

#### Plataforma Regional para la Reducción del Riesgo de Desastres de las Américas

Invertir en RRD para proteger los avances del desarrollo

IV Sesión - Guayaquil, Ecuador del 27 al 29 de Mayo 2014







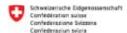
## Building Resilience to Disaster Risk and Climate Change in the Caribbean

Panel 1: Risk Construction

Presenter: Ronald Jackson, Executive Director Caribbean Disaster Emergency Management Agency

































# Why do we need to build resilience?

Caribbean region has inherent vulnerabilities to natural hazards

The magnitude, timing, location and impacts of a hazard event are difficult to predict

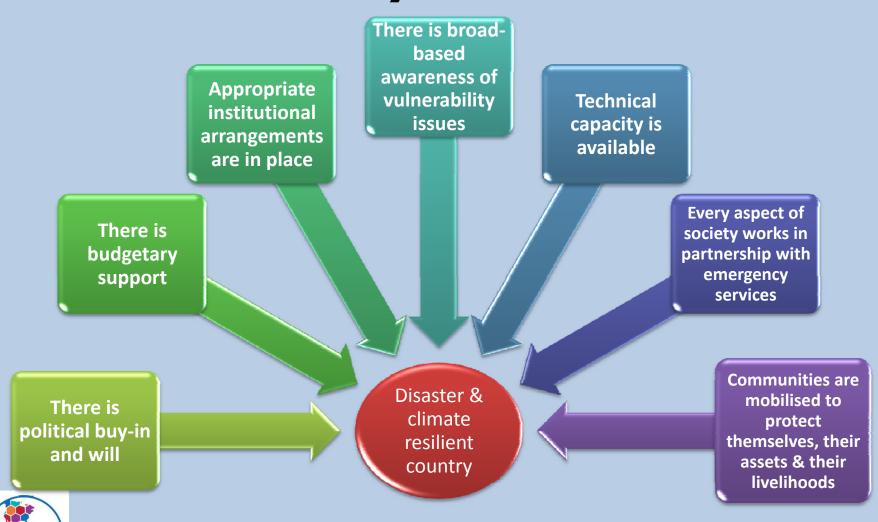
Changing climate is increasing the unpredictable nature of weather patterns

Increasing urbanisation of our societies are placing greater burdens on our environmental resources Changing societal
dynamics - work-life
patterns, lifestyle
expectations,
demographic changes,
community fragmentation
are increasing community
vulnerability

Disaster impacts can set back or reverse development gains



# What does a disaster & climate resilient country look like?



# Building Resilience to Disasters & Climate Change: Case Studies from the Caribbean

- National Case Studies
- Hard Investments
  - Coastal Protection in Barbados
  - Building Climate Resilience in the Agro and Water Sector in Jamaica
  - Slope Stabilization in Jamaica
- Soft Investments
  - Safe schools project BVI
  - Tourism in Jamaica

### **Coastal Protection in Barbados**



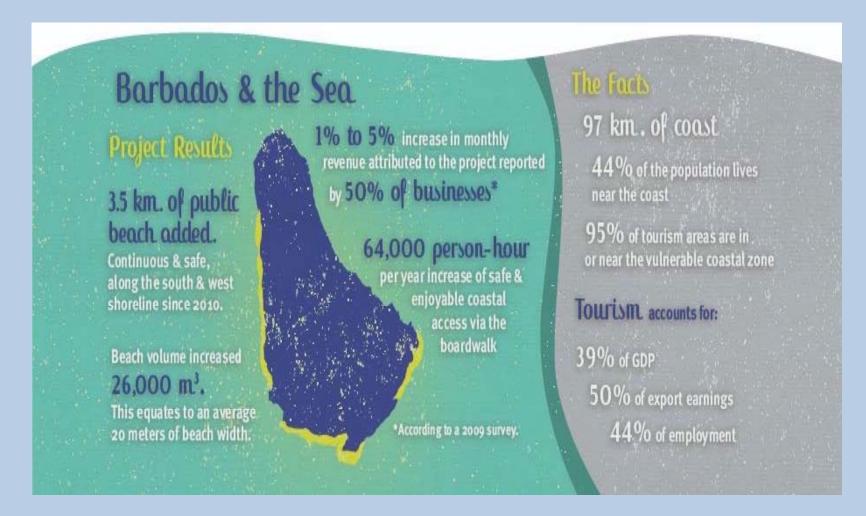








### **Coastal Protection in Barbados**





### **Coastal Protection in Barbados**

Given its comprehensive approach to coastal and marine management, Barbados is considered today a best-practice model for the Caribbean.

