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# CDEMA

## Regional progress report on the implementation of the Hyogo Framework for Action (2009-2011)

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## Executive summary

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The Caribbean Region, largely comprised of Small Island Developing States (SIDS) and low lying coastal states (LLCS), is acknowledged as being among the most prone to a range of natural hazards. Some natural hazards, such as hurricanes, landslides, floods are annual occurrences among different states with the consequent damage and setbacks for human development. The region is also exposed to volcanic eruption.

Climate change is also likely to significantly impact upon the Region's experience with hazard events by altering average climatic conditions and climate variability which affect underlying risk factors, and generating new threats for the region.

The January 12, 7.0 Haiti earthquake is a stark reminder to Participating States of the potential threat of a catastrophic earthquake impacting their countries. Of the hundreds of earthquakes occurring during the period May 2009 to May 2010, the Seismic Research Centre (SRC) at the University of the West Indies, St. Augustine Campus issued about 30 advisories on earthquakes that occurred on land or close to Anguilla, Barbados, Dominica, St. Kitts and Nevis, Saint Lucia and Trinidad and Tobago. There were also reports of felt earthquakes in the Virgin Islands and Jamaica.

The 2009 Atlantic Hurricane Season was considered as below normal when compared to most seasons since the current high activity era for Atlantic hurricanes began in 1995. There were nine named storms, of which three became hurricanes and two became major hurricanes. The fewer, shorter-lived, and generally weaker storms resulted largely from El Niño conditions during the peak months of August-October of the season.

The Enhanced CDM Strategy and Programming Framework 2007-2012, approved at the 16th Meeting of the Council of Ministers of the Caribbean Disaster Emergency Response Agency (CDERA) in June 2007, and adopted at the political level through the Council of Trade and Economic Development (COTED) in April 2008, is expected to accelerate initiatives in building resilience of the Caribbean Region to disasters.

The CDM Strategy and Framework provides the blueprint for planning of disaster management/risk reduction interventions within the CDEMA PS, and is the region's platform for the implementation of the HFA. The Framework has been accepted by a number of development partners and has been integrated into their programming for the region.

In terms of sectoral interfacing, the CDM Coordination and Harmonization Council (CDM CHC) was established on 10 December, 2007 to provide policy and technical advice for CDM implementation at the national, regional and sector levels. Six (6) sectors have been prioritized for mainstreaming of CDM during the 2007-2012 period, and sector leads on the CDM CHC have been identified to guide this process: Education, Health, Civil Society, Agriculture, Tourism and Finance.

CDEMA, the agency designated by the Caribbean Community as having lead responsibility for

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disaster management in the region, also collaborates closely with a number of regional technical specialist agencies for the implementation of disaster risk reduction initiatives within the region.

## **Status of DRR in Caribbean**

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### **HFA Priority 1: indicators 1-2**

Regional indicator 1: A sub/regional framework for disaster risk reduction exists

#### **Level of Progress achieved**

4: Substantial achievement attained but with recognized limitations in capacities and resources

#### **Means of verification**

No : Regional framework / plan / roadmap

#### **Description**

The Enhanced CDM Strategy and Framework (2007-2012) was developed through broad stakeholder consultation adopted by partners, and approved at the 16th Meeting of the Council of Ministers of the Caribbean Disaster Emergency Response Agency (CDERA) in June 2007. The purpose of the enhanced CDM strategy is to strengthen regional and community level capacity for mitigation, management and coordinated response to natural and technological hazards and the effects of climate change. It is expected to accelerate initiatives in building resilience of the Caribbean Region to disasters.

Each Priority Outcome has requisite outputs, activities and indicators. The CDM Strategy and Programming Framework provides the blueprint for planning of disaster management/risk reduction interventions within the CDEMA PS. The Framework has been accepted by a number of development partners and has been integrated into their programming for the region.

The CDM Strategy and Programming Framework 2007-2012 is designed to support the advancement of several regional and international mandates: the global and regional disaster management agenda including the Hyogo Framework for Action 2005-2015; the CARICOM Regional Programming Framework; the St. George's Declaration of Principles for Environmental Sustainability; and the objectives of the Caribbean Single Market and Economy.

Four (4) Priority Outcomes are identified in the CDM Strategy:

1. Enhanced institutional support for CDM Program implementation at national and regional levels;
2. An effective mechanism and programme for management of comprehensive disaster management knowledge has been established;

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3. Disaster Risk Management has been mainstreamed at national levels and incorporated into key sectors of national economies (including tourism, health, agriculture and nutrition);
  4. Enhanced community resilience in CDEMA states/territories to mitigate and respond to the adverse effects of climate change and disasters.

