

Caribbean Approaches to Climate Change Adaptation

Many Strong Voices:
**Stakeholder Workshop on Climate Change
Impacts and Adaptation in the Arctic and Small
Island Developing States**

27-30 May, 2007

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CARICOM INITIATIVES

- UNFCCC recognizes the need for countries to “adapt”
- INC of IPCC recommended 3 stages for Adaptation in developing countries:
 - Stage 1 – building capacity for adaptation
 - Stage 2 – further capacity building
 - Stage 3 – identifying & implementing Adaptation measures.

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CARICOM INITIATIVES

- Caribbean Governments have initiated regional action to address issue which was accorded top priority in BPOA:
 - CPACC (1997 – 2001)
 - ACCC (2001- 2004)
 - MACC (2004 – 2008)
 - CCCCC establishment (2004)
 - SPACC (2007 – 2010)

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CARICOM INITIATIVES

- GEF (CPACC, MACC, SPACC) projects implemented by WB.
- CIDA funded ACCC project implemented by Canadian Consulting Consortium.
- Executing Agency
 - OAS (CPACC)
 - CARICOM Secretariat (ACCC)
 - CCCCC(MACC, SPACC)
 - Executing agency function devolved to regional institution

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CARICOM APPROACH TO ADAPTATION

- Suite of activities designed to determine:
 - the extent of risk arising from climate change to which region will be exposed in future.
 - The vulnerability of the region's natural and socioeconomic systems to climate change.
 - The impacts of CC on the natural and socioeconomic systems of the region.
 - Regional response to mitigate those impacts and costs for implementing.
 - Implementation of mitigative actions (ADAPTATION)
 - Building regional capacity to carry out the above actions

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CARICOM APPROACH TO ADAPTATION

- CARICOM countries' contribution to global GHG emissions budget negligible.
- However particularly vulnerable to impacts of climate change.
- Already region vulnerable to present day risks from climate variability.
- Incumbent on region to build capacity to adapt to climate change.
- Increasing resilience to present day risks from climate variability is the starting point for region's adaptation agenda.

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CPACC- development of National Adaptation Policies

- Under CPACC region embarked on a process to develop national Adaptation Policies and Implementation Plans(1999-2001). Process involved
 - Extensive national consultations with wide set of stakeholders to identify critical cc issues.
 - Determination of key vulnerable elements (sectors, ecosystems, communities) that needed to be addressed.
 - Incorporation of existing expert knowledge in designing response strategies – “no regrets adaptation measures”.
 - Gaining national consensus on key response strategies to be employed.
 - Gaining national consensus on implementation plan.
 - Formulation of National Adaptation Strategy and Implementation Plans
- Policy documents provide for updating as scientific knowledge improves.

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SOME ADAPTATION OPTIONS IDENTIFIED UNDER CPACC- Water

- **Inventory of resources**
- **Water monitoring programs**
- **Saltwater intrusion data required**
- **Establishment of comprehensive Integrated Water Resource Management scheme**
- **Water conservation**
- **Water harvesting, increased water storage, improve reservoir capacity & reduce leaks**
- **Watershed management**
- **Public education & outreach (PEO)**

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SOME ADAPTATION OPTIONS IDENTIFIED UNDER CPACC- TOURISM

- **Vulnerability studies**
- **Strengthen legislative frameworks for coastal developments (EIA, land use policy, enforcement)**
- **CC concerns in development of tourism plans**
- **Promote energy efficiency, water conservation & use of renewable energy**
- **Public education & outreach (PEO)**

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SOME ADPTATION OPTIONS IDENTIFIED UNDER CPACC- Agriculture & Fisheries

- **Develop ex-situ conservation of variety of germplasm**
- **Improved efficiency of irrigation systems**
- **Research on full extent of impacts – soil erosion, land degradation, loss of fertility**
- **Improved data collection & management systems in fisheries**
- **Mangrove & reef protection measures**
- **Development of marine protected areas**
- **Develop alternatives – e.g. inundated coasts to aquaculture**
- **Public education & outreach**

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CPACC- development of National Adaptation Policies

