energy. Storm surge modeling needs to be undertaken throughout the Archipelago.
- The Ministry of Health has been recording ultra-violet radiation since 1999, but an additional 2 recorders are required.
- Although a considerable amount of data has been collected, continued problems are being experienced in data management and quality control of data/information. There is a need to obtain climate data management software to improve information management practices, and a program of institutional strengthening within the Department of Meteorology needs to be undertaken.
- The vulnerability of coastal areas from storm surges is a concern, and sea-wall instability continues to be a problem.
- Coral reefs in The Bahamas continue to experience bleaching during El Nino Southern Oscillation events.
- There is a pressing need to establish a comprehensive weather, solar radiation and wave monitoring capability in The Bahamas, together with a capacity to measure and monitor soil moisture.
- Vulnerability analysis has been done in some islands to assist with physical planning, but this needs to be extended to other islands.
- Some coral reef monitoring has been undertaken, and work has been initiated on monitoring sea-grass productivity. This work needs to be continued and extended to other areas.
- During Hurricane Floyd, extensive damage to forest cover was suffered on some islands with as much as 5 out of every 10 trees being destroyed. Although data on forestry resources has been collected since the early 1980's, there is an urgent need to monitor changes to forest and mangrove areas resulting from climatic events and changes.

- Existing forestry legislation is inadequate to protect and conserve forest cover, and physical planning and development is often undertaken without any value being placed on existing forestry resources. There is an urgent need to secure the permanent protection of vulnerable forest and mangrove areas. An integrated approach to resource management is urgently required.
- The sectors most vulnerable to climate change impacts are agriculture and tourism, while water and marine resources are the most vulnerable areas. It is imperative to ensure that development affecting these areas and sectors adequately take into consideration the impacts of climate change. It is anticipated that climate change impacts will include:
 - (a) saltwater intrusion into sub-surface water reservoirs;
 - (b) an increase in wetland areas;
 - (c) heavier storm surges which will result in increased damage to coastal infrastructure (e.g. roads and sewerage systems);
 - (d) greater incidents of flooding resulting in increased infiltration of flood waters into sewerage systems;
 - (e) increased storm activity which will result in increased seasonal damage to electrical and telephone lines;
 - (f) loss of biodiversity (terrestrial and marine);
 - (g) Loss of coastal infrastructure.
- The entire country is a coastal zone, with 80% of The Bahamas being within 5 feet of mean sea level, thereby making “retreat” and redistribution/relocation of settlements unfeasible options. Engineered improvements to coastal structures is very costly. An integrated approach to resource management is required to adequately address the impacts of climate change.
- Adaptation to climate change impacts will require considerable institutional strengthening in a variety of government and private sector organizations (e.g. Vector Control).
- Regional impacts on ecosystems and regional biodiversity (e.g. the displacement of peoples throughout the region as a consequence of climate change affecting human settlement and food security) resulting from climate change needs to be urgently addressed. It is considered essential that the resilience of natural systems be enhanced.
- It is anticipated that *The Bahamas First National Communication* will be completed within the next two weeks and thereafter forwarded to Cabinet for review and subsequent approval.
- *The Bahamas First National Communication* has identified a number of activities that are required at the national and regional level to effectively implement obligations under the United Nations Framework Convention on Climate Change.

These activities are outlined in a two page summary (see Annex B). In addition it is recognized that The Bahamas will need to formulate a *National Climate Change Adaptation Policy and Action Plan*, and a *National Water Resources Management Policy*. Work on these activities will commence once *The Bahamas First National Communication* has been approved by Cabinet. Priority will be given to the formulation of the *National Climate Change Adaptation Policy and Action Plan* and the National Climate Change Committee will access resources under Component 4 of the CPACC project to undertake this activity.

- It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the National Climate Change Committee would co-ordinate the development of the *National Climate Change Adaptation Policy* and Action Plan.
- (b) Once *The Bahamas First National Communication* has been approved by Cabinet, the National Climate Change Committee will prepare a work-plan relating to the formulation of the *National Climate Change Adaptation Policy and Action Plan* which will be communicated to the CPACC Regional Project Implementation Unit.
- (c) In the development of the *National Climate Change Adaptation Policy and Action Plan* there will be the need for the development of a comprehensive public awareness/education program. Areas in which CPACC RPIU can assist with such a program will be investigated. The public education and awareness program on climate change that has been developed in Trinidad and Tobago will be forwarded to The Bahamas for review to determine its applicability. It is considered that there may be a need to invite the Governor General to host a meeting to:
 - (i) present the *National Communication*;
 - (ii) initiate discussion on the implications of the document including the development of a *National Action Plan on Climate Change Adaptation*; and
 - (iii) initiate the public awareness and sensitization process.

Annexures A and B

(See over)

Barbados

Date and Venue

Tuesday 26th September 2000 - 4th Floor Conference Room, Ministry of Environment, Energy and Natural Resources.

Participants:

Leonard Fields	-	Barbados Meteorological Services
Alex S. Ifill	-	Barbados Water Authority
David Ince	-	Energy Division
Ricardo Marshall	-	Sewerage & Solid Waste Project Unit
Harold Morris	-	Ministry of Public Works
Leonard Nurse	-	Barbados Coastal Zone Management Unit
Derrick Oderson	-	Ministry of Environment, Energy and Natural Resources
Antonio Rowe	-	Coastal Zone Management Unit
Lloyda Springer	-	Ministry of Environment, Energy and Natural Resources
Troy Waterman	-	National Council for Science and Technology
Christine Wellington	-	Ministry of Environment, Energy and Natural Resources
John Wilson	-	Ministry of Environment, Energy and Natural Resources
Dr. U O'D Trotz	-	CPACC RPIU
Judi Clarke	-	CPACC RPIU
Rawleston Moore	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU
Leslie Walling	-	CPACC RPIU

Agenda: See Annex 3

Commentary:

The following comments were made during the meeting by various participants:

- Recent climate models suggest that we are not going to see a return to normal climate patterns in the region, and an increase in extreme weather events is to be expected.
- It was considered that existing legal framework in Barbados is outdated and cannot adequately address climate change impacts or interventions.
- It was considered that work needs to be undertaken on how to value climate change issues and impacts in socio/economic and cultural terms. Such valuation is often a judgement call by countries.
- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation.

- It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*.
- In developing the *National Climate Change Adaptation Policy*, it was considered that the positive aspects of climate change need to be looked at as well as the negative aspects.
- It was considered that the public consultation process used to develop the Desertification Policy would be a useful model to follow to develop the *National Climate Change Adaptation Policy*.
- There is a need to develop a comprehensive public awareness campaign on climate change.
- It was considered that the consultation process to develop the *National Climate Change Adaptation Policy* should include presentation to Parliamentarians in order to sensitize them on the issues, and request should be made for written submissions from .
- The Ministry of Environment, Energy and Natural Resources shall be the focal point in the development of the *National Climate Change Adaptation Policy*.
- It was considered that Barbados would need about US\$6,000 to assist in costs associated with the public awareness campaign associated with developing the *National Climate Change Adaptation Policy*.
- The Climate Change Committee would initiate a request for additional funds for the financial year 2000-2001 to cover public awareness and education relating to climate change.
- It was considered that a readily identifiable image needed to be developed for the climate change public awareness program.

Development of Climate Change Policy - Proposed Work-Plan:

- (a) The Barbados Climate Change Committee undertook to prepare a detailed work plan outlining steps to be taken to develop the *National Climate Change Adaptation Policy*. The work plan would be submitted to the CPACC RPIU Office within 4 weeks. The work plan would be based on the plan utilized to develop the National Desertification Policy and Coastal Zone Management Policy, and would outline resource needs and inputs required from the CPACC RPIU under Component 4.
- (b) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. A second round of consultations should be held in November or December 2000 once technical options had been developed. December 7th, 2000 was the date proposed for the second round - comprising 2 half-day meetings. Thereafter, the Climate Change Committee would undertake an extensive public consultation process to develop a draft Policy Paper.

- (c) The Climate Change Committee agreed to set up a sub-committee to develop a public awareness campaign with input provided from the CPACC RPIU. The campaign would be submitted to CPACC RPIU in two weeks.

Public Awareness and Education

A brief outline was given regarding what areas are to be covered by the public awareness program for component 4. The meeting was then opened for discussion. It was indicated (by Christine Wellington) that the Ministry of the Environment, Energy and Natural Resources had some success with their public awareness campaign for Ozone Month. She briefly outlined what was involved.

It was agreed that instead of recreating a new strategy, the Committee would draw on the experience gained from the one developed by the Ministry for Ozone Month, especially since it was successful. A cost of US\$6,000 was estimated for the public awareness campaign.

Proposed Public Awareness and Education Activities

- As with the Ozone campaign:
 - Develop a mascot that would subsequently appear on all promotional material
 - Use the popular live morning radio show called “ The Road Runner”. This involves a person knowledgeable on the topic in the company of the radio personnel driving to various parts of the island. Questions would then be asked to individuals, who, if answer correctly, would win a small prize.
 - Posters and competitions.
 - Brochures – designed for the specific target audience
- Articles in newspapers, particularly the Greenpage, the Broadstreet Journal publication (focused at the private sector)
- Troy Waterman from the National Science Council on technology informed the meeting of public awareness activities under the NSCT, that can include climate change. These included:
 - A lecture series for secondary school students
 - A publication called “Junior Monitor”, which is published every academic term for CXC level students.
- ‘Piggybacking’ on Private Sector Seminars, (i.e. having climate change as an agenda item)
- Factoids in both the print and sound media (Cathy Walcott at VOB, in particular). Terry Ally, an Environmental Journalist from the Nation newspaper has already been contacted about the activities under this component. He has agreed to assist in publishing information.
- Use “UWI Notebook” for articles or advertising upcoming events. The “UWI notebook” is a full page of the Nation Newspaper published every other Monday, and in the Barbados Advocate every other Wednesday.

Public Awareness Committee

- A Public Awareness and Education Committee was selected from amongst participants present. Members of the Committee are:
 - Christine Wellington (Environment Division of *Ministry of the Environment, Energy and Natural Resources*)

- Troy Waterman (*National Council for Science and Technological Development*)
- David Ince (*Energy Division of the Ministry of the Environment, Energy and Natural Resources*)
- Nadia James (Environment Division of *Ministry of the Environment, Energy and Natural Resources*)
- Llyoda Springer (Environment Division of *Ministry of the Environment, Energy and Natural Resources*)
- Judi Clarke (*CPACC RPIU*)

Public Awareness and Education - Next Steps

- Taking into consideration:
 - the issues identified in the draft Issues Paper for Barbados
 - the Public Awareness and Education strategy used by the Ministry, and
 - suggestions made during the meeting

Judi Clarke (CPACC RPIU) will develop a draft public awareness and education strategy by October 6th, 2000. This is to be presented to the committee for review and comments.

Belize

Date and Venue

Monday, 7th November 2000 – Belize Institute of Management Conference Room, Belize City.

Participants:

Froylan Alvarado	-	Belize City Council
Eugene Ariola	-	Coastal Zone Management Institute
Ramon Frutos	-	National Meteorological Services
Carlos Fuller	-	National Meteorological Services
Janet Gibson	-	Coastal Zone Management Institute
Malcolm Hendry	-	Consultant, Coastal Zone Management Strategy
C. Victor Lewis	-	Office of Electricity Supply, Ministry of Energy
Rafael Novelo	-	Public Health Inspector
Sharon Lindo	-	Ministry of Foreign Affairs
Sharon Ramclam	-	Fisheries Department
Elvis Requena	-	Ministry of Economic Development
Mustafa Touré	-	ESTAP (Eastern & Southern)
Wayne Usher	-	Consultant, National Issues Paper
Dr. U. O'D Trotz	-	CPACC RPIU
Judi Clarke	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex A1 (Belize)

Commentary:

The following comments were made during the meeting by various participants:

- An extensive consultation process has been undertaken as part of the process to formulate the *National Communication*. Cabinet has already reviewed the *National Communication*, which is to be approved once minor changes of an editorial nature have been completed.
- There is a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation. It is considered that the Policy document should establish clear objectives, which will be given effect through an Implementation Strategy. In relation to climate change, it is recognized that the responsibilities of government need to “evolve” and these evolving responsibilities should be clearly articulated in the Policy document.
- Climate change needs to be integrated into all national strategies and plans, and should be integrated into all sector programs. Climate change should not drive sectoral policies and programs but should form an essential part of the planning and implementation process. There is an urgent need to ensure that climate change is considered as part of existing and ongoing initiatives such as the development of the Coastal Zone Management Strategy, the formal establishment of the Sustainable Development Councils, and under the “South-Side Renewal

Initiative” whereby a task force has been established to evaluate settlement and housing options. The Sustainable Development Councils, which are being formally established through legislation, could serve as a mechanism to integrate climate change into national development strategies, policies and programs. Consideration for climate change impacts and adaptation options should also be incorporated into the programs undertaken by Public Works.