### **Context & Constraints**

CDEMA is currently undergoing an organizational restructuring process which is aimed at better positioning the Agency to fulfill its expanded mandate within the region. The variable technical capacity of the national disaster offices (NDOs) within the CDEMA PS is a challenge to the implementation of the Agency's CDM implementation within the states. So too is the fact that most of the Agency's work within the states is dependent upon the provision of donor support.

### **Reference document:**

> [http://www.preventionweb.net/files/15775\\_cdmstrategyandprogrammeframework200.pdf](http://www.preventionweb.net/files/15775_cdmstrategyandprogrammeframework200.pdf)  
[PDF 491.26 KB]

## **Regional indicator 2: A multi sectoral sub/regional institutional mechanism exists**

### **Level of Progress achieved**

4: Substantial achievement attained but with recognized limitations in capacities and resources

### **Means of verification**

No : Regional platform

> Terms of Reference for CDM Coordination and Harmonisation Council

[http://www.preventionweb.net/files/15775\\_torforcdmchc3revised.doc](http://www.preventionweb.net/files/15775_torforcdmchc3revised.doc) [DOC 91.50 KB]

### **Description**

The continued effort to enhance the CDM implementation process included a Partners CDM Consultation, which was held on July 31, 2007. The programming consultation agreed on the establishment of a CDM governance mechanism to provide policy and technical advice for CDM implementation at the national, regional and sector levels. This led to the establishment of the Comprehensive Disaster Management Coordination and Harmonization Council (CDM CHC) on 10 December, 2007.

Specifically, the objectives of the CDM CHC are to:

1. Mainstream Disaster Risk Management main at the national level and into key sectors of national economies
  2. Provide overall guidance to CDM development and implementation.
  3. Facilitate the effective coordination and harmonization of the CDM implementation process
  4. Facilitate learning and knowledge management of CDM among key stakeholders
  5. Strengthen regional capacity for leadership in advancing the disaster loss reduction agenda.
- The CDM CHC comprises of representation from lead agencies of six (6) priority sectors,

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development partners, CDEMA CU and CDEMA Participating States, private sector and non-governmental organizations. The sector committees facilitate the wider inclusion of relevant stakeholders in the CDM planning and implementation process at the sectoral level. Their membership comprises key representatives from the international, regional and national, public and private sector agencies in the respective areas of agriculture, civil society, education, health and tourism.

Membership of the CDM CHC includes:

- i. Caribbean Disaster Emergency Management Agency (Chair),
- ii. Caribbean Development Bank (CDB),
- iii. Canadian International Development Agency (CIDA),
- iv. United Nations Development Programme (UNDP),
- v. United States Agency for International Development (Development Arm and OFDA),
- vi. United Kingdom Department for International Development (DFID),
- vii. European Union (EU),
- viii. CARICOM Secretariat,
- ix. Organization of American States (OAS),
- x. Organization of Eastern Caribbean States (OECS),
- xi. University of the West Indies (UWI),
- xii. Food and Agriculture Organisation (FAO),
- xiii. Caribbean Tourism Organization (CTO),
- xiv. Pan American Health Organization (PAHO),
- xv. Caribbean Electric Utility Services Cooperation (CARILEC),
- xvi. Caribbean Policy Development Centre (CPDC),
- xvii. United Nations Development Fund for Women (UNIFEM),
- xviii. Caribbean Community Climate Change Centre (CCCCC),
- xix. Caribbean Association of Industry and Commerce (CAIC),
- xx. International Federation of the Red Cross and Red Crescent (IFRC)
- xxi. CDEMA sub-regional focal point representatives.

Overall, there has been a remarkable amount of activity over the first three years of existence of the CDM CHC, although many of the results are intangible or process oriented such as collaborations. The various components of the mechanism have been established and are functioning, evidence of which can be found in many areas including documents that have been prepared; ongoing collaborations; awareness raising among the stakeholders; agreements that have been reached; resources that have been attracted and capacity building and training.

### **Context & Constraints**

A consultancy commissioned by the CDEMA Coordinating Unit is currently underway to review the effectiveness of the CDM CHC for promoting coordination, harmonization, awareness, resource mobilization and rationalization amongst Partners. This was done by way of a survey of stakeholders.

The CHC was described by respondents as a space in which development partners could work together to share the lessons learned on other projects. In fact it has encouraged joint

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initiatives, such as the CIDA/DFID partnership and the CDM Harmonised Implementation Programme (HIP) being implemented by the CDEMA CU. Other achievements have been the recent convening of an agricultural insurance seminar in Antigua which resulted from the CHC linking with the agriculture subcommittee. There has also been the development of the Monitoring, Evaluation and Reporting (MER) Framework with input from strategic technical partners like DFID, UNDP and PAHO; and the development of the CDM database.

In terms of CHC challenges identified, these can be grouped into five (5) categories: understanding of the role and function of the CHC; measuring progress; resources and capacity to sustain the mechanism; communication; and the role of CDEMA CU as chair and secretariat.

