

**DRAFT**

**SUMMARY REPORT  
ECACC PROJECT LAUNCH**

**8 - 10 NOVEMBER, 2007  
GEORGETOWN, GRAND CAYMAN**

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**1. Background information**

**a. The Caribbean Community Climate Change Centre (CCCCC)**

The Executive Director of the CCCCC gave a brief overview on the mandate and role of the Centre as a CARICOM Institution, the details of which are summarized in Annex 1. Key activities of the Centre applicable to the ECACC (ENHANCING CAPACITY FOR ADAPTATION TO CLIMATE CHANGE) project were highlighted. These include:

- i. Outputs from its regional climate modelling
- ii. The Clearinghouse
- iii. The Training programme

**b. The National circumstance of each participating country**

Presentations on the National circumstance were made by each participating country. The materials presented formed the basis for subsequent discussions in the development of both the national and regional work plan.

**c. Overview of the MACC Project**

A summary of the MACC project programme was presented which served to provide areas of activities for consideration under the ECACC project. Annex 2 gives the details of the presentation.

**2. Possible Activities for the ECACC Project**

Five areas of activities were discussed and are listed below:

- i. Regional Climate Monitoring activities
- ii. Climate Change Scenarios and Impact Studies as a means of providing information to policy makers.
- iii. Vulnerability Assessments
- iv. Adaptation Strategies
- v. National Climate Change Policies.

### **3. Highlights of the discussions**

#### **a. Monitoring activity**

- i. Need to improve and/or expand existing meteorological and climate monitoring stations.
- ii. Cayman and TCI regions identified as areas where more data are required.
- iii. The need to have a central repository for data that is accessible to all of the Overseas Territories. The Centre's Clearing House was identified to serve such a function.
- iv. The ICON station to be installed in Little Cayman was identified as similar to the MACC project CREWS station in Discovery Bay Jamaica.
- v. It was noted that reef monitoring activities are already being carried out in many of the Overseas Territories. However, a need for an integrated regional depository of the collected data and its analysis was identified. Again the CCCCC's Clearinghouse was identified to carry out this function.
- vi. A comprehensive review of all monitoring being done was recommended in order to identify gaps both national and regional.

#### **b. Research and Publication in the region**

- i. The lack of peer-reviewed literature on the state of Caribbean reefs was noted.
- ii. It was also noted that coral reef and water quality monitoring data are often treated as proprietary by individual countries.
- iii. Identification of the key parameters of interest for climate change discussion and that sight of existing monitoring networks should not be overlooked such as the Association of Marine Labs of the Caribbean, CARICOMP, and NOAA's coral bleaching network.

#### **c. Climate Change Scenarios**

- i. The Met Offices have been identified as critical partners for in the training session in one of the Territories in generating climate change scenarios.
- ii. It was noted that the Cayman Met Service has been using the TAOS storm surge model with 90m resolution.

- iii. It was noted that in most cases both the bathymetric and near coast topographic data lack the resolution for accurate prediction by the TAOS storm surge model.

#### **d. Vulnerability Assessments**

- i. The following sectors were identified as most vulnerable to climate change and for which vulnerability assessment should be conducted:
  - 1. Water
  - 2. Agriculture
  - 3. Tourism
- ii. The vulnerability assessment is expected to reveal issues to be addressed. The methodology developed by NOAA (which includes social factors, economic issues, livelihoods etc.) is identified as a tool that can be used in the assessment.
- iii. Pilots should be conducted in region on three sectors identified as vulnerable. Since tourism is a dominant sector in all the territories, a multi-disciplinary team from the OT's could be utilise to carry out the assessments. Further that it be used as the pilot project from a regional perspective then each territory can continue to look at other sectors identified above, utilising methodology.
- iv. The importance of the other sectors was highlighted. The Agriculture sector, normally, would not be considered as important in the UKOT's. However, it was noted that as a **food security issue** it was identified as important for consideration. Issues connected with food security include impact of climate change on agriculture in countries from which we import foods, impact of shift towards bio-fuel crops etc.