Barbados has successfully established the legal and institutional framework needed to protect its coast.

From 2002 to 2009, Barbados built headlands, breakwaters, retaining walls, and walkways and revetments to stabilize its shoreline and control beach erosion on the south and west coasts.

The coastal infrastructure works are environmentally sustainable; resilient to natural hazards; and utilize advanced engineering techniques to limit maintenance costs over time.

Barbados' coastal management has been a boost to the tourism industry, which provides employment for nearly half of the population.



### Building Climate Resilience in the Agricultural and Water Sectors in Jamaica

Jamaica's economic development is inextricably linked with accessible and suitable water resource availability.

A critical issue the reduction and degradation of water supplies in 3 of its southern watersheds – Kingston, and the watersheds of the Rio Cobre and Rio Minho rivers.

Climate change will exacerbate this degradation by rising sea levels and decreasing groundwater levels caused by climate change.

Jamaica's Strategic Program for Climate Resilience (SPCR) under the Caribbean PPCR integrates DRM, flood reduction, poverty reduction, gender considerations and food security

It will combine climate scenarios with existing conservation methods so that vulnerable communities can use them in order to better cope with climate variability.

### Building Climate Resilience in the Agricultural and Water Sectors in Jamaica

Jamaica's Strategic Program for Climate Resilience (SPCR) –focus on combining climate scenarios with existing conservation methods so that vulnerable communities can use them in order to better cope with climate variability.

Adapting water management options such as water conservation techniques, upgrading of existing water storage facilities, diversification of livelihoods options and research on drought resistant crops

Develop alternative water harvesting methods such as mini-dams, reservoirs or rainwater harvesting gravity drip irrigation systems.

Use technologies to improve soil moisture retention; sustainable farming practices, reforestation of denuded hills, and community involvement in CCA

Developing risk and vulnerability assessments based on climate scenarios in order to determine the added risk of climate change to the economic, social and infrastructure of the area for incorporation into an adaptation plan for the area.

Undertake a characterization of the project area using available baseline data, which will be supplemented by assessments conducted by technical personnel in the field

# Innovation in Disaster Risk Reduction

Adoption of the Tyresoil Retaining Wall

Technique and Slope De-watering

Melbrook Heights, Jamaica

HARBOUR VIEW HOUSING SCHEME

HARBOUR VIEW HOUSING SCHEME





















### **Project Completion (Before and After)**









## SMART Schools in the British Virgin Islands









### **SMART Schools in the British Virgin Islands**

Since 2000, the DDM has been working to inculcate a culture of safety in the Territory's educational institutions through its SMART Schools Programme.

With support from CDEMA through a Government of Brazil funded initiative, DDM developed a Health and Safety Policy, assessment tool (which considers school location, design, retrofitting, evacuation and disaster planning procedures); monitoring database and a certification process.

In 2012, 65 schools ranging from pre-primary to tertiary level were assessed, and the assessment reports discussed in meetings with Principals of each school and DDM officials.

Support was provided by the Disaster Management Agency to schools to prepare plans of action for addressing structural issues and to develop Emergency/Disaster Contingency Plans.

Currently, 17 schools have achieved full certification which is valid for 3 years.

The SMART Schools Programme is strongly supported by the Ministry of Education and has become the way of doing business at educational institutions.

### Strengthening Resilience of the Tourism Sector in Jamaica

Since 2006, the Ministry of Tourism has been partnering with the Disaster Management Office to mainstream DRM and build resilience to multi-hazards in the Tourism sector.

In 2007, the Tourism Emergency Operations Centre (TEOC) was established as the official source of information and point of communication for official reports and inquiries for the tourism sector through the National Emergency Operations Centre (NEOC)

In 2008, the Ministry established the Tourism Emergency Management Committee (TEMC) which is a is a collaborative, public-private partnership involving the Ministry, the tourism industry, and disaster management agencies to provide centralized coordination and control of disaster response within the tourism industry.