## **HFA Priority 2: indicators 3-4**

**Regional indicator 3: Institutional mechanism and procedures are in place to carry out trans-boundary risk assessments**

### **Level of Progress achieved**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Means of verification**

No : Regional/sub-regional hazard, vulnerability or risk atlas  
No : Regional/sub-regional risk information system

### **Description**

Information not currently available.

### **Context & Constraints**

Information not currently available.

**Regional indicator 4: Sub/regional early warning systems exist**

### **Level of Progress achieved**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Means of verification**

No : Protocol for dissemination of early warning information

### **Description**

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### Dopplar Radar Network

In October 2003, the European Commission (EC) approved a €13.2 million Regional Project to construct and install four new Doppler digital radars in Barbados, Belize, Guyana and Trinidad & Tobago to replace an old and obsolete radar network installed by the Caribbean Meteorological Organisation (CMO) in the late 1960s and early 1970s. The Project links the new radars with others already in place to form a modern network of nine radars as part of the Caribbean Early Warning System for severe weather conditions.

The Doppler Radar Network is a critical component of the Caribbean Disaster Early Warning System as it supports accurate early identification of significant weather systems that could have significant impacts at the regional, national and local levels. The Network provides continuous real-time radar coverage out to 400 kilometres from each site and which will enable the National Meteorological Services (NMSs) to provide images and guidance to the public and key local sectors, such as the aviation industry, the water resources sector, agriculture and disaster preparedness officials. Provision of this information prior to the onset of the event, results in reduced mortalities and socio-economic losses.

### Flood Early Warning System

Under the CARICOM/Japan Technical Cooperation Agreement, CDEMA with the support of the Japan International Cooperation Agency (JICA) is implementing the Caribbean Disaster Management (CADM) Project Phase II which is designed to build capacity of CDEMA and five (5) of its Participating States (Belize, Dominica, Grenada, Guyana and Saint Lucia) for managing the flood hazards. The project will run over a three year period, starting April 2009 and ending December 2011.

Outputs of the CADM Phase II Project are:

- i. Early Warning System for flood hazards established and implemented at the five Pilot Sites.
- ii. Capacity of the Regional Team to develop Hazard Maps and to establish Flood Early Warning Systems upgraded.
- iii. A Hydrological Database to be established and will function from the Caribbean Institute of Meteorology and Hydrology (CIMH).

### Context & Constraints

Training is a critical aspect of ensuring the sustainability of the radar network. Under the project that supported the establishment of the network, approximately 10 persons from the region (2 from each radar host country and 2 from the Caribbean Institute of Meteorology and Hydrology (CIMH)) received training targeted at maintaining the radars. Since that time CIMH has lost one of its two trained staff and is seeking funding to retrain a replacement. Similar scenarios can occur among the training technicians in host countries.

## HFA Priority 3: indicators 5-7

### Regional indicator 5: Sub/regional information and knowledge sharing mechanism

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available

### **Level of Progress achieved**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Means of verification**

No : Sub/regional web site

> Website of the Caribbean Disaster Emergency Management Agency <http://www.cdema.org>

No : Sub/regional community of practice/e-mail network

### **Description**

Annual Caribbean Conference on CDM

The Comprehensive Disaster Management (CDM) Conference is the Caribbean region's annual signature disaster management forum, which provides the platform for reflection, dialogue and exchange of information on initiatives and issues to advance the CDM agenda and measuring progress in the region within the context of the Enhanced CDM Strategy and Programming Framework 2007-2012.

The CDM Conference is structured to promote good practice, share ongoing research, chart the way forward for the advancement of CDM in the Caribbean and to provide a unique opportunity for facilitating networking among disaster management actors.

Notable growth has been seen since it was first staged in December 2006. Support for planning and staging of the CDM Conferences is typically received from development partners, regional institutions and the public and private sectors.

### **CDEMA Virtual Library**

CDEMA is in the process of developing a Virtual Library (VL) which is intended to provide the Agency with a medium for maintaining a structured, publicly accessible electronic collection of information on relevant Disaster Management topics. This is necessitated by the stipulations of the Agreement establishing CDEMA, and is also required to support the objectives of the Comprehensive Disaster Management (CDM) Strategy. More specifically, the VL is intended to support the work of the CDEMA Documentation Centre, which aims to provide access to a comprehensive collection of resources on disasters and disaster management related information on the Caribbean and of relevance to the Region to support information needs pursuant to CDM.

The primary intended the "clientele" for the VL are stakeholders within the Participating States and other stakeholders inclusive of disaster management practitioners, decision-makers, researchers and the general public. However, given its wide accessibility, the actual user group can be expected to be broader. The VL is expected to become operational by the end of 2010.