- In two countries Dominica and St Lucia these Policy documents officially approved by Cabinets
- Process very much in line with what was approved at COP 8 in Marrakech for development of NAPAs.
- Process no less rigorous that what is required for the NAPAs. However unlike NAPAs did not provide for the prioritisation of adaptation strategy.
- NAPA process has led to the establishment of the LDC Adaptation Fund which has several features which facilitate more expeditious disbursement and utilisation than that which obtains in other GEF administered funds

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CURRENT ACTIVITIES

- Under our ongoing MACC project the following activities are being pursued:
 - Sectoral vulnerability assessments – water, agriculture, tourism sectors
 - Regional climate modeling to support assessments
 - PRECIS – 25&50 km resolution
 - Japanese Earth Simulator Model – 20km
 - Statistical Downscaling
 - (Also outputs from MM% model running in an “operational mode” to produce short term climate forecasts

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CURRENT ACTIVITIES

- Impact studies – water , agriculture, tourism. Feeding in outputs from climate models into sectoral models.
- Development of adaptation options.
- Cost benefit analysis of adaptation options.
- Mainstreaming climate change adaptation into sectoral strategies and national development planning.
- Project does not address the implementation of adaptation

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SOME CONSTRAINTS

- V&A assessments – need to incorporate social and economic vulnerability.
- Regio-specific climate scenarios
- Data –e.g.
 - Near shore bathymetry
 - Topography
 - Meteorological
 - Sea level
- Impact models
- Costing adaptation (also costing inaction)
- Public awareness.

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SPACC

Component 1

- **This component seeks to identify, prioritize and evaluate, and design appropriate adaptation options and measures that would address biodiversity and land-degradation issues at the community level**
- **Total cost US\$1.0 million:**
 - **Expected GEF funding US\$0.5 million)**

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SPACC

Component 2

- **In this component the project will support the implementation on a pilot basis, of selected adaptation measures in seven sites in the participating countries thereby enhancing the resilience of insular ecosystems under significant threat from climate change and land degradation.**
- **Total Cost of this component is US\$2 million**
 - **Expected GEF funding is US\$1.45 million**

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SPACC

. Component 3

This component would finance goods and services required to:

- **Develop and establish (in at least one country) the operational frameworks (legal, institutional and management structures) for addressing multiple convention objectives in accordance with national priorities within the “ecosystem approach” as adopted by the three governments and promoted by UNFCCC, CBD and UNCCD;**

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SPACC

- **Develop National Sustainable Development Strategy (in at least one country) which integrates climate change, biodiversity conservation, and land degradation management within national development planning framework;**
- **Establish a single national reporting framework for UNFCCC, CDB, and UNCCD so as to reduce the burden on limited resources available in the three countries, while pioneering a harmonized report structure that would integrate climate change, biodiversity and land degradation issues.**

. **The total cost of this component is US\$2.95 million**

- **Expected GEF funding US\$0.1 million**

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ADAPTATION & DISASTER MANAGEMENT

- Nexus between disaster mitigation and climate change adaptation when dealing with weather derived disasters.
- Both speak to increasing resilience of human and built systems to impacts of climate – in the case of disasters climate variability and in the other climate variability and change
- Initiatives for collaboration:
 - Common tools e.g. flood plain maps, vulnerability assessments, EWS.
 - Revision regional Disaster Mitigation Strategy
 - Revisit CUBIC to incorporate CC risks
 - MM5 outputs as a management tool for Disaster Managers.

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Possible areas for collaborative effort

- Web based M Sc programme for SIDS (SIDS consortium of Universities) + scholarships
- Capacity building in SIDS to participate in CDM
- Dissemination and training in use of tools developed in SIDS e.g. risk management, EIA,Community V&A, Impact models etc.
- Establish CC clearing house for SIDS (SIDSNET)
- Trust Fund for Adaptation in SIDS
- Global reinsurance scheme for SIDS

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ADAPTATION- A PROCESS

- Adaptation is a process that includes capacity building for :
 - Vulnerability assessments
 - Impact assessments
 - Developing adaptation options
 - Prioritizing adaptation options
 - Cost benefit analyses of adaptation options
 - Implementing adaptation options
 - Monitoring impacts of adaptation interventions
 - Resources must be provided for the **“PROCESS OF ADAPTATION”**

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THANK YOU

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