Water resources and energy security were identified as two other very important vulnerabilities for the UKOT's.

#### **e. Public Education and Outreach**

A number of approaches to address the issue of public education and outreach were identified.

- i. Countries which have the facilities to develop outreach materials should share with other countries. JNCC project on outreach material development for UKOT's highlighted.
- ii. Decide on a national message so that all agencies can integrate climate change consideration in their separate presentations and thereby reinforce message. Consistency and credibility of message important but message will need to be packaged differently for different audiences.
- iii. Need a community champion – someone respected in the community and who can get the message across to the average person.
- iv. Public education and outreach needs to be at core of all of our activities. Identify existing methods and mechanisms for communication and insinuate Climate Change messages into these.
- v. The use of multi-media tools like a DVD which can be used across the region.
- vi. Produce Calypso on Climate Change
- vii. Have to balance “doom and gloom message” with adaptation messages – messages need to be personal.
- viii. Cayman's insurance sector highlighted as possibility for engagement on regional issues.
- ix. Promotion of new insurance products on the market eg such as Parametric insurance where payment becomes automatic once winds reach a certain intensity, and the UK insurance scheme that dives credit to businesses who climate proof ventures etc.
- x. Need to look at insurance that creates some type of social safety-net for nations poor. Low-income-housing. Consider Self-insurance schemes – Barbados Light and Power created fund that is now non-taxable – required legal changes.

#### **4. Going Forward**

The go forward steps and local requirements for the implementation of the ECACC project are given in Annex 3 and Annex 4 respectively.

## Annex 1

### THE CARIBBEAN COMMUNITY CLIMATE CHANGE CENTRE INCEPTION TO OPERATION - A BRIEF OVERVIEW

#### 1. The Genesis of the Climate Change Centre

The CARICOM Heads at their annual meeting in July 2002 recognized the vulnerability of the region's sustainable development to the projected impacts of climate change and climate variability. As a result endorsed the creation of the Climate Change Centre with a mandate to coordinate the regional response to climate change and its efforts to manage and adapt to its projected impacts.

#### 2. Its Operational Status

The Centre commenced limited operations in January 2004 with the appointment of a Director. It became fully operational in July 2005 through supporting grants from the host country Belize and the Governments of Barbados and Italy. The current staff is comprised of five (5) Technical and eleven (11) Financial and Administrative supporting personnel. It is located in the City of Belmopan, Belize



Figure 1 Building housing the offices of the Climate Change Centre

### **3. Legal Status and Governance**

The Centre possesses full juridical personality. It is a CARICOM specialized agency with an independent management that is guided by

- The CARICOM Council of Trade and Economic Development (COTED) on policy matters
- A board of directors with responsibility for strategic planning
- A technical secretariat headed by an Executive Director with responsibility for tactical planning

### **4. Financial Sustainability**

The Centre derives operational and research revenue through Grants, project execution fees and a Trust Fund. Currently the Centre is the Executing Agency of a number of projects projects:

- MACC (World Bank / GEF project) ≈ US\$6M)
- SPACC (World Bank / GEF project) ≈ US\$5M)
- PHRD (World Bank / Japanese project) ≈ US\$300K)
- UKDFID (UK£300,000)
- UKDFID (UK£71,000)
- UNESCO (US\$160,000)
- Italian Renewable Energy feasibility study (€400K)

The Trust Fund is currently US\$1 million established from a grant by the Government of Trinidad and Tobago Petroleum Funds.