- Waste management is a national priority, and there is a need to evaluate the impacts of climate change on all waste management practices, with particular attention on greenhouse gas abatement.
- There is a need to review the National Energy Policy to ensure that climate change is adequately addressed.
- A review of the existing legal regime and its adequacy for dealing with climate change adaptation is presented in the draft Issues Paper. There is a considerable amount of legislation that could be used to implement effective adaptation measures. However, the existing legal framework is often unable to deal with pressing environmental concerns because of poor enforcement.
- The priorities and ranking of such priorities that are presented in the draft Issues Paper (page 26) needs to be reviewed and debated, and should ensure that national priorities are reflected to guarantee that support for the *National Climate Change Adaptation Policy* and Implementation Strategy is forthcoming from the public and private sector. Concern was expressed about criteria utilized for ranking of national priorities in the issues paper which identified Tourism as first priority. Subsequent discussions identified human settlement , the conservation of water resources, and the protection of human health as the major areas of concern for Belize. It was agreed to revisit this using clearly identified criteria and to indicate what these were in the final Issues Paper.
- A Bill has been tabled to regulate architects and engineers, and to provide for the establishment of professional standards. Currently, there are no building codes or engineering standards. Climate change has obvious implications on the standards to which structures are built, and there is an urgent need to ensure that the regulation of architects and engineers and that the planning and construction of all buildings and structures in vulnerable areas adequately consider the impacts of climate change. There has traditionally been considerable “micro-management” by central government, and there is a pressing need to involve local government and city councils in the implementation and enforcement of building codes and in the regulation of physical planning activities. An urgent requirement is the establishment of a comprehensive land use planning process which integrates climate change into the planning and decision-making processes. Development needs to be planned in a more strategic manner which takes into consideration the characteristics and limitations imposed by the natural environment. It is considered that the establishment of a comprehensive land-use planning process is

the most important management mechanism for ensuring that climate change impacts and appropriate adaptation options are integrated into the planning processes. Active community participation in all land-use planning activities will be an essential requirement if climate change adaptation is to become a reality. There is an urgent need to improve base-line data in order to establish a comprehensive land-use planning process.

- Over 45% of human settlement in Belize occurs in vulnerable coastal areas, and some areas are under sea level. Climate change and sea level rise would have a profound impact on human settlement, and would result in considerable loss of human settlement and recreational areas. It should also be noted that some development areas for human settlement are in low-lying areas that are extremely vulnerable to damage from storm surges and flooding as has been witnessed recently during Hurricane Keith. Many hotels and tourism infrastructure are located in vulnerable coastal or beach areas. There is an urgent need to identify the impacts of climate change on such facilities, and develop appropriate intervention options to prevent the development of further facilities in vulnerable areas.
- Climate change is likely to result in coral bleaching and increased incidents of fish kills resulting from algae blooms which are caused by high nutrient levels in coastal waters combined with higher water temperatures and a reduction in freshwater infusion because of changes to ocean currents.
- Existing laws are sectoral in nature and fragmented, and have not been developed with adaptation to climate change as a consideration.
- There is now a considerable level of sensitivity to climate change impacts in the country as a result of the flood damage caused by Hurricane Keith. The public at large needs to be actively involved in the development of the *National Climate Change Policy*. It is recognized that policy makers have to be sensitized on the urgent need to develop an integrated approach to climate change adaptation planning and management. It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. It was considered that the launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change.
- The public sector will play an important role in the implementation of any *National Climate Change Policy*. It is important to ensure that the insurance/finance sectors, developers, engineers and other sectors of the private sector actively participate in the formulation and implementation of the policy.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the Climate Change Committee would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan. It was considered that work on

developing the Policy should be accelerated to take advantage of the considerable level of sensitivity to climate change impacts that have been generated in the country as a result of the flood damage caused by Hurricane Keith. Such a Policy needs to be established as soon as possible to guide the Government of Belize in all planning and development activities.

- (b) The Climate Change Committee would develop a work plan outlining the process that shall be undertaken to formulate the *National Climate Change Adaptation Policy* and Implementation Plan, and within 30 days the Committee shall submit this workplan to the CPACC RPIU together with a breakdown of the resources that will be required to support the process.
- (c) The Climate Change Committee will establish contact with other agencies and committees to ensure that climate change adaptation is considered as part of existing and ongoing initiatives such as the development of the Coastal Zone Management Strategy, the formal establishment of the Sustainable Development Councils, and under the “South-Side Renewal Initiative” whereby a task force has been established to evaluate settlement and housing options. The Committee will also prepare and submit an information note to Cabinet outlining the process to develop the *National Climate Change Adaptation Policy* and Implementation Plan, and requesting that appropriate consultation/coordination mechanisms be established to ensure that climate change is integrated into all government planning and development activities.
- (d) Concern was expressed over the need to ensure active participation and consultation in the development of the *National Climate Change Adaptation Policy* and Implementation Plan so as to ensure ownership and the effective implementation of the policy and action plan. It was considered that the policy document would best be developed by members of the Climate Change Committee with active participation from select stakeholders.
- (e) It is considered that a comprehensive public education and awareness program will need to be established to support the development of the *National Climate Change Adaptation Policy* and Implementation Plan. This process has been initiated with a press release announcing the initial consultative workshop (see Annex 2).
- (f) Work on finalizing the Issues Paper should be completed within the next few weeks. Thereafter, consultations with a variety of stakeholders will be held to obtain input to the Issues Paper. These consultations should be completed by the end of January 2001.
- (g) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. It is considered that the process to formulate a *National Climate Change Adaptation Policy* and Implementation Strategy could be assisted through the identification of appropriate climate change scenarios and the development of appropriate intervention options based on available resources. It is considered that a “menu” of such scenarios and adaptation options would help to standardize the policies that are developed in each country. This “menu” of scenarios and adaptation options could be presented at the 2-day workshop that will be held in February 2001. This session would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Climate Change Committee would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (h) It is anticipated that the Climate Change Committee would review comments submitted during the public consultation process, and make any necessary changes to the draft Policy document.
- (i) Once the draft Policy Paper had been formulated, it is anticipated that the Climate Change Committee would undertake the development of an Implementation Plan.
- (j) It is anticipated that the draft policy paper and implementation Plan would be submitted to CPACC RPIU for review by a panel of technical experts. Comments arising from this technical review will be submitted to the Climate Change Committee for consideration.

- (k) It is anticipated that once agreement has been reached, the Climate Change Committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to Cabinet for review and eventual approval.
- (l) In order to establish a formal training program on climate change in schools CPACC should coordinate and facilitate a regional workshop for teachers and educators to assist in the development of training tools and an appropriate curriculum module.

Public Awareness and Education

The Issues Paper stated that a recurrent theme during its preparation was public awareness and education, as this will be an important component of any adaptation strategy. However, in its ranking of priority issues, 'Public education' was given the lowest ranking. It was suggested to either place public education as a higher priority or to 'infuse' it into all other priorities. The issue of sensitizing tourists was raised. It was agreed that there is a need to educate visitors and tourists from industrialized countries and that a clear message be sent to industrialized countries that existing emission cut-backs under the Kyoto Protocol are not adequate to avoid climate change impacts in vulnerable small island States. It is considered that this message should be made clear to visiting tourists from industrialized nations who have not met their commitments to reduce green house gas emissions to levels that will not cause changes to global climates, in order that they may put pressure on their own governments to address this. The existing tourist product should be reviewed to identify mechanisms whereby greater sensitization can be achieved on climate change impacts and adaptation strategies. A clear message needs to be sent to the political directorate so that they can continue to apply pressure on industrialized governments to improve on emission reductions. Considerable sensitization needs to take place, through a comprehensive public education and awareness program. It is considered that public education and awareness should be a national priority under and *National Climate Change Adaptation Policy* and Implementation Strategy.

Proposed Activities

- Public consultations will be initiated, drawing on the experience from the National Biodiversity Strategy where public consultations were held in rural communities.
- Competitions in schools
- Lectures on climate change, field trips
- Regional workshop for teachers / educators to develop climate change curriculum in schools and universities
- 30 second TV ads – factoids

Next Steps

- A copy of the public education and awareness program on climate change that had been developed by Trinidad and Tobago would be forwarded to the Climate Change Committee in Belize for their review and consideration.

- The Climate Change Committee, with the assistance of media personnel, would develop a work plan to develop a public education program to support the development of the *National Climate Change Adaptation Policy* and Implementation Plan, and by the end of November 2000 submit it to the CPACC RPIU. This strategy will include a breakdown of the resources that will be required to support these initiatives. It is anticipated that resources would be required from CPACC to assist with the costs associated with the printing and disseminating the Draft Policy document, and facilitating the public consultation process.

Annexures A and B

(See over)

Dominica

Date and Venue

Monday, 16th October 2000 – Fisheries Complex Conference Room, Roseau.

Participants:

Anthony Commodore	-	State Attorney, Ministry of Legal Affairs
Rob Douglas	-	Dominica Solid Waste Management Corporation
Anthony Drigo	-	Dominica Water and Sewerage Corporation
Kongit Gabriel	-	Environmental Co-ordinating Unit
Oliver Grell	-	Ministry of Agriculture
Harold Guiste	-	Fisheries Division
Mark John	-	Head, Environmental Co-ordinating Unit
Urban Martin	-	Inter-American Institute for Co-operation in Agriculture
Fedeline Moulou	-	Dominica Amalgamated Workers Union
Henry Shillingford	-	Dominica Conservation Association
Luther St. Ville	-	Prime Unit, Ministry of Agriculture
David Williams	-	Forestry and Wildlife Division
Dr. U O'D Trotz	-	CPACC RPIU
Judi Clarke	-	CPACC RPIU
Dr. Leonard Nurse	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex A (Dominica)

Commentary:

The following comments were made during the meeting by various participants:

- It is considered essential that Dominica improve its capacity to monitor climate changes.
- It is recognized that climate change impacts all sectors and activities, and should be reflected in the negotiation of all multilateral environmental agreements and in negotiations at the World Trade Organization (WTO).
- A new *Planning Act* is being developed. Natural resource accounting report was initially prepared in 1990, and now forms part of the planning process. It is considered that Component 4 of the CPACC project will assist Dominica with the valuation of its natural resources and prioritizing development activities in a climate change context.
- Difficulties have been experienced in identifying appropriate adaptation responses in the face of scientific uncertainty. As an example, the main road to Rousseau is extremely vulnerable to the threat from landslides that would in effect cut off the rest of Dominica from the capital. It is almost impossible to achieve any

consensus on what should be done to reduce this vulnerability until the scientific certainty of such a scenario can be accurately presented to decision-makers.

