

# **Effective Adaptation to Climate Variability and Climate Change in Small Island States**

## **Policy and Institutional Imperatives for Caribbean SIDS**

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# Structure of Presentation

- Review of key influencing factors
- Elements of an overarching philosophy
- Key Policy objectives
- Guiding principles
- Sector-specific policies and strategies
- Institutional imperatives
- Implementation considerations

# Influencing Factors

- Climate hazards (CC/CV):
  - pose a significant hazard risk, especially to vulnerable social, economic and environmental systems in SIDS
  - are exacerbated by and can worsen the inherent and acquired social, economic and environmental vulnerabilities of SIDS
  - can have a compounding effect when occurring in combination with non-climate induced shocks such as commodity and energy price shocks
  - Pose a more significant challenge for fragmented and uncoordinated policy and institutional frameworks
  - Can best be addressed within an integrated hazard risk management framework (IHRM).

# Elements of an Overarching Philosophy

- Integrated hazard risk management (IHRM) allows for:
  - The systematic application of policies, procedures and practices to the task of analyzing, controlling and communicating about risk issues
  - A more effective approach to risk assessment, planning and forecasting of all risks
  - More sustained coordination and collaboration among the relevant actors
  - On-going assessment of the costs and benefits of risk reduction measures
  - Build economic, social and environmental resilience

# Some Key Policy Objectives

- An IHRM Policy should aim to:
  - Build capacity of relevant institutions and agencies
  - Promote the inculcation of a risk management ethic in all public and private sector planning and development initiatives
  - Foster the establishment of an appropriate decision-support system based on systematic research and observation of natural hazard risks
  - Empower local communities to build their resilience
  - Increase public education and awareness.

# Some Guiding Principles

- A strong and diversified economy is a sine qua non for effective hazard risk management
- An effective hazard risk management is a sine qua non for economic resilience
- Hazard risk reduction is most effective when:
  - it is approached in a development planning context
  - It involves a multi-stakeholder approach at the earliest stage and
  - When it is sustained by PEA programs
- Reducing the number and effects of natural disasters requires that the development challenges that lead to the accumulation of hazard and human vulnerability is addressed

# Some Guiding Principles

- Investing in IHRM ...
  - is investing in sustainable development
  - can significantly reduce disaster losses and the future cost and speed of recovery
  - can help to minimize the use and cost of limited technical, administrative and financial resources
  - can reduce potential conflicts in policy development
  - can promote coordination among development partners

# Strategic Responses – Settlements and Infrastructure

- Build adequate capacity for research into climate dynamics that may affect social and economic infrastructure
- Integrate climate and other natural hazards in the physical planning and development control process
- Ensure the adoption of planning standards and guidelines that facilitate adaptation, retreat and/or relocation of human settlements from vulnerable areas
- Strengthen early warning systems
- Promote retro-fitting of homes, especially low income), businesses and public buildings
- Introduce certification and licensing schemes for contractors and tradesmen

# Strategic Responses – Human Health

- Promote sustained research into the human health impacts of natural hazards
- Establish/strengthen epidemiological surveillance systems to effectively track the incidence of respiratory, cardiovascular and vector-borne diseases and any links to episodes of flood/drought, and extreme temperatures
- Build the capacity of health personnel to deal with psychological trauma associated with extreme weather events

# Strategic Responses – Agriculture

- Develop an IHRM policy and strategy for the agriculture sector to address short, medium and long term impacts
- Assess the implications of hazards risk for food security
- Identify drought-resistant crop varieties that yield more mass per unit of water consumed
- Promote better soil management, fertilization and pest and weed control
- Encourage sustainable land management practices that reduce land degradation
- Encourage the use of more deficit, supplemental and precision irrigation systems
- Introduce crop insurance and other risk transfer schemes for the agriculture sector

# Strategic Responses – Tourism

- Develop, in concert with stakeholders, a sustainable tourism strategy that addresses climate hazards and general sustainability concerns
- Ensure that appropriate physical planning guidelines are enforced for new tourism developments
- Protect coastal assets from sea level rise and wave action using natural defense systems where possible
- Explore options for joint insurance of tourism infrastructure
- Require EIAs for all major tourism investments
- Build adequate foreign exchange reserves to cushion the impact of disruptions to the tourism industry caused by natural hazards

# Strategic Responses – Financial Services

- Promote lending mechanisms for ensuring adequate financial support for rehabilitation and reconstruction activities
- Explore opportunities for pooled insurance and reinsurance arrangements among public and private sector interests
- Encourage insurance companies to:
  - develop appropriate capacity to identify and forecast risk and to share data with other actors in IHRM
  - Support scientific work to develop better risk identification tools
- Encourage the private sector to develop innovative risk reduction and transfer instruments

# Strategic Responses – Coastal and Marine Resources

- Adopt measures to protect coastal areas and to strengthen the resilience of coastal ecosystems and resources
- Develop a comprehensive coastal zone management plan which incorporates natural hazards concerns and guides the location of investments within the coastal zone
- Identify and promote alternative fishery and resource use activities where predicted impacts preclude the continuation of traditional activities
- Design and implement poverty reduction programs for coastal communities
- Work in conjunction with other countries and international organizations in developing an effective early warning system
- Implement a continuing monitoring and assessment program, including observation of the health of coastal ecosystems and changes in coastal processes