### **5. The Objectives of the Centre**

The primary objectives of the Centre include:

- Promoting protection of the earth's climate system with special emphasis on the Caribbean
- Enhancing regional, institutional capabilities for the co-ordination of national responses to the adverse effects of climate change
- Providing comprehensive policy and technical support in the area of climate change and related issues and spearheading regional initiatives in those areas
- Promoting education and public awareness on climate change issues



- Facilitating regional consensus for negotiations related to the UNFCCC

## **6. Current Activities of the Centre**

The current activities of the Centre include:

- Assessment of existing global circulation models and development of a downscale tool for application in the Caribbean;
- Development of an Economic Assessment Tool to assess adaptation measures;
- Promotion of Regional symposia, workshops and Capacity building programmes.
- Collaborating with regional and extra-regional institutions in climate change-related research in biodiversity and land use management

## **7. Collaborating Institutions**

The Centre collaborates with a number of regional and extra-regional institutions in order to meet its obligations. Currently it has Memorandum of Understanding (MOUs) with the following institutions:

- University of Louisville (Kentucky, U.S.A.)
- Florida International University (U.S.A.)
- University of the West Indies
- University of Belize
- Potsdam Institute for Climate Impact Research
- United Kingdom Hadley Centre
- Meteorological Research Institute, Japan
- INSMET of Cuba
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## **8. Contact Information**

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## **Annex 2**

### **THE MACC PROJECT AND POSSIBLE ACTIVITIES UNDER THE ECACC PROJECT**

The MACC (Mainstreaming Adaptation to Climate Change) is a GEF-Funded Project (2004 – 2008) for twelve CARICOM member states (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines and Trinidad and Tobago). It is implemented by the World Bank and Executed by the Caribbean Community Climate change Centre in Belize.

The project follows two prior projects - the GEF-CPACC project (Caribbean Planning for Adaptation to Global Climate Change, 1997 – 2001) and the CIDA-ACCC project (Adapting to Climate Change in the Caribbean, 2001 - 2004). It has laid the ground work for the GEF - SPACC project (Special Pilot Adaptation to Climate Change, 2007 - 2011).

#### **The project is made up of four operational components consisting of**

- Build capacity to assess vulnerability and risks associated with climate change
- Build capacity to reduce vulnerability to climate change
- Build capacity to effectively access and utilise resources to reduce vulnerability to climate change
- Public Education and Outreach

#### **COMPONENT 1: BUILD CAPACITY TO ASSESS VULNERABILITY AND RISKS ASSOCIATED WITH CLIMATE CHANGE**

##### **1.1 Meteorological Monitoring System**

Under CPACC project 18 monitoring stations were installed to monitor the following parameters:

- i. Sea Water level
- ii. Sea surface temperature
- iii. Barometric pressure
- iv. Wind velocity
- v. Air temperature
- vi. Relative humidity
- vii. Rainfall

Under the MACC project the existing monitoring stations are being improved to enhance performance and data reliability. In addition sea level rise is being monitored with the instalation and implementation of Continuously Operating Reference Stations (CORS). Other activities include:

- i. Provide support for the Regional Archiving Centre (RAC)
- ii. Strengthen capacity at CIMH (Caribbean Institute for Meteorology and Hydrology) for the maintenance and operation of the monitoring network, and in the training to Meteorological offices personnel to manage stations, expand applications and use of data, installation and use of CORS.

## **1.2 Coral Reef monitoring**

Under this component of the project a Coral Reef Early Warning monitoring system is installed at Discovery Bay in Jamaica. Critical parameters being monitored include:

- 1.2.1 Partial pressure of CO<sub>2</sub>
- 1.2.2 Sea water temp.& salinity
- 1.2.3 wind speed and direction, precipitation,
- 1.2.4 barometric pressure, air temperature,
- 1.2.5 photosynthetically available radiation above and below the water, ultraviolet light above and below the water,, salinity

## **1.3 Other Coral Reef Activities**

- 1.3.1 Training & Monitoring in OECS countries & Tobago utilising methodology & Protocols developed under CPACC.

## **1.4 Generating Climate Change Scenarios and Modeling:**

Using A1, B2 and A1B scenarios established by the IPCC future climates for the region is being modeled and analysed for use in impact studies The two primary methods being used are:

- 1.4.1 Statistical downscaling of regional climate models, and the
- 1.4.2 Dynamic downscaling using the PRECIS regional model for 50km and 25km resolutions.

## **1.5 Possible Activities under the ECACC Project under Component 1**

### **MONITORING**

- i. SLR monitoring – acquisition of station and installation in agreed site.
- ii. Coral reef monitoring:
  - a. Ascertain level of coral reef monitoring activities taking place in OTs.