- Only historical data is used for the purposes of conducting environmental impact assessments (EIA's) and the focus is on identifying the impacts of development projects on the environment. No attempt is currently made to look at the impacts of climate or other aspects of the environment on any proposed project.
- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation. A consultation meeting with 30 stakeholders from various agencies and the private sector was convened on the 10th October 2000 to identify issues of concern and undertake initial prioritization for the purpose of completing the Issues Paper. However, difficulty has been experienced in prioritizing adaptation options since an assessment of options was undertaken in purely economic terms. Work still needs to be done on the costs of proposed intervention options.
- The process to develop and implement the *National Climate Change Adaptation Policy* should assist in ongoing attempts to preserve freshwater resources and introduce alternate energy sources. In this regard, it can be seen that there is a positive impact associated with climate change. It will also present an opportunity to introduce and enforce various building and environmental standards. However, a concern has been expressed about the impacts trade agreements may have on any proposed adaptation options, particularly the enforcement of various standards.
- The process to develop the *National Climate Change Adaptation Policy* should assist in the development of the *National Communication* which is still in the early stages of preparation.
- Although the National Climate Change Committee has not yet been established, there are a number of ongoing programs aimed at educating and sensitizing the public on a variety of environmental issues, including climate change. In this regard, it should be noted that some environmental non-government organizations have their own outreach programs that target schools and include material on climate change. A mascot/icon has been developed from Dominica's national bird the Sisserou Parrot. This popular character "Rou Rou" is used to explain the various environmental issues to children. These programs should be expanded to include climate change and adaptation.
- It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. It was considered that the launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change. The government has

- some experience in undertaking public consultations for the Integrated Development Plan, and the Ecotourism Plan, and should be able to draw upon these experiences to develop the *National Climate Change Adaptation Policy* and Implementation Plan. However, there is a need to ensure that the process is not tainted by the public perception that consultations are a waste of time since the issues have already been decided. Climate change is so wide-ranging and affects all levels of society. There is a need to initiate the “paradigm shift” in the ways government and civil society deals with climate change and adaptation. As part of the sensitization process, consideration needs to be given to developing promotional materials which graphically demonstrates the impacts of climate change on Dominica and the consequential effects on specific groups/sectors.
- It is considered essential that a presentation be made to Ministers and parliamentarians to sensitize to climate change issues and the need to develop and implement a *National Climate Change Adaptation Policy*. It is hoped that Ministers and other parliamentarians would then take the message back to the community level in their on-going consultations with constituents.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that a National Climate Change Committee would be established to co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) Only one section of the Issues Paper remains to be finalized, and the document will then be forwarded for review and comment by the National Climate Change. This process should be completed in two weeks. Thereafter, the Committee would circulate the draft Issues Paper to various government agencies and departments to obtain their input and comments on any outstanding issues that should be included.
- (c) The National Climate Change Committee will prepare a public education and awareness campaign to support the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (d) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms before the Committee could go out to the public for consultations. This technical meeting should be held early January 2001. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Climate Change Committee would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (e) It is anticipated that resources would be required from CPACC to assist with the costs associated with printing and disseminating the Draft Policy document, and in facilitating the public consultation process.
- (f) The Climate Change Committee would review comments submitted during the public consultation process, and make any necessary changes to the draft Policy document.
- (g) Once the draft Policy Paper had been formulated, the Climate Change Committee would undertake the development of an Implementation Plan.
- (h) The draft policy paper and implementation Plan would be submitted to CPACC RPIU for review by a panel of technical experts. Comments arising from this technical review will be submitted to the Climate Change Committee for consideration.

- (i) Once agreement has been reached, the Climate Change Committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to the Minister and Cabinet for review and eventual approval.
- (j) The CPACC RPIU would assist in developing a video on climate change and adaptation, and distribute to each country for use in their public education and awareness programs.

Public Awareness and Education

The floor was opened for discussion on a public awareness and education program for this component.

It was noted that the Dominica Conservation Association already has a program in place for environmental issues. This however was focused at primary level students. Only recently has there been any public information about climate change, and this was in the form of articles in the local newspaper. It was also noted that the Natural Resources Management Unit (based in St.Lucia) had developed a public awareness program which is in use in Dominica, and that the National Emergency Preparedness Office (NEPO) has an ongoing program in which climate change can be included.

In developing the Desertification Policy some time ago, public consultation was used as a public awareness tool, and it was agreed that this experience should be drawn upon in the implementation of this component. More importantly, climate change issues will be addressed in the Dominica context and more specifically in terms of the effects on the lives and livelihoods of individuals.

Proposed Public Awareness and Education Activities

- It was agreed to incorporate climate change issues into the existing program from the DCA, and an attempt made to do the same with the other existing programs.
- It was suggested that public awareness be also addressed at the ‘village’ level, particularly in terms of climate change impacts on agriculture in light of the fact that any public awareness campaign needs to take into consideration problems of access to some media for some sectors of the population.

Public Awareness and Education - Next Steps

- The new Focal Point, Mark John, will select a committee and develop a program to support component 4. The resources needed to implement such a program will be identified, and communicated to the RPIU who have committed to assisting in this area.
- CPACC will develop a presentation for cabinet members, that the focal point will use to address this group.
- The public awareness and education program will be implemented after the finalization of the issues paper.

Annexure A

(See over)

Grenada

Date and Venue

Friday, 27th October 2000 – Agency for Rural Transformation Boardroom, Marrast Hill, St. George's.

Participants:

Joseph Antoine	-	Friends of the Earth (Grenada)
Robert Alexis	-	Ministry of Legal Affairs
Leon Charles	-	Co-ordinator, First National Communication
Robert Dunn	-	Forestry Department
Steve Fassih	-	Friends of the Earth (Grenada)
Sandra Ferguson	-	Agency for Rural Transformation
Alan Joseph	-	Forestry Department
Edward Lord	-	Grenada Ports Authority
Francis McBarnette	-	Organization of American States
Allison Miller	-	Ministry of Tourism
Jocelyn Paul	-	Ministry of Finance
Everson Peters	-	Ministry of Agriculture
Paul E. Phillip	-	Fisheries Division
Trevor Thompson	-	Land Use Division
John Tyme	-	Ministry of Legal Affairs
Hubert Whyte	-	Airport Authority
Judy Williams	-	Grenada Community Development Agency
Rawleston Moore	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex A (Grenada)

Commentary:

The following comments were made during the meeting by various participants:

- The *National Communication* is now drafted and to be submitted to Cabinet on Monday, 30th October 2000. It is anticipated that it will be presented to the forthcoming Conference of the Parties to the UNFCCC in November 2000. At page 10 of the *National Communication* it is recommended that a *National Climate Change Adaptation Policy* be formulated as a priority. This recommendation is supported by the Ministry of Finance. Accordingly, it was agreed by participants that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation.
- A comprehensive review of the existing legal regime and its adequacy for dealing with climate change adaptation has been undertaken under Component 6 of CPACC.
- New tidal gauge stations are required in order that comprehensive data on tidal

patterns and anticipated changes resulting from climate change can be obtained.

- It is important that a clear message be sent to industrialized countries that existing emission cut-backs under the Kyoto Protocol are inadequate to avoid climate change impacts in vulnerable small island States. It is considered that this message should be made clear to visiting tourists from industrialized nations in order that they may put pressure on their own governments to increase greenhouse gas emission reductions.
- Grenada has undertaken an extensive public consultation process to develop the *Forestry Policy*, and experience from this exercise should guide the process to develop the *National Climate Change Policy*.
- The water sector is one that is extremely vulnerable to impacts from climate change. Grenada's current levels of water production are adequate to meet existing needs. Reports have indicated that there was an estimated 50% loss of water due to leakage. However, with the establishment of a metering system, it has been determined that wastage is in fact the cause of water loss. This highlights the need for an extensive public education campaign. It is uncertain as to what impacts climate change will have on water quality and quantity. The impacts of climate change combined with high demand during the tourist season (which coincides with the dry season) may affect Grenada's ability to adequately deal with seasonal high demand for water. The impact of 2 new golf courses on the country's ability to provide adequate water has not been considered when the projects were reviewed. The issue of water re-distribution needs to be evaluated. There is insufficient water storage capacity in the North of the country, while there is an excess storage capacity in the South. However, there is generally little surface water storage, with most water storage being in underground reservoirs and aquifers. The majority of dams and water catchment areas are heavily silted because of upstream agricultural practices (e.g. ploughing every year for peanut production, and overgrazing which seriously affects ground cover). There is a need to introduce low-flow toilets through economic incentives to hotels and the owners of residential properties that will encourage the installation of water saving equipment. There is an urgent need to conduct further research on the impacts of climate change on the quality and quantity of water resources (surface and underground).
- There is insufficient data available on saltwater intrusion and how existing underground water resources may be affected by climate change. Several cases of saltwater intrusion into existing underground water supplies have been recorded, but these have most probably resulted from excessive pumping. In Carriacou all wells are situated within 150 meters of the coast, and on other islands the set back is as little as 100 feet. As a result, there is likely to be more problems experienced with saltwater intrusion as a result of climate change.
- Most of Grenada's human settlement occurs in coastal plains areas, and some

areas are under sea level (e.g. Grenville). Climate change and sea level rise would have a profound impact on human settlement, and would result in considerable loss of human settlement and recreational areas. It should also be noted that major infrastructure such as the international airport and the industrial park are in low-lying areas that are extremely vulnerable to damage from storm surges.

- Grenada has a vibrant artisanal fishery which is likely to be affected by climate change impacts. The coastal pelagic fishery utilizing beach seine nets is most likely to be affected which will have profound social and economic consequences since it provides the major source of food for Grenada. Impacts on the reef fishery will not be as serious in social and economic terms since there is lesser reliance on this fishery as a source of food. However, climate change is likely to result in coral bleaching and increased incidents of fish kills resulting from algae blooms which are caused by high nutrient levels in coastal waters combined with higher water temperatures and a reduction in freshwater infusion because of changes to ocean currents.
- Most hotels and tourism infrastructure are located in vulnerable coastal or beach areas. There is an urgent need to identify the impacts of climate change on such facilities, and develop appropriate intervention options to prevent the development of further facilities in vulnerable areas. The new Building Code establishes a series of set-backs, but these are generally not being enforced, in part because the Building Codes do not bind the State. It is recognized that the finance and insurance sectors could play an important part in facilitating the enforcement of the Building Codes. The OECS “model” building codes are the basis for the legislation that has been enacted, However, it is recognized that this model Building Code was not developed with climate change in mind and may need to be revised.
- Climate change is likely to result in increased incidents of vector borne diseases. There is a need to assess the impacts of climate change on human health and identify appropriate intervention options together with the implications on health service delivery. However, before an appropriate health policy can be developed to respond to climate change, there is a need to collect data and information that can serve to justify anticipated policy changes.
- Climate change may cause Grenada to investigate a different tourism “product” since sand and sea as a product may not be sustainable. The development of tourism infrastructure may need to focus on facilities that are not constructed on vulnerable beach areas. There are a number of large homes which are in a state of disrepair which, with upgrading, could form the basis for the promotion of “villa tourism”. Such facilities would require considerably less water resources for their upkeep and maintenance.
- Existing laws are sectoral in nature and fragmented, and have not been developed with adaptation to climate change as a consideration. There is no environmental

impact assessment process established by law, which is an urgent priority. Additionally, there is an urgent need to ensure that the consideration of climate change impacts constitutes an integral part of any environmental impact assessment process.

- The public at large needs to be actively involved in the development of the *National Climate Change Policy*, and for this purpose it is essential that the message on climate change be presented to civil society in a form that is easily understood and which focuses on their concerns and interests. NGO's and community groups will play an important part in any public awareness program.
- It is recognized that policy makers have to be sensitized on the urgent need to develop an integrated approach to climate change adaptation planning and management. It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. It was considered that the launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the Climate Change Committee would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan. However, the national focal point and members of the committee are considerably overworked, and do not have the resources to be able to commit any extra time to the development of the Issues Paper or the *National Climate Change Adaptation Policy* and Implementation Plan. A formal request would be made to the CPACC RPIU for support to retain a part time co-ordinator to facilitate work on the Issues Paper, and to oversee the public consultation process that would be established to develop the *National Climate Change Adaptation Policy* and Implementation Plan. It is foreseen that a "Climate Change Unit" may need to be established to facilitate the implementation of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) Concern was expressed over the need to ensure active "participation" in the development of the *National Climate Change Adaptation Policy* and Implementation Plan so as to ensure ownership and the effective implementation of the policy and action plan. While an extensive public participation process as undertaken to formulate the *Forestry Policy* would be preferred, it was considered that little value would be achieved from such an extensive process in view of the limited public knowledge about climate change impacts and adaptation options. Accordingly, it was considered that the policy document would best be developed by members of the Climate Change Committee with active participation from select stakeholders.
- (c) The Climate Change Committee would develop a work plan to develop and public education program to support the development of the *National Climate Change Adaptation Policy* and Implementation Plan and by the end of January 2001 submit to the CPACC RPIU a breakdown of the resources that will be required to support these initiatives. It is anticipated that resources would be required from CPACC to assist with the costs associated with the printing and disseminating the Draft Policy document, and facilitating the public consultation process.
- (d) The *National Communication*, and outputs from Component 6 (Vulnerability and Adaptation) would assist in the formulation of the Issues Paper. Work on finalizing the Issues Paper should be completed within the next few months. Thereafter, consultations with a variety of stakeholders

will be held to obtain input to the Issues Paper. These consultations should be completed by the end of January 2001.