In 2013, with support from CDEMA through an IDB funded initiative, the National Tourism DRM and CCA Strategy was developed to address the elements of Mitigation, Preparedness, Response and Recovery in the Tourism Sector as a model for other CDEMA Participating States.

## Caribbean Reflections on the New International DRR Framework

Caribbean Leadership in the post 2015 DRR framework, through established regional mechanisms such as the CDM Strategy and its Governance Mechanism provides a distinct opportunity that should be embraced.

An integrated risk management approach should be pursued bringing together elements of DRR, adaptation to climate change, disaster risk financing, risk transfer mechanisms and development planning within an overarching context of resilience

The agenda of Small Island Developing States (SIDS) remains a significant matter to be considered in all the Post 2015 Agenda processes

Bring sharper focus to Priority Area # 4.
Noting the peculiarities of Caribbean
Economies and the threat this area
poses to Resilience if not addressed.

Promote greater attention and investment in the strengthening of humanitarian response capacities especially in the face of growing exposure and given the effects of climate change

# Reflections on Measuring Public Policies for Prospective Risk Management

- Understanding how we create risk social, economic and physical development processes.
  - Appreciate that we can't eliminate all risk or hazards but only reduce and manage them.
  - Questions of quality of risk reduction interventions are these interventions truly reducing risk or maintaining existing risks
  - Is risk is allowed to build up over time through political decisions or the occasional trade offs that have to be made between balancing investment for job creation or preserving ecosystems and there services.

# Reflections on Measuring Public Policies for Prospective Risk Management

- Ask ourselves what would success look like?
- What are we seeking to do achieve a level of resilience which will allow us to sustain economic wellbeing/prosperity
- How will we do it? Perhaps through social welfare policies, land use and land management policies and strategies; Settlement policies and strategies; development control, enforcement; environmental protection.
- How will we measure Perhaps measured using indices which indicate levels of risk exposure and resilience
  - These will have to be monitored at a appropriate periods (every 3 years perhaps)
- Need to make our efforts evidence based.
  - Develop the metrics that allow for full analysis and presentation of evidence.

### Resilient States · Safer Lives

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#### PROFESSIONAL PROFILE

Ronald Jackson, Executive Director of the Caribbean Disaster Emergency Management Ageny (CDEMA) based in Barbados



**Mr Ronald Hugh Jackson** was appointed as Executive Director of CDEMA with effect from April 3, 2013.

Mr Jackson was the Director General of the Office of Disaster Preparedness and Emergency Management (ODPEM) in Jamaica, a position he held since August 2006 until March 2013. He previously served ODPEM as Deputy Director General, Senior Director of the Preparedness and Operations Division and as Regional Coordinator for the Southern parishes.

He has been extensively involved in disaster management at the national, regional and international level in various capacities. At the national level, he lent his expertise to the coordination of the national response to the impact of Hurricanes Charlie, Ivan (2004); Dennis and Emily (2005); Tropical Depression 16 and subsequently Tropical Storm Nicole (2010) and most recently Hurricane Sandy (2012). He has been instrumental in the development of the Guidelines for Child-Friendly Disaster Management and Response, Reinstatement of the ODPEM Dedicated Communication Network and Revision of the Emergency Welfare Plan. In 2010 Mr. Jackson received a Certificate of Commendation from the Caribbean Community for his contribution to the rescue and recovery efforts in the aftermath of the January 2010 Haiti Earthquake.

Prior to his appointment as Executive Director, he was a member of CDEMA's Technical Advisory Committee, President of the IDB Caribbean Policy Dialogue Forum, the co-chair for the Inter American Network for Disaster Management and represented the Caribbean Disaster Emergency Management Agency (CDEMA) Member States on the Hyogo Framework for Action Mid-Term Review Committee and Post-2015 Hyogo Framework for Action Committee.

Mr. Jackson holds a Master of Science Degree (M.Sc.) in Natural Resource Management and Environmental Resource Management from the University of the West Indies and a Bachelor of Science Degree (B.Sc.) in Physical Planning and Environmental Resource Development from the University of Technology.