- b. Determine need to adopt CPACC monitoring protocols
- c. Proceed with training in OTs and monitoring if required
- d. If not develop mechanisms for exchange of information and coordination between CARICOM monitoring sites and those in OTs.

## **2.0 COMPONENT 2: BUILD CAPACITY TO REDUCE VULNERABILITY TO CLIMATE CHANGE**

### **2.1 Development of Adaptation Strategies**

Under this component of the project capacity building for identifying and analysing policy options in the development of Adaptation Strategies is being developed in the following selected sectors:

- i. Water Sector
- ii. Agricultural Sector
- iii. Tourism

### **2.2 Collaboration with CDERA**

Close collaboration with CDERA is being undertaken in the incorporation of climate change consideration into region's CDM strategy. Also improved collaboration between National Disaster and Meteorological Offices is being encouraged through the sponsoring of joint seminars and workshops in the use of the MM5 model in disaster preparedness planning. Other modeling outputs are also being used to upgrade the regional building code – CUBIC.

### **2.3 Possible Activities under the ECACC Project under Component 2**

- i. CLIMATE CHANGE SCENARIOS & IMPACT STUDIES**
  - a. Develop climate change scenarios for all participating countries from PRECIS outputs.
  - b. Capacity building in utilising outputs from PRECIS experiments

- c. Capacity building in impact studies (water, agriculture)

**ii. VULNERABILITY ASSESSMENTS**

- a. Capacity building in use of vulnerability assessment methodology developed under MACC.
- b. Consider a coordinated vulnerability assessment on the tourism sector in OTs – given the critical role this sector plays in the OTs.

**iii. ADAPTATION STRATEGIES**

- a. Identify no regrets adaptation policies for key sectors – tourism, water, coastal infrastructure, agriculture.
- b. Based on VA studies develop adaptation strategies for specific sector.
- c. Identify opportunities to mainstream CC adaptation in national planning.
- d. Revisit building codes, land use planning, disaster mitigation planning.

**iv. NATIONAL CLIMATE CHANGE ADAPTATION POLICIES**

- a. Develop National CC Adaptation Policies through a process of National consultations and use of expert judgement (similar to CPACC process and that used to develop NAPAs)
- b. Participate in consultative process to develop the regional Strategy.
- c. Briefing sessions with CCCCC on status of international negotiations under the UNFCCC as they affect the Caribbean.

**3.0 COMPONENT 3: BUILD CAPACITY TO EFFECTIVELY ACCESS AND UTILIZE RESOURCES TO MINIMIZE COSTS OF CLIMATE CHANGE ADAPTATION**

This component supports:

- i. The preparation of regional position for negotiation on Climate Change at relevant international for a as well as the development of a regional position and negotiation strategy for UNFCCC and other international organizations.
- ii. Feed results from Components 1 and 2 into National Communications

#### **4.0 COMPONENT 4: PUBLIC EDUCATION AND OUTREACH**

The Public Education and Outreach programme is comprised of the following four components:

- i. Implementation of regional PEO strategy.
- ii. Implementation of National PEO strategies
- iii. Establishing regional clearing house for climate change information.
- iv. Advocacy with key interest groups.

##### **4.1 Possible Activities in the ECACC Project under Component 4**

- i. Design and Implement National PEO plan
- ii. Target key interest groups
  - a. Policy makers.
  - b. Tourism sector.
  - c. Insurance and financial sectors
  - d. Schools
- iii. Given the presence of key insurance and financial regional players in the OTs we may take advantage of this to leverage wider regional interest in CC issues from these critical sectors.

#### **Annex 3**

#### **GOING FORWARD**

#### **Annex 4**

### **LOCAL REQUIREMENTS FOR THE IMPLEMENTATION OF THE ENHANCING CAPACITY for ADAPTATION to CLIMATE CHANGE IN THE CARIBBEAN (ECACC) PROJECT**

## Annex 5

### List of Participants

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## Housing