- (e) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting could be held in February 2001 - comprising 2 half-day sessions. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Climate Change Committee would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (f) It is anticipated that the Climate Change Committee would review comments submitted during the public consultation process, and make any necessary changes to the draft Policy document.
- (g) Once the draft Policy Paper had been formulated, it is anticipated that the Climate Change Committee would undertake the development of an Implementation Plan.
- (h) It is anticipated that the draft policy paper and implementation Plan would be submitted to CPACC RPIU for review by a panel of technical experts. Comments arising from this technical review will be submitted to the Climate Change Committee for consideration.
- (i) It is anticipated that once agreement has been reached, the Climate Change Committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to Cabinet for review and eventual approval.
- (j) It is anticipated that assistance would be provided by CPACC to develop a "powerpoint" presentation and other materials that would assist in presentations to the Minister and other parliamentarians in order to obtain their support for the champion the development and implementation of the *Climate Change Adaptation Policy* and Implementation Plan. Additionally, it was considered that an Information Note should be forwarded to Cabinet to advise them of the proposed activities to be undertaken in the formulation of the *Climate Change Adaptation Policy* and Implementation Plan.

Annexure A

(See over)

Guyana

Date and Venue:

Thursday, 28th September 2000 - Conference Room, Environmental Protection Agency, IAST Building, University of Guyana, Georgetown.

Participants:

Per Bertilsson	- Executive Director, Environmental Protection Agency
Andrew Bishop	- Policy Co-ordinator, Ministry of Agriculture
Rovin Bhookindran	- Guyana Sea Defenses (Project Execution Unit)
Navin Chandarpal	- Presidential Adviser on Science and Technology
Verley Cordis	- Ministry of Agriculture
Ravita Diaram	- Environmental Protection Agency
Krishna Dhourei	- Guyana Forestry Commission
Paulimo Franklin-Arjoca	- Guyana Sewerage and Water Commission
Yasmin Gilmartin	- CPACC Media Group
Dilip Jaigopaul	- Chief Hydrometeorologist, Ministry of Agriculture
Forbes July	- Ministry of Foreign Affairs
Marlon Khan	- Climate Change Consultant
Dawn Maison	- Fisheries Department
Deborah Monrouth	- Ministry of Housing and Water
Joseph O'Lall	- Director, Guyana Energy Authority
Diridyan Permail (?)	- Permanent Secretary, Ministry of Agriculture
Zainool Rahaman	- Hydrometeorological Department
Linda Rutherford	- Chronicle Newspaper
Rajkumar Singh	- Environmental Protection Agency
Sandra Seeraj	- Conservation International Guyana (NGO)
Eilene Watson	- Guyana Geology and Mines Commission
Dr. U O D Trotz	- CPACC RPIU
Judi Clarke	- CPACC RPIU
Carlton James	- CPACC RPIU (Public Awareness)
Derrick Oderson	- CPACC RPIU
G. de Berdt Romilly	- CPACC RPIU

Agenda: See Annex A (Guyana)

Commentary:

The following comments were made during the meeting by various participants:

- X The agricultural sector is of considerable importance to Guyana, with the result that flooding and saltwater intrusion into fertile lands is seen as one of the most pressing problems caused by climate change.
- X It is anticipated that Component 4 of the CPACC project will assist in the identification of appropriate legal and institutional frameworks to address climate change.
- X The importance of building on ongoing initiatives was stressed. In this regard, the Guyana Climate Change Committee had been operating for a number of years and had fostered a good working association amongst various stakeholders working in the area of climate change. Additionally, the Integrated Coastal Zone Management Commission had been established in January 1999 and has developed a work plan for coastal zone management in Guyana. A large database on coastal resources had been developed to assist decision-makers in the planning process, and Guyana had been working with the CPACC RPIU on the aspect of vulnerability assessment. The Integrated Coastal Zone Management framework could address some aspects of climate change adaptation. A review of environmental legislation has been undertaken, although it does not highlight deficiencies in the legislative framework in relation to adaptation to climate change. An inventory of all environment and natural resource legislation currently exists. A *National Land Use Policy* and *National land-Use Plan* are now with cabinet and are expected to be approved in the near future. A *National Biodiversity Management Plan* has been developed, and the area devoted to national park is currently being expanded.
- X Flooding of fertile agricultural lands has exposed Guyana's vulnerability to the impacts of climate change.
- X It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation which could guide policy makers. The policy and implementation plan should identify resource constraints, and outline activities and actions which could be undertaken within existing resource capabilities.
- X Under Guyana's *National Communication* it was agreed that a Policy on Adaptation would be developed, and an outline of a proposed policy and action plan has been formulated which would address national priorities.
- X The *National Communication* has been forwarded to Cabinet and is expected to be approved in the near future.
- X It is recognized that the proposed policy and action plan contained in the *National Communication* does not adequately address legal, policy and institutional aspects relating to climate change - particularly relating to cross-sectoral responsibilities.

- X It was recognized that there is a need to develop a policy document to complement the *National Communication*.
- X It was considered that there was a need to review existing legal and institutional frameworks with a focus on climate change adaptation. Such a review should feed into the policy formulation process and result in the development of a *National Climate Change Adaptation Policy* and Implementation Plan.
- X It was considered that the *National Climate Change Adaptation Policy* and Implementation Plan should identify management options, and should include measures relating to disaster preparedness, flood management and flood insurance.
- X It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*.

Proposed Work-Plan:

- (a) It was agreed that the Climate Change Committee would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) The first step in the process would be a review of Guyana's *National Communication* by the CPACC Technical Team. This review would focus on identifying any deficiencies in the proposed policy and action plan that is contained in the *National Communication*, and would be completed in about 2 weeks.
- (c) Concurrently, a review would be undertaken of existing legal, policy and institutional frameworks with a focus on climate change adaptation. This review, which would be undertaken by a local consultant with resources provided by the CPACC RPIU, would take four weeks to complete.
- (d) Upon the completion of these two reviews, it is foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting could be held in December 2000 - comprising 2 half day sessions. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Climate Change Committee would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (e) Once the draft Policy Paper had been formulated, the Climate Change Committee would undertake the development of an Implementation Plan. The draft Policy and Implementation Plan would be subjected to public review and consultation.
- (f) The draft policy paper and implementation plan would be submitted to CPACC RPIU for review by a panel of technical experts. This process would require two weeks. Comments arising from this technical review will be submitted to the Climate Change Committee for consideration.
- (g) Once agreement has been reached, the Climate Change Committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to the Ministry of Agriculture for onward transmission to Cabinet for review and eventual approval.

Public Education and Awareness

- A program has been developed focusing on public awareness and education for climate change, and several training sessions have been convened at the community level.
- The Climate Change Committee will review the public awareness and education program outlined in the *National Communication*, to determine whether any changes may be required to accommodate the proposed work plan for Component 4. The Committee will also identify resources that may be required from the CPACC RPIU to undertake the public awareness program.
- The workplan and estimate of costs to implement the public awareness program will be forwarded to the CPACC RPIU within 30 days.

Annexure A

(See over)

Jamaica

Date and Venue:

Wednesday, 11th October 2000 – 7th Floor Boardroom, Ministry of Water and Housing, Kingston.

Thursday, 12th October, 2000 – 2nd Floor Conference Room, Natural Resources Conservation Authority (NRCA), Kingston.

Participants:

Leonie Barnaby	-	Senior Director, Ministry of Land and Environment
Philbert Brown	-	Emergency Management and Weather Services
Carol Excell	-	Legal Officer, Natural Resources Conservation Authority
Clifford Mahlung	-	National Meteorological Service
Franklin MacDonald	-	Executive Director, National Environment and Planning Agency
Ms. Mathis	-	Legal Counsel, Natural Resources Conservation Authority
Rainee Oliphant	-	Forestry Department
Dr. U O'D Trotz	-	CPACC RPIU
Dr. Leonard Nurse	-	CPACC RPIU
Rawleston Moore	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex 3

Commentary:

The following comments were made during the meetings by various participants:

- The Country Focal Point has prepared a Cabinet submission seeking the establishment of a Climate Change Secretariat. It is anticipated that the Secretariat and a National Climate Change Committee will be established in the near future. Letters seeking membership on the Committee have already been dispatched.
- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for its implementation. The challenge would be to create ownership for the final product so as to ensure that it will be implemented by successive administrations. It is considered that the Government should follow the “Green Paper/White Paper” process in view of the importance of climate change adaptation. The Natural Resources Conservation Authority (NRCA) has considerable experience in the formulation of a variety of Green/White Papers (e.g. *Towards a Watershed Policy for Jamaica*. (Green Paper No. 2/99), and *Policy for Jamaica’s System of Protected Areas*), and would take the lead in the development of the Green/White Paper process.

- It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. There is an urgent need to inform the public about climate change impacts. It is considered that public education and awareness on the impacts of climate change requires the greatest concentrated effort. The launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change.
- There is a need to review all national laws with a focus on climate change, in order to identify gaps, deficiencies and opportunities for improvement.
- There is an urgent need to articulate and communicate a clear message to parliamentarians on the importance of initiating urgent action on climate change, and the need to develop and implement a *National Climate Change Adaptation Policy*. In this regard, assistance from CPACC would be appreciated in order to develop materials for such a presentation.
- It is considered that there is a need to look at obtaining the input from the insurance and finance sectors since the matter of re-insurance for severe storm damage needs to be urgently addressed. An effective re-insurance regime to address increased damage resulting from climate change should be addressed in the *National Climate Change Adaptation Policy*.
- The impacts of climate change need to be understood by all members of society, and the sectoral approach to resource management and national/physical planning needs to be replaced by a more holistic and integrated approach if climate change adaptation is to become a reality.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the National Climate Change Committee and the Natural Resources Conservation Authority (NRCA) would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) The Climate Change Committee would undertake further work on the Issues Paper, with particular attention on identifying current and proposed policies, initiatives and legislation which are relevant to climate change adaptation planning and management. Short-term local consultancies may be required to undertake the review of laws, policies and institutional structures from a climate change perspective, and to complete work on the Issues Paper. The evaluation of legal, policy and institutional frameworks may need to be reviewed externally, with support provided by CPACC. Thereafter, the Committee would circulate the draft Issues Paper to various government agencies and departments to obtain their input and comments on any outstanding issues that should be included. It is anticipated that work on finalizing the “Issues Paper” will be completed by January 2001.