# Strategic Responses – Water Resources

- Undertake risk assessments that can inform decisions dealing with water-related, natural and man-made hazards
- Build the capacity of meteorological entities to undertake flood and drought forecasting
- Undertake reforestation and other measures to increase the resilience of watersheds
- Assess and address the needs for water storage and distribution infrastructure to ensure water availability during extensive drought periods
- Promote initiatives to identify and where necessary exploit non-traditional water resources
- Require large water consumers such as hotel and drinks manufacturers to adopt water conservation measures
- Monitor the impact of saltwater intrusion on the integrity of groundwater aquifers

# Strategic Responses – Land Resources

- Develop and implement national land and land use policies and strategies
- Adopt scientifically-sound and cross-sectoral approaches to land management that integrate ecological, economic and social dimensions of land degradation
- Mitigate the impacts of physical development on natural resources through the use of EIAs
- Preserve important sites, ecosystems and wildlife habitats, rivers and watersheds
- Design and implement sustainable forestry policies and plans
- Examine feasibility of adopting debt-for-nature swaps

# Institutional Imperatives

- Introduce an integrated development planning framework of which IHRM is an integral part
- Strengthen those institutions with key disaster preparedness, response, administrative and coordinating capabilities so as to...
  - Provide adequate support to stakeholders on adaptation measures
  - Monitor the impact of IHRM policies and strategies
  - Enable the conflicts between development policies and projects and IHRM initiatives to be readily assessed and addressed

# Implementation Considerations

- Role of Governments:
  - Provide effective leadership in IHRM
  - Incorporate IHRM in national sustainable development strategies and in the budgetary process
  - Identify research needs and the ways in which they can be met
  - Develop and apply appropriate engineering, planning and building standards
  - Strengthen meteorological services to provide high quality and timely climate forecasts
  - Develop an effective policy and legislative framework that supports IHRM

# Implementation Considerations

- A Role of the Private Sector
  - Develop and implement corporate environmental policies that emphasize prospective and compensatory IHRM principles
  - Observe the “Polluter Pays Principle”; the “User Pays Principle” and the “Precautionary Principle” respectively
  - Make informed investments in hazard mitigation and management

# Implementation Considerations

- Role of Civil Society
  - Monitor the actions and responses of government and the private sector
  - Assist in disseminating information and knowledge on IHRM practices
  - Assisting in community resilience building efforts
  - Assist with vulnerability assessments

# Implementation Considerations

- Role of Regional Organizations
  - Strengthen national capacities through training, program support and resource mobilization
  - Share information and documentation and comparative analyses of issues on a regional or sub-regional basis
  - Develop common regional policy platforms
  - Assist in the conduct of comprehensive post-disaster assessment
  - Collaborate in the conduct of research on hazard risks

# Implementation Considerations

- CARICOM-Specific strategies:
  - Mainstream IHRM into programs of the CARICOM Secretariat and regional agencies
  - Make environmental policy an integral part of region's foreign policy
  - Develop a cadre of Environmental Diplomats
  - Establish a CRNM-type agency or arrangement to represent the region's interests in MEA negotiations
  - Establish a dedicated and sustained funding stream for a Regional Adaptation Fund
  - Establish high level participation in and oversight of work of the GEF Council
  - Build capacity for effective participation in global carbon trading schemes

# Implementation Considerations

- Role of the International Community:
  - Support national and regional institutions that are engaged in IHRM capacity building efforts
  - Share more effectively existing knowledge that can help countries to meet various hazard management challenges
  - Develop internal policies that ensure IHRM is factored into development aid and in disaster recovery/reconstruction programs
  - Assist with the enhancement of global indexing of risk and vulnerability
  - Support the development of a detailed procedure for identifying and placing an appropriate value on risk

# A Role for OAS-DSD

- Undertake research to:
  - establish the benefits of “no regrets” investments in IHRM
- Support efforts to:
  - retro-fit homes and schools
  - develop early warning systems
  - integrate climate and other natural hazards in the physical planning and development control process
  - reduce land degradation through sustainable land management practices
  - assess climate-related risks to water resources
  - build capacity for effective climate change adaptation
  - Build capacity for effective participation in negotiating MEAs

# A Role for OAS-DSD

- Work through Collaborative Agreements with the following agencies:
  - CARICOM Secretariat
  - OECS Secretariat
  - CARICOM Climate Change Centre
  - Caribbean Disaster Emergency Response Centre
  - Caribbean Institute for Meteorology and Hydrology
  - Caribbean Environmental Health Institute

# A Role for OAS-DSD

- Develop/strengthen Implementing/  
Executing Agency status with:
  - Canadian International Development Agency
  - Caribbean Development Bank
  - European Union
  - Food and Agriculture Organization
  - Global Environment Facility
  - United Nations Environment Program

- THANK YOU!!!
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