- (c) The Climate Change Committee would initiate work on the launch of the public consultation process. CPACC RPIU will assist in the development of presentation materials that will support the articulate and communicate a clear message to parliamentarians on the importance of initiating urgent action on climate change, and the need to develop and implement a *National Climate Change Adaptation Policy*. Materials for these presentations to parliamentarians will be developed by the end of November 2000, and it is anticipated that the CPACC RPIU may be called upon to assist with presentation to parliamentarians.
- (d) A public consultation process would be undertaken by the Climate Change Committee/NRCA to obtain input and comments on the Issues Paper.
- (e) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting should be held in April 2001- comprising 2 half-day sessions. These sessions would result in the formulation of a "Green Paper" that would be submitted for broad-based consultation. The draft Green Paper would be prepared and ready for public consultation in May-June 2001. Thereafter, the Climate Change Committee/NRCA would undertake an extensive public consultation process leading up to the development of a draft "White Paper".
- (f) Once the draft Policy Paper had been formulated, the Climate Change Committee/NRCA would undertake the development of an Implementation Plan.
- (g) It may be necessary to have the draft *Climate Change Adaptation Policy* and Implementation Plan submitted for Peer Review with input provided by technical experts convened by the CPACC RPIU. Once agreement on the document has been reached, it is foreseen that the NRCA/Climate Change Committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to the Ministry of Land and Environment for onward transmission to Cabinet for review and eventual approval.
- (h) The Climate Change Unit/NRCA are short of personnel, and may require resources (technical, financial and human) to facilitate the development of the *Climate Change Adaptation Policy* and Implementation Plan, and the public education and awareness program. The Climate Change Unit/NRCA will consult with other stakeholders concerning the implementation of Component 4, and will within 30 days, submit to the CPACC RPIU a detailed work-plan outlining specific resources (technical, financial and human) that will be required to facilitate the development of the *Climate Change Adaptation Policy* and Implementation Plan, and the public education and awareness program.
- (i) Given that the Environmental Management Authority (EMA)/Climate Change Committee in Trinidad and Tobago has developed a public education and awareness program on climate change, it was considered that this program could serve as a model for the region and that Trinidad and Tobago could be utilized as a resource center for similar programs.

St. Kitts and Nevis

Date and Venue:

Friday, 13th October 2000 – Bird Rock Beach Conference Room, Basseterre.

Participants:

Shawna Brisbane	-	Crown Counsel, Attorney General's Chambers
Graeme Browne	-	Physical Planning Division
Randolph Edmead	-	Lecturer, CFB College
Attlea Elliot	-	Teacher, Cayon High School
Jay Farier	-	Planning Unit
Teshelle Francis	-	Meteorologist, RL Bradshaw International Airport
Errol Finch	-	Carib Supply
Don Grant	-	Assistant Traffic Controller/Meteorologist, RL Bradshaw International Airport
Sam Heyliger	-	Fisheries Management Unit
George Morris	-	Nevis Water Department
Peter Ngunjiri	-	Government Public Relations Department, Nevis
Jamilia Samuel	-	Department of Tourism
Raymond Solomon	-	Director, Department of Environment
Nithal (?)	-	Department of Environment
Angela Walters	-	Planning Department, Nevis
Robert Warner	-	Assistant Manager, RL Bradshaw International Airport
Rajdaye Wynter	-	Meteorology Department
Llewellyn Wiltshire	-	Nevis Water Department
Dr. U O'D Troz	-	CPACC RPIU
Rawleston Moore	-	CPACC RPIU
Dr. Leonard Nurse	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex 3

Commentary:

The following comments were made during the meeting by various participants:

- A new *Town and Country Planning Act* has been prepared and is now with the House of Assembly. The new legislation will make environmental impact assessments (EIA's) compulsory for all new development activities, and will establish mechanisms whereby "set backs" can be established to prevent development in vulnerable coastal areas.
- It was considered that regional impacts of climate change on natural systems needs to be further studied, together with the impacts of natural phenomena (e.g. the volcanic eruptions on Montserrat and "Kick'em Jenny") on climate patterns.
- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for

implementation. Concern was expressed that it may not be possible to complete work on the development of the *National Climate Change Adaptation Policy* within the time frame left under the CPACC project. It was considered that CPACC should have a longer life to support countries in the development and implementation of the policy.

- The Department of Environment is currently involved in a number of initiatives (e.g. Coastal Zone Management project) that will assist in the formulation of the *National Climate Change Adaptation Policy*.
- Work on the *National Communication* has been started, and the work on the vulnerability assessment section should commence in November 2000, and be completed by January 2001. It is anticipated that the *National Communication* will not be finalized until November 2001, and it is intended that the “Issues Paper” and *National Climate Change Adaptation Policy* formulated under Component 4 will assist in the development of the “Vulnerability and Adaptation” section of the *National Communication*.
- It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. It was considered that the launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change.
- Economic instruments, financial considerations and public education are essential mechanisms to effect change so as to address the impacts of climate change.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the Climate Change Committee would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) Assistance from an external consultant funded by CPACC would be required in the formulation of the Issues Paper, and to co-ordinate the review of the document by members of the Climate Change Committee. It is anticipated that the Issues Paper would be complete by the end of January 2001.
- (c) The Climate Change Committee would undertake further work on the Issues Paper, with particular attention on identifying current and proposed policies, initiatives and legislation which are relevant to climate change adaptation planning and management. Thereafter, the Committee would circulate the draft Issues Paper to various government agencies and departments to obtain their input and comments on any outstanding issues that should be included.
- (d) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting should be held after mid-March 2001 - comprising 2 half-day sessions. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Climate Change Committee would undertake an extensive public consultation process leading up to the development of a draft Policy Paper. It is anticipated that the public consultation process would take 6 weeks to complete.

- (e) It is anticipated that resources would be required from CPACC to assist with the costs associated with printing and disseminating the Draft Policy document, and in facilitating the public consultation process.
- (f) The Climate Change Committee would review comments submitted during the public consultation process, and make any necessary changes to the draft Policy document.
- (g) Once the draft Policy Paper had been formulated, the Climate Change Committee would undertake the development of an Implementation Plan.
- (h) The draft policy paper and implementation Plan would be submitted to CPACC RPIU for review by a panel of technical experts. Comments arising from this technical review will be submitted to the Climate Change Committee for consideration.
- (i) Once agreement has been reached, the Climate Change Committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to the Permanent Secretary in the Ministry of Environment for onward transmission to the Minister and Cabinet for review and eventual approval. It is anticipated that the Final Draft *Climate Change Adaptation Policy* and Implementation Plan would be ready for submission to the Ministry of Environment by May 2001.
- (j) It was considered essential that the Minister of Environment champion the development and implementation of the *Climate Change Adaptation Policy* and Implementation Plan. Assistance would be provided by CPACC to develop a “powerpoint” presentation and other materials that would assist in presentations to the Minister and other parliamentarians in order to obtain their support for the champion the development and implementation of the *Climate Change Adaptation Policy* and Implementation Plan. It was considered that presentations under Component 4 of the CPACC project could be timed to coincide with presentations to be made under Component 8. Representatives from the CPACC RPIU may be required to attend and assist with the presentations to the Minister of Environment and parliamentarians. At least one month’s notice of the presentation date would be provided to the CPACC RPIU in order to permit adequate time for the development of presentation materials. Additionally, it was considered that an Information Note should be forwarded to cabinet to advise them of the proposed activities to be undertaken in the formulation of the *Climate Change Adaptation Policy* and Implementation Plan.
- (k) It was considered that presentations should be made to the insurance and finance industries and to the tourism sector to obtain their participation in national and regional adaptation initiatives. Presentations should target national and regional offices, and the CPACC RPIU should take the lead in coordinating further consultation with the insurance/finance and tourism sectors.

St. Lucia

Date and Venue

Tuesday, 17th October 2000 – Palm Tree Hotel Conference Room, Rodney Bay.

Participants:

Crispin D' Auvergne	- Sustainable Development and Environment, Ministry of Planning
Devon Barrow	- Ministry of Planning
Deborah Budhell	- Water Resources Management Unit, Ministry of Agriculture, Fisheries and Forestry
Cosmas Charles	- Environmental Health Department
Emelda Charles	- National Conservation Authority
Shermaine Chung	- Caribbean Environmental Health Institute (CEHI)
Julian Dubois	- Ministry of Community Development
Cornelius Edmund	- St. Lucia Electricity Services Limited
Caroline Eugene	- Program for Regularization of Unplanned Development, Ministry of Planning
Leon Ferrar	- Department of Fisheries
Esther Flippocytz	- Soufriere Marine Management Area
Anita James	- Water Resources Management Unit
Lorraine James	- Solid Waste Management Authority
Sema Jean	- Ministry of Planning
Lyndon John	- Forestry department
Laurianus Lesfloris	- Solid Waste Management Authority
Lesmond Maghoire	- Ministry of Labour
Jahto Mahal	- Ministry of Community Development
Marina Mathews	- Sir Arthur Lewis Community College
Peter Meyers	- Caribbean Agricultural Research Development Institute
Peter Murray	- Organization of Eastern Caribbean States Natural Resources Management Unit (OECS/NRMU)
Charmaine Nathaniel	- St. Lucia National Trust
Eftah Norbert	- St. Lucia Chamber of Commerce
Hilton Oculien	- Fire Service
Jeannine Rambally	- Department of Fisheries
Joanna Raynold	- Program for Regularization of Unplanned Development, Ministry of Planning
Herbert Regis	- Meteorological Office
Cheryl Regis	- Sir Arthur Lewis Community College
Michael Robb	- Forestry Department
Susanna Scott	- Department of Fisheries
Cuthbert St. Juste	- Ministry of Labour
Dr. U O'D Trotz	- CPACC RPIU
Judi Clarke	- CPACC RPIU
Dr. Leonard Nurse	- CPACC RPIU
G. de Berdt Romilly	- CPACC RPIU

Agenda: See Annex 3

Commentary:

The following comments were made during the meeting by various participants:

- A National Climate Change Committee has been established comprising 18 individuals from the public and private sector.
- The *National Communication* is currently being prepared.
- Extensive damage was sustained to the John Compton Dam in 1994 as a result of Tropical Storm Debbie. Cost of the damage and restoration work has been well documented and could serve to demonstrate the financial impacts associated with storm damage where initial design/construction has not taken into consideration anticipated changes in design criteria due to climate change impacts.
- It has been determined that human settlement continues to develop in vulnerable areas, including within the “Queens Chains” area and in flood plains.
- Rainfall records from private estates date back to the 1910’s and clearly demonstrate spatial variability in rainfall patterns, and highlight vulnerability of certain areas. A variety of temperature gauges have been gathering data for some time, and analysis of this data has identified a clear trend towards an increase in medium temperatures.
- In terms of human health impacts, it is anticipated that climate change will result in an increase in infections from vector-borne disease. Medical facilities can deal with this increase, but will need upgrading and additional resources. However, concern has been expressed about the human health impacts arising from water infrastructure that may be damaged during storms resulting in the contamination of drinking water. The more subtle impacts on human health arising from climate change (e.g. increase in rates of asthma) may not be readily discernable by the public, thereby making it difficult to mobilize public support for any policy changes that may be required. There is an urgent need to sensitize the public and media about these impacts from climate change, and a variety of systems of communication should be considered.
- It is anticipated that climate change will affect the country’s marine and terrestrial biodiversity which in turn will result in human and cultural impacts. Additionally, climate change impacts can exacerbate existing problems such as burning undertaken to clear agricultural lands.
- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation. In developing the *National Climate Change Policy* there is a need to look at national development in an holistic and integrated manner so as to ensure that all policies look at climate change impacts and responses. It is considered that climate change should not be a subset of the *National Development Plan* but rather should form an integral part of the national planning

framework.. It is essential that the land planning process integrates climate change, and for this reason the Development Control Authority (DCA) should actively participate in the development and implementation of the *National Climate Change Adaptation Policy*. Local government authorities should also be involved in the development of the policy since they will need to play a leading role in the implementation of the policy.

- It is recognized that interest in climate change continues to grow in all sectors of civil society, but that there is a need to sustain this interest through a systematic public education and awareness program and through “peer sensitization”.
- The full impacts of climate change upon the insurance/finance sector has not been fully appreciated or quantified. The region needs to involve this sector in adaptation planning to reduce the level of risk, and prevent any unnecessary increases in insurance or finance charges such as was experienced after Hurricane Andrew which caused extensive damage to Florida and resulted in an increase in insurance premiums throughout the Caribbean region to effectively pay for the huge insurance claims in the United States of America.
- It is recognized that the development of a *National Climate Change Adaptation Policy* could be used as a justification to mobilize policy makers and the public to undertake a number of activities that are required to achieve sustainable development and the sound management of natural resources.
- It is government’s objective to achieve a sustainable energy policy. A draft policy document has been prepared and is to be presented to government for approval.
- It is recognized that there is a need for increased monitoring of climate patterns. However, attention should also focus on the type of data and the manner it is presented so that increased emphasis can be placed on obtaining a sound basis for informed decision-making. It is considered that the absence of data on climate change or climate impacts should not prevent the public/private sectors from making sound choices aimed at managing or mitigating anticipated impacts. The “precautionary principle” should govern decision-making.
- It is considered that public education and awareness on climate change and adaptation requires special attention. The scientific literacy/education of the general public needs to be enhanced. A number of cultural barriers to scientific literacy exist. The launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change. However, the *National Climate Change Policy* needs to identify how cultural barriers to scientific literacy are to be changed or broken.
- In identifying appropriate intervention options for adapting to climate change, the temporal aspects of climate change impacts (i.e. changes over next 10, 20, 50 years) needs to be quantified leading to the formulation of appropriate and timely

management mechanisms.

- Greater understanding of traditional knowledge and skills needs to be acquired in order to identify whether traditional or historic practices may provide guidance when designing suitable climate change adaptation options.
- It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. The Department of Forestry has a public outreach program that could be utilized to assist with the formulation and implementation of the *National Climate Change Adaptation Policy*.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the Climate Change Committee would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan. As a first step in the process the Committee would develop a work plan and public education program and within 30 days submit to the CPACC RPIU a breakdown of the resources that will be required to support these initiatives.
- (b) The Country Focal Point would undertake further work on the Issues Paper, and then forward the draft document to members of the Climate Change Committee for review and comment. It is anticipated that work on the Issues Paper will be complete within 2 weeks.
- (c) Work is required on the identification of identifying gaps, overlaps or inconsistencies in current and proposed policies, initiatives and legislation which are relevant to climate change adaptation planning and management. In this regard, the Ministry of Planning is currently looking at undertaking an institutional review in the context of environmental management. This review is to be undertaken in November 2000 with support provided by the OECS NRMU under the CIDA funded ENCAPD project. It is considered that should CPACC be able to provide the small amount of additional funding required, the terms of reference for this review could be expanded to also look at the existing laws, policies and institutional structures from the perspective of climate change adaptation planning and management. This review needs to be undertaken prior to the articulation of policy options under the *National Climate Change Adaptation Policy* and Implementation Plan.
- (d) It is considered that a “participatory decision-making” process needs to be employed to develop the *National Climate Change Adaptation Policy*. The Climate Change Committee would initiate work on the launch of this process. CPACC RPIU will assist in the development of presentation materials that will articulate and communicate a clear message to parliamentarians and the political directorate on the importance of initiating urgent action on climate change, and the need to develop and implement a *National Climate Change Adaptation Policy*. Materials for these presentations to parliamentarians and the political directorate will be developed by the end of November 2000. The Climate Change Committee will make a presentation to Cabinet outlining the proposed consultation program that will lead to the formulation of the *National Climate Change Adaptation Policy*.
- (e) Materials for presentations to various sectors of civil society need to be prepared in order to launch the public education and awareness campaign in support of the development of the *National Climate Change Adaptation Policy*. This material needs to focus on special interests of select stakeholders, and should be tailored in a manner that will identify specific issues and concerns.

- (f) It is considered that the *National Climate Change Adaptation Policy* should be based on a “vision” with a clearly defined action-oriented strategy to achieve that vision. The policy paper should clearly establish the factual basis for action since too many policy documents exist which are not based on fact.
- (g) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting should be held in January 2001 - comprising 2 half-day sessions. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Climate Change Committee would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (h) Once the draft Policy Paper had been formulated, the Climate Change Committee would undertake the development of an Implementation Plan.
- (i) Once agreement has been reached, the Climate Change Committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to Cabinet for review and eventual approval.
- (j) It is anticipated that resources would be required from CPACC to assist with the costs associated with printing and disseminating the Draft Policy document, and in facilitating the public consultation process.
- (k) The CPACC RPIU would prepare a “collation” of issues and impacts from each of the Issues Papers prepared by the 12 participating countries in order to assist with prioritization and the identification of appropriate intervention options. The collation would be summarized under sectors (e.g. agriculture, health, fisheries, biodiversity, etc.).

Public Awareness and Education

St. Lucia seems well on their way with regard to public awareness on climate change issues. The Sustainable Development and Environmental Unit has already embarked on a program that goes into primary schools to speak about environmental issues as well as climate change. However, the aspect of the National Climate Change Adaptation Policy still needs to be included.

Public Awareness and Education Activities

- Community development officers should be used to implement public awareness at the community level.

Public Awareness and Education – Next Steps

- Focal point to select a committee to incorporate climate change issues as well as the policy into existing programs.

St. Vincent and the Grenadines

Date and Venue

Monday, 23rd October 2000 – Chamber of Industry and Commerce Boardroom, 3rd Floor, Corea Building, Kingston.

Participants:

Morrison Bauden	-	St. Vincent National Trust
Bentley Browne	-	Central Planning Division
Ashley Cain	-	St. Vincent Banana Growers Association
Decima Corea	-	Central Planning Division
Alwyn Curid	-	Ministry of Housing
Joel Jack	-	Department of Meteorology
Edmund Jackson	-	Ministry of Health and Environment
Maxwell John	-	Ministry of Agriculture and Labour
Arlene Keane-Browne-	Ministry of Education	
Rowena Kirby	-	Fisheries Division
Kevin Mandeville	-	Environmental Health Department
Cecil McKie	-	St. Hill Insurance Company
Dr. Reynold Murray	-	Ministry of Health and Environment
Cornelius Richards	-	Forestry Department
Dr. U O'D Trotz	-	CPACC RPIU
Rawleston Moore	-	CPACC RPIU
G. de Berdt Romilly	-	CPACC RPIU

Agenda: See Annex A (St. Vincent and the Grenadines)

Commentary:

The following comments were made during the meeting by various participants:

- The banking and insurance sectors have traditionally operated in absence of regard for climate change impacts, but there is a growing awareness of the need to manage risks and high costs associated with such impacts.
- The *National Communication* is now drafted and is shortly to be submitted to Cabinet. It is anticipated that it will be presented to the forthcoming Conference of the Parties to the UNFCCC in November 2000.
- No legislation specific to disaster management has been enacted, although CDERA has prepared “model” legislation which has not yet been adopted. The National Disaster Management Plan does not take into account climate change impacts, or attempt to identify areas that are vulnerable and which may need special attention under the Plan. At the national level, it is considered essential that a vulnerability assessment be undertaken to identify vulnerable areas so that appropriate response plans can be built in to the National Disaster Management Plan. Additionally, it is critical that institutional strengthening be provided to the

National Disaster Management Office in order that effective response can be achieved after severe climate events.

- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation. The Policy should identify which laws need to be amended or changed in order to adequately address climate change impacts.
- The issue of vulnerability to climate change impacts has now been highlighted in the 5 year *National Development Plan*. Further work needs to be undertaken on the identification and assessment of risks associated with climate change and the development of sound modeling capabilities as a basis for informed decision making on all planning activities.
- Most of physical development in the country occurs outside the formal approval process, with Government development activities being one of the principal areas of concern since national planning laws do not bind the State. The new *Town Planning Act* of 1992 imposes a legal requirement to conduct an environmental impact assessment (EIA) for all new development activities. However, inadequate enforcement effectively ensures that such assessments are never undertaken. Additionally, there are no building codes in effect. It is considered that adequate response to climate change cannot be undertaken unless these structures are in place. The high cost of not complying with these requirements has already been demonstrated. A case in point is where the government housing agency developed a low cost housing scheme in an area that was prone to slippage after heavy rain. The Government now has to pay out in excess of \$1.3 million to individuals who have lost their homes. In some cases property owners were paying mortgages in excess of two years after their homes were destroyed by storms.
- The last serious hurricanes to affect St. Vincent and the Grenadines were in 1898 and 1936, with the consequence that there is a national attitude that hurricanes will not happen again and there is no reason why extra-ordinary measures should be taken to mitigate or prevent damage from such climatic events. Consequently, it is difficult to get government to spend any extra money to ensure that buildings are built to withstand abnormal climatic events. The new cruise ship terminal is a case in point, and it was severely damaged as a result of storm surges from Hurricane Lenny. The country is suffering financially since the government refuses to make hard decisions which would reduce the risk of such costly damage being sustained if adherence to more stringent building requirements were formally established. Changes will only happen once the public is sensitized to the risks and costs associated with climate change impacts and pressure is exerted on the political directorate.
- Most of the people affected or at risk from climate change impacts are poor and are not aware of the complexities of the issues surrounding climate change and its impacts on civil society. It is considered that public education on climate change

issues needs to come before any significant movement will be possible in implementing any effective adaptation policy. The public at large needs to be actively involved in the development of the *National Climate Change Policy*, and for this purpose it is essential that the message on climate change be presented to civil society in a form that is easily understood and which focuses on their concerns and interests. NGO's and community groups will play an important part in any public awareness program.

- Climate change is an “island systems management” problem that affects areas other than the coastal zone. The “whole island as an ecosystem” needs to be the approach adopted in any integrated and holistic process for adaptation planning and management. The major question that needs to be resolved is how, in practical terms, is climate change incorporated into an integrated planning process.
- The insurance and finance sectors regard climate change as an insignificant factor at the present time, and they do not want to lose business by imposing any stringent requirements about “set backs” or compliance with building standards. There is currently a serious level of under-insurance within the country. There is a need to break the cycle (i.e. cost of financing>costs of insurance>compliance with building standards>lack of political will>costs of building>costs of financing, etc.) which effectively dictates against any short-term improvement.
- The full extent of the impacts on the agricultural sector have yet to be assessed and quantified. It is anticipated that climate change will impact food production, yield, food security, drought relief programs, and exacerbate other problems associated with the agricultural sector including soil erosion, land degradation and loss of fertility. Careful consideration needs to be given to appropriate intervention options since they could have serious impact on the country's ability to comply with environmental standards imposed by receiving markets, and result in trade restrictions or sanction under international trading agreements. As an example the response to increased drought conditions could be the introduction of drought resistant crops which would present concern under international agreements and national legislation in Europe governing genetically modified organisms. Natural response to decreased soil fertility would be an increase in the use of fertilizers which may result in violation of international regimes intended to control the use of environmentally harmful substances on produce intended for human consumption.
- Food security will become an important issue in responding to climate change impacts, and there is a need to develop seed banks containing seed varieties that are suitable for use in a variety of changing climatic conditions. Integrated pest management options may be frustrated by climate change impacts.
- The cost of irrigation and the impacts of water extraction on water resources could become a significant factor with changing climate patterns.

- Any change in forestry cover or forest biodiversity will have an impact on all other sectors in the country. Forest resources are very sensitive to changing climate patterns. The removal of indigenous forest species during clearing for human settlement or for agricultural development activities has caused micro-climates in cleared areas. These micro-climates are impacted by changing weather patterns, and it has been found that the introduction of exotic species is necessary to re-forest any such area. The continued introduction of exotic species will seriously impact the biodiversity of forest areas, and could affect the resilience of the country's forests. Additionally, climate change impacts are likely to affect water catchment areas and the volume or quality of water generated in such areas. Although a comprehensive watershed management program has been developed, there is a need to undertake a comprehensive inventory of all water resources and identify likely impacts arising from climate change.
- The fisheries sector does not have any formal policy to address climate change. Coral bleaching and harm to marine resources associated with climate change are concerns that have been expressed. The Grenadines have extensive coral reef areas that are important for cultural, social, environmental and economic reasons. A data base on marine water quality has been developed by the Fisheries Department, but no attempt has been made to accurately assess and quantify likely impacts on marine resources from climate change.
- Existing surface water resources appear to be diminishing – caused in part by changing climate patterns which exacerbate problems associated with increased demand for water and a concurrent loss of watersheds. Historically, a number of natural streams used to be used in times of water shortages, and there may be a need to revert back to such solutions if climate change impacts continue to impact surface water sources. A comprehensive Water Resources Management Plan is being developed with assistance from the European Union, and consideration should be given to ensure that it adequately addresses anticipated impacts from climate change.
- The Meteorological Office does not have an exhaustive database upon which sound decision-making on climate change adaptation options can be based. There is no developed weather service at the national level, and urgent consideration needs to be given to the institutional strengthening of the Meteorological Office so as to ensure that a sound basis is developed to assist in decision-making on climate change adaptation options.
- In terms of human health impacts, it is anticipated that climate change will result in an increase in infections from vector-borne disease. Concern has also been expressed about the human health impacts arising from water infrastructure that may be damaged during storms resulting in the contamination of drinking water. There is an urgent need to sensitize the public and media about the human health impacts associated with climate change.

- Although some public education and awareness on general environmental issues has been undertaken, there is a need for a more focussed campaign on climate change aimed at teachers and the whole student body. It is considered that climate change should be part of the formal school curriculum. An extensive and wide-ranging public education and awareness campaign on climate change needs to be established. Climate change needs to be “packaged” for teachers if it is to be taught in schools, and a curriculum module should be developed.
- Although a National Climate Change Committee has not been established, work on climate change issues is undertaken by the Environmental Advisory Board.
- It is recognized that policy makers have to be sensitized on the urgent need to develop an integrated approach to climate change adaptation planning and management. It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*. It was considered that the launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the Environmental Advisory Board would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) Work on finalizing the Issues Paper should be completed within the next few weeks with particular attention being focused on identifying current and proposed policies, initiatives and legislation which are relevant to climate change adaptation planning and management. Thereafter, consultations with a variety of focus groups will be held to obtain input to the Issues Paper. These consultations should be completed by the end of 2000.
- (c) The Environmental Advisory Board would develop a work plan and public education program and within 30 days submit to the CPACC RPIU a breakdown of the resources that will be required to support these initiatives. It is anticipated that resources would be required from CPACC to assist with the costs associated with the printing and disseminating the Draft Policy document, and facilitating the public consultation process.
- (d) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting could be held in January 2001 - comprising 2 half-day sessions. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, the Environmental Advisory Board would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (e) The Environmental Advisory Board would review comments submitted during the public consultation process, and make any necessary changes to the draft Policy document.
- (f) Once the draft Policy Paper had been formulated, it is anticipated that the Environmental Advisory Board would undertake the development of an Implementation Plan.

- (g) It is anticipated that the draft policy paper and implementation Plan would be submitted to CPACC RPIU for review by a panel of technical experts. Comments arising from this technical review will be submitted to the Environmental Advisory Board for consideration.
- (h) It is anticipated that once agreement has been reached, the Environmental Advisory Board shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to the Ministry for Health and Environment for onward transmission to Cabinet for review and eventual approval. It is anticipated that the Final Draft *Climate Change Adaptation Policy* and Implementation Plan would be ready for submission to Cabinet towards then end of 2001.
- (i) Assistance would be provided by CPACC to develop a “powerpoint” presentation and other materials that would assist in presentations to the Minister and other parliamentarians in order to obtain their support for the champion the development and implementation of the *Climate Change Adaptation Policy* and Implementation Plan. Additionally, it was considered that an Information Note should be forwarded to Cabinet to advise them of the proposed activities to be undertaken in the formulation of the *Climate Change Adaptation Policy* and Implementation Plan.
- (j) In order to establish a formal training program on climate change in schools CPACC should coordinate and facilitate a regional workshop for teachers and educators to assist in the development of training tools and an appropriate module.

Annexure A

(See over)

Trinidad and Tobago

Date and Venue:

Wednesday, 27th September 2000 - 16th Floor Conference Room, Ministry of Environment, Government Buildings, Port of Spain.

Participants:

Andrew Coleman	- Interim National Physical Planning Commission (INPPC)
David Gajadhar	- Ministry of Public Utilities
Gail George	- Ministry of Energy and Energy Industries
Lisa James	- Ministry of Environment
Gillian John	- Department of Environment and Natural Resources, Tobago House of Assembly
Kishan Kumarsingh	- Environmental Management Agency (EMA)
Sharon Laurent	- Environmental Management Agency (EMA)
Ranjit Maysingh	- Ministry of Works and Transport (MOWT)
Deenesh Pirsad	- Point Lisas Industrial Park Development Corporation (PLIPDECO)
Andrew Plunkett	- Interim National Physical Planning Commission (INPPC)
Arthur Potts	- Department of Marine Resources and Fisheries, Tobago House of Assembly
Denise Prescott	- Ministry of Works and Transport (MOWT)
Kesraj Seegobin	- Auditor General's Department
Wayne Quintal	- Environmental Unit, Ministry of Works and Transport (MOWT)
Col. David Williams	- National Emergency Management Agency
Hugh Wilson	- Ministry of Agriculture
Dr. U O'D Trotz	- CPACC RPIU
Judi Clarke	- CPACC RPIU
Derrick Oderson	- CPACC RPIU
G. de Berdt Romilly	- CPACC RPIU

Agenda: See Annex 3

Commentary:

The following comments were made during the meeting by various participants:

- The launching of Component 4 under the CPACC project presents an ideal opportunity to launch an extensive public awareness campaign on climate change.
- Currently, there are no tools in existence to assist decision-makers with beach front development applications, and it was considered that a *National Climate Change Adaptation Policy* would provide direction and guiding principles.
- Existing legislation (e.g. the *Three Chains Act*) had been invaluable in establishing a 180 feet buffer zone along the shoreline to control development in this area. Such legislation could be useful in establishing controls on shore front

development which may be necessary to respond to anticipated impacts from climate change.

- Economic instruments, financial considerations and public education are essential mechanisms to effect change so as to address the impacts of climate change.
- It was considered that the environmental impact assessment process should be more closely tied to the engineering design stage of development planning so that improved design/engineering standards that address concerns about climate change can be fully integrated into project design.
- It was considered that further work needed to be done on the Issues Paper, and attention needed to be placed on identifying current and proposed policies, initiatives and legislation which are relevant to climate change adaptation planning and management.
- It was agreed that there was a need to develop a *National Climate Change Adaptation Policy* that would outline intervention options and an action plan for implementation. It was considered that a formal part of the policy should be an evaluation of socio/economic effects and impacts of the policy.
- It was considered that obtaining support, consensus and buy-in from the public/private sectors is an essential part of the process to develop the *National Climate Change Adaptation Policy*.

Development of Climate Change Adaptation Policy - Proposed Work-Plan:

- (a) It was agreed that the Climate Change Committee / EMA would co-ordinate the development of the *National Climate Change Adaptation Policy* and Implementation Plan.
- (b) The Climate Change Committee would undertake further work on the Issues Paper, with particular attention on identifying current and proposed policies, initiatives and legislation which are relevant to climate change adaptation planning and management. Thereafter, the Committee would circulate the draft Issues Paper to various government agencies and departments to obtain their input and comments on any outstanding issues that should be included. This process would be completed in three weeks.
- (c) The Climate Change Committee would review comments submitted by government departments and agencies, and make any necessary changes to the Issues Paper. This task would take two weeks.
- (d) The Climate Change Committee would initiate work on the launch of the public consultation process. A period of two weeks will be required to plan for the launch of the consultation process.
- (e) A public consultation process would be undertaken by the Climate change committee to obtain input and comments on the Issues Paper. This initial public consultation process would require four weeks.
- (f) The Climate Change Committee would review comments arising from the public consultation, and make any necessary changes to the Issues Paper. This task would take two weeks.

- (g) It was foreseen that a technical meeting would be needed to facilitate discussion on intervention options and discuss proposed management mechanisms. This technical meeting should be held in November or December 2000 - comprising 2 half-day sessions. These sessions would result in the formulation of a Position Paper that would be submitted for broad-based consultation. Thereafter, over a period of 8 weeks the Climate Change Committee would undertake an extensive public consultation process leading up to the development of a draft Policy Paper.
- (h) Once the draft Policy Paper had been formulated, the Climate Change Committee would undertake the development of an Implementation Plan. This process would require two weeks for consultations.
- (i) The draft policy paper and implementation Plan would be submitted to CPACC RPIU for review by a panel of technical experts. This process would require two weeks. Comments arising from this technical review will be submitted to the Climate Change Committee for consideration.
- (j) Once agreement has been reached, the Climate Change committee shall submit the Final Draft *Climate Change Adaptation Policy* and Implementation Plan to the Ministry of Environment for onward transmission to Cabinet for review and eventual approval.
- (k) The sub-committee which developed the *Climate Change Public Awareness Campaign 2000-2002* would review the document and the proposed work plan outlined to develop the *Climate Change Adaptation Policy* to determine whether any amendments may be required to the public awareness campaign to support activities under Component 4 of the CPACC project.
- (l) The Climate Change Committee will initiate work on the development of a public education program on climate change.

Public Awareness and Education

A brief outline was given concerning the areas are to be covered by the public awareness programme for Component 4. The programme was conceptualized in two phases: the first would address the general public on general climate change issues, and the second would target specific aspects of society (socioeconomic sectors), and in doing so, highlight the *National Climate Change Adaptation Policy and Action Plan*. The floor was then opened for discussion.

Kishan Kumarsingh (CPACC Focal Point from the EMA), indicated that Trinidad & Tobago had already developed a public awareness programme for issues concerning global warming, climate change and sea level rise. This programme is outlined in a document (*Climate Change Public Awareness Programme – 2000-2002*) developed by the Sub-committee to the Working Group to determine the Implications of Global Warming, Climate Change and Sea Level Rise.

The programme, executed by the Environmental Management Authority (EMA) utilizes the mass media and is directed mainly at school children. It was concluded that, given the existing and successful programme, the only amendment would be the inclusion of the *National Climate Change Adaptation Policy and Action Plan* under Component 4 of CPACC project.

It was indicated that one should be mindful of ‘public fatigue’ as it is likely to overwhelm the public with information, and likely to result in apathy. A concern was also expressed about communication techniques for various groups. It was agreed that tailoring the programme is imperative to ensure public participation and hence a successful campaign.

Proposed Public Awareness and Education Activities

- **In light of the fact the General Elections will be held in Trinidad and Tobago in the 6 –7 months, it was suggested that this time be spent in “selling” the policy to candidates as they are currently in the process of preparing their manifestos.**
- **The EMA is currently liaising with the Ministry of Education on the matter of formal education addressing climate change issues.**
- **Training of teachers – needs to be addressed with a formal program.**

Public Awareness Committee

- **A committee, comprising some of the members of the National Climate Change Committee had already been setup. A list of the members is currently not available.**

Public Awareness and Education - Next Steps

- The Public Awareness Committee will review the proposed work plan to see where and how public awareness and education can be included (in terms of outputs at particular times for particular audiences). The committee will also review the current public awareness strategy and incorporate the development and implementation of the *National Climate Change Adaptation Policy and Action Plan* into the work program.

Section 3.

3.0 Workplan for Component 4

3.1 Project Objectives

The overall objective of Component 4 is the development of a policy framework that will facilitate integrated planning and management for cost effective response and adaptation to the impacts of global climate change, within the twelve participating Caribbean countries. This section of the report outlines the proposed methodology relating to the technical implementation of Component 4 of the CPACC project that has been agreed during the Inception Mission to each participating country.

3.2 Development of Policy and Strategy at National Level

As highlighted in the *Technical Implementation Proposal* for Component 4, the participating Caribbean countries will be assisted in their efforts to establish a number of management mechanisms for integrated adaptation planning and management to become a reality. Clearly, each of these mechanisms cannot be established concurrently, and in almost all instances considerable resources (human, technical, financial) will be required to establish the policy, legal and institutional structures that are necessary to give effect to these mechanisms. Most importantly, the implementation of appropriate management mechanisms needs to be achieved in a strategic manner which recognizes existing conditions and restraints. It must be recognized that Component 4 of the CPACC project is the first step in a very long and constantly evolving process of adaptation to climate change, and all expectations and outputs from this component should be placed in such a context. Accordingly, it has been agreed that the limited resources that are available under Component 4 of the CPACC project should best be utilized in assisting each participating Caribbean country with the formulation of a *National Climate Change Adaptation Policy* which will serve as the foundation to facilitate integrated planning and management for cost effective response and adaptation to the impacts of global climate change.

3.3 Proposed Methodology

The proposed methodology for implementing Component 4 of the CPACC project was discussed during the Inception Mission at stakeholder meetings that were convened in each country, as summarized in Section 2 of this report. The proposed methodology that has been agreed is outlined in this section.

It is understood that the project co-ordinating committee that has been established in each participating country will embark upon an extensive consultative process to facilitate the development and subsequent approval (by government and the public at large) of the *National Climate Change Adaptation Policy* and Implementation Strategy. The methodology outlined below summarizes specific activities that will be undertaken in the process to develop these policy documents.

(a) *Preparation of Work Plan*

In those countries where it was not possible to conclude discussions on a workplan to implement Component 4, the Country Focal Point in consultation with the Climate Change Committee will develop a detailed work plan outlining activities that shall be undertaken to develop the *National Climate Change Adaptation Policy* and Implementation Plan. These workplans shall identify resources required from the CPACC RPIU to undertake specific activities to implement Component 4, and shall be submitted to the CPACC RPIU within 30 days of the Inception Mission.

(b) *Completion of Issues Paper*

Those countries that have not completed work on the Issues Paper will undertake further consultation to facilitate the finalization of these documents.

(c) *Institutional, Legal and Policy Review*

As a preliminary step in completing the Issues Papers, some countries have requested assistance in undertaking a review of existing policy, legal and institutional structures

from the perspective of climate change adaptation planning and management. In most instances a short-term local consultancy may be required to undertake this review of laws, policies and institutional structures from a climate change perspective. In certain instances the evaluation of legal, policy and institutional frameworks may need to be reviewed externally, with support provided by CPACC PRIU.

(d) Development of Presentation Materials for Political Directorate

Assistance would be provided by CPACC RPIU to develop a “powerpoint” presentation and other materials that would assist in presentations to the political directorate in various participating countries in order to obtain their support for the development and implementation of the *Climate Change Adaptation Policy* and Implementation Plan. Representatives from the CPACC RPIU may be required to attend and assist with the presentations to appropriate Ministers and parliamentarians. At least one month’s notice of the presentation date would be provided to the CPACC RPIU in order to permit adequate time for the development of presentation materials. Additionally, it was considered that an Information Note (see Annex 8) should be forwarded to Cabinet to advise them of the proposed activities to be undertaken in the formulation of the *Climate Change Adaptation Policy* and Implementation Plan.

(e) Launch of Public Education and Awareness Program

Each country shall undertake an extensive public education and awareness program in support of the development of the *National Climate Change Adaptation Policy* and Implementation Plan. Additionally, it is considered that presentations should be made to the insurance and finance industries, to educators and teachers, and to the tourism sector to obtain their participation in national and regional adaptation initiatives. Presentations should target national and regional offices, and the CPACC RPIU should take the lead in coordinating further consultation with the insurance/finance and tourism sectors, and with teachers/educators.

(f) Technical Meeting

In December 2000 and January 2001, the project team shall return to convene a two day meeting with the project coordinating committee and other stakeholders. This two day meeting shall focus on:

- (a) a critical review of the AIssues Paper≡ (day 1) during which comment arising from the consultation process shall be evaluated;
- (b) the identification of appropriate interventions to address identified issues (day 2).

Drawing upon the evaluation of appropriate management mechanisms outlined in this report, the project team shall assist the project coordinating committee and other stakeholders in the evaluation and identification of appropriate strategies for climate change adaptation planning and management.

(g) Development of APosition Paper≡

Upon completing the technical meeting, the project team shall assist the coordinating committee in each country to prepare reports which shall summarize the outcomes from the two day meeting with stakeholders. Specifically, each report shall contain a APosition Paper≡ presented in a format that can be circulated for review and comment to the project co-ordinating committee and other stakeholders. The Position Paper shall:

- (a) identify relevant climate change adaptation issues in the context of each country, presenting an overview of relevant social, economic, environmental and institutional aspects (drawn from revised Issues Paper); and
- (b) identify potential strategies and management mechanisms for climate change adaptation planning and management (drawn from the two-day technical meeting).

The paper is intended to serve as a mechanism to facilitate the evaluation and testing of identified potential strategies and management mechanisms which, once reviewed (and revised as appropriate) will constitute the basis for action at the national level. The strategies and management mechanisms will include an outline of specific actions that need to be undertaken (by public and private sector) and policy, legal, and institutional aspects that need to be addressed.

It is foreseen that the project co-ordinating committee in each participating country will facilitate the review of the APosition Paper≡ through an extensive consultative process. With this in mind, the APosition Paper≡ shall be presented in a format suitable for use in the consultation process.

(h) Development of Draft Policy and Strategy

After the Position Paper has been circulated and reviewed within each country, the project team shall assist the project coordinating committee in developing the first draft text of the *National Climate Change Adaptation Policy* and Implementation Strategy.

Its is foreseen that first draft text of the *National Climate Change Adaptation Policy* and Implementation Strategy will:

- (i) Where possible, identify anticipated changes to local and regional climate patterns in the short, medium and long term (drawing upon scientific evaluations undertaken in support of CPACC project activities);
- (ii) Outline anticipated impacts from anticipated local and regional climate patterns (drawing from the CPACC vulnerability and risk assessment program);
- (iii) Identify activities and areas that are vulnerable, or at risk or that may be affected by anticipated local and regional climate patterns (drawing from the AIssues Paper≡ and the CPACC inventory of coastal resources, the coral reef monitoring program and the coastal vulnerability and risk assessment program);
- (iv) Outline appropriate adaptation planning and management strategies for addressing anticipated climate change impacts in the short, medium and long term (drawing from the technical meeting and the APosition Paper≡);
- (v) Define the implementation plan to give effect to the appropriate adaptation planning and management strategies, including time frames for implementation (drawing from the technical meeting and the APosition Paper≡);
- (vi) Identify activities that should be undertaken at the regional level to support and complement the national policy and implementation plans (see section 3.4. below);
- (vii) Identify the legal, institutional and financial mechanism that will be established to:
 - X give effect to the Policy and implementation plan (drawing from the technical review and the APosition Paper≡); and
 - X coordinate national and regional climate change adaptation activities (see section 3.4. below);
- (viii) Outline the process whereby the *National Climate Change Adaptation Policy* will be kept under regular and periodic review (possibly every 5 to 10 years) in order to accommodate changing climate patterns and local circumstances.

It is foreseen that the project co-ordinating committee in each participating country will facilitate the review of the draft Policy and Strategy through an extensive consultative process. With this in mind, the first draft text of the *National Climate Change Adaptation Policy* and Implementation Plan will be presented in a format suitable for use in the consultation process.

(i) Review of Draft Policy and Strategy

After the first draft text of the *National Climate Change Adaptation Policy* and Implementation Plan has been circulated and reviewed within each country the project team shall, where required, provide assistance to the project coordinating committee in undertaking a “peer review” of the documents by a group of technical experts. Comments arising from this technical review will be submitted to the Climate Change Committee and the CPACC Country Focal Point for consideration.

(j) Preparation of Final Policy

The project team shall, where required, provide assistance to the project coordinating committee in:

- (a) revising the documents as necessary, and preparing the final text of the *National Climate Change Adaptation Policy* and Implementation Plan;

- (b) preparing any documents that may be required to facilitate the submission of the *National Climate Change Adaptation Policy* and Implementation Plan to the highest level of government for consideration and eventual approval.

It is not anticipated that country visits by the project team shall be required to undertake this task.

3.3.1. Project Costs

In addition to support for the work program outlined above, it is anticipated that resources would be required from CPACC RPIU to assist with the costs associated with:

- (i) undertaking the legal, policy and institutional review;
- (ii) providing national committees with short-term technical and administrative support;
- (iii) printing and disseminating the Draft Policy document;
- (iv) facilitating the public consultation process;
- (iv) implementing the public education and awareness program.

3.4. Development of Regional Policy and Strategy

It is recognized that during the formulation of a *National Climate Change Adaptation Policy* and Implementation Plan, each participating country will identify certain activities and actions that cannot be undertaken in isolation and which require regional support or a regional approach in order to effectively address specific issues. Accordingly, it is intended that a *Regional Climate Change Adaptation Policy* and Implementation Strategy be formulated to complement and support (where necessary) national policies and action programs.

3.4.1. Proposed Methodology

With the support of the participating countries, the CPACC Regional Project Management Unit shall work with the team of technical experts to assist participating countries in the formulation of a *Regional Climate Change Adaptation Policy* and Implementation Strategy.

The process shall be initiated by a Regional Seminar convened by the CPACC Project Management Unit in association with the OECS NRMU, the OAS Caribbean Disaster Mitigation Project, CDERA and other regional inter-governmental environmental agencies and project offices. It is anticipated that this seminar will be convened once the APosition Papers[≡] have been developed in each participating country whereby activities required at the regional level will have already been identified to some extent. The purpose of the seminar shall be to:

- (a) review material that shall be circulated relating to regional climate change initiatives or activities and other regional environmental initiatives that may impact upon climate change activities and programs;
- (b) discuss the recommendations relating to regional activities and issues arising from country APosition Papers[≡];
- (c) identifying appropriate regional climate change adaptation issues and pertinent adaptation planning and management mechanisms at the regional level which can complement and support national climate change adaptation policies and strategies and which are not currently provided under the CPACC project;
- (d) identify the nature of activities (legal, institutional, etc.) that will be necessary for the formulation of a *Regional Climate Change Adaptation Policy* and Implementation Strategy.

The CPACC Regional Project Management Unit and the project team shall prepare a report which will summarize the outcomes from the Regional Seminar. It is foreseen that the CPACC Project Management Unit will embark upon an extensive consultative process to facilitate the development and subsequent approval by participating Caribbean countries of the *Regional Climate Change Adaptation Policy* and Implementation Strategy. Where necessary, subsequent meetings will be convened with the international donor community to seek their participation and involvement in any initiatives outlined in the regional

policy and strategy which cannot be implemented by countries in the region without outside technical or financial support.

3.5. Implementation Program

An implementation plan for the development of the national and regional climate change adaptation policies is presented below.

Figure 3.1. – Work-plan

(Chart to be inserted)

COMPONENT 4: SCHEDULE OF ACTIVITES

	←	Sep. 2000	Oct. 2000	Nov. 2000	Dec. 2000	Jan. 2001	Feb. 2001	Mar. 2001	Apr. 2001	May 2001	Jun. 2001	Jul. 2001	Aug. 2001
Antigua & Barbuda			B(20)	D C		G	H I		J		LN?	M?	
Bahamas	A		B(9)	?	?	?	?	?	?	?	?N?	?	?
Barbados	A	B(26)		F D	C	H G K	J				N?		
Belize	A			B(6) F	C D	H	I G	J	K L		N?		
Dominica			B(16)	D F		G	I H		J L	M	N?		
Grenada	A		B(24)			CFH	G	I L	J	M	N?		
Guyana	A	B(28)			G	H I	J				N?		
Jamaica			B(11)	C	E	D			G	H J	K LN?		
St. Lucia	A		B(17)	C D E		G J	H				N?		
St. Kitts & Nevis	A		B(13)		E	D		G	H I	J M	N?		
St. Vincent & the Grenadines	A		B(23)	B D		G	H I	J			LN?		M?
Trinidad & Tobago	A	B(27)		D	G		H I	J L		M L	N?		

Key:

- A. Establish Climate Change Committee
- B. Inception Mission
- C. Preparation of a work plan
- D. Completion of Issues Paper
- E. Legal, Institutional and Policy Review
- F. Launch of public awareness and education campaign
- G. Technical meeting
- H. Public consultations
- I. Review of comments from public consultations
- J. Development of Draft Policy and Strategy
- K. Peer review of Draft Policy and Strategy
- L. Implementation plan developed
- M. Final draft policy and Implementation plan submitted to Minister and Cabinet
- N. Workshop to develop Regional Policy

NB:

- *(#): gives the date the activity has been or is due to be carried out.
- ← : Activity carried out prior to September 2000.
- For more details on country commitments, see summary reports.