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## **Context & Constraints**

Information not currently available.

## **Regional indicator 6: Institutional mechanism in place to monitor risk reduction status and progress at Sub/regional level**

### **Level of Progress achieved**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Means of verification**

No : Monitoring framework/systems

### **Description**

In 2007, CDEMA completed a revised and enhanced regional CDM Framework and Strategy to guide Disaster Risk Management (DRM) programming in the Caribbean for 2007-2012. The CDM Strategy and Framework was developed in-line with Results-Based Management (RBM) principles and approaches. In this context, CDEMA has been investing in building the capacity of Participating States and partners in the region in the areas of RBM and in enhancing monitoring and reporting on identified outputs of the CDM Framework and Strategy.

As a result of the focus on defining and measuring results of the Framework and Strategy, a mechanism for utility-based monitoring and evaluation became a priority. As such, in February 2009, CDEMA engaged an international team of monitoring, evaluation and disaster management experts to collaborate with the CDEMA Coordinating Unit (CU), CDM CHC, NDOs, regional partners and relevant Ministry stakeholders in the development of a Monitoring, Evaluation and Reporting (MER) Framework for the enhanced CDM Strategy and Programming Framework within the region. In this context, it is a useful tool for the CDEMA CU, National Disaster Organizations (NDOs) and National Disaster Coordinators (NDCs), the CDM CHC and other national and regional stakeholders involved in CDM-related initiatives and related monitoring and reporting.

The Framework provides both the strategic direction and pragmatic processes to deal with the nature of CDEMA interventions and scope in order to reduce the monitoring and reporting burden often associated with large and complex programming like that of CDEMA's, by clarifying from the outset the minimum requirements and standards, and by presenting practical tools for undertaking ongoing monitoring and reporting on the Enhanced Regional CDM Strategy and Framework.

The MER Framework will assist in capturing contributions, changes and progress made in achieving the CDM outputs and outcomes from the local, national and regional levels in the Caribbean and from a variety of disaster-management related and other sectoral programming, as well as allowing for lessons to be learned based on gaps that might emerge. Monitoring for accountability is equally a priority for donor agencies. This is part of a larger global need to demonstrate results over time from expended resources in development aid initiatives.

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Regional baseline data was collected by the consulting team in November 2009, and between February and April 2010. The baseline data presents the current state of affairs in relation to the CDM Strategy outputs and the corresponding output indicators, which were developed by and agreed to by all CDEMA PS, the CDEMA CU and the CDM CHC. The baseline data also serves to inform regional programming and knowledge as it highlights both the progress being made and where it has not.

### **Context & Constraints**

Overall, monitoring of the Enhanced Regional CDM Strategy and Framework is in essence the core responsibility of CDEMA CU. In terms of who specifically will be charged with responsibility for each output indicator will require a decision with the CU. At the same time because of the regional nature of the CDM Strategy and the intricate linkages with NDOs and key sectors in each of the CDEMA PS, each level of stakeholder can also contribute to the monitoring of outputs specifically through data collection processes and provision of data directly to the CDEMA CU.

At the national level, while data collection for the majority of indicators remains the responsibility of the CDEMA CU, the CU will depend heavily on the NDOs for provision of that data. In addition, for some of the indicators (i.e. those wherein data is required from other ministries in the country) this data collection will be the responsibility of the NDO during the first phase of the implementation of the M,E&R Framework. For analysis of data, this is the sole responsibility of CDEMA CU. In terms of who specifically will be charged with analysing such data will require a decision with the CU.

### **Regional indicator 7: Sub/regional research institutions for disaster risk reduction exist**

#### **Level of Progress achieved**

4: Substantial achievement attained but with recognized limitations in capacities and resources

#### **Means of verification**

No : Research programmes and projects

#### **Description**

The University of the West Indies Disaster Risk Reduction Centre

In response to the long-recognised need for multidisciplinary training, research and technical expertise in disaster management and risk reduction in Caribbean communities, the University of the West Indies (UWI) saw it necessary to establish the Disaster Risk Reduction Centre (DRRC). Centre emerged out of an initiative to mobilize the University's expertise to assist Caribbean countries devastated by hurricanes during 2004. The Centre has its genesis in the UWI Hurricane Relief Task Force.

The Centre will complement the work of CDEMA. The establishment of the Centre provides an institutional mechanism for harnessing this capacity at the UWI and using it to develop and

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implement training, research, advisory and outreach services to enhance disaster mitigation and management in the Caribbean region.

The focus of the DRRC is both preventive—in the provision of technical, advisory and consultancy services to mitigate the risks of disasters—and palliative, in the rapid mobilisation of human resource capacity within the University, for in situ assistance and project implementation both before and after disasters.

#### Caribbean Community Climate Change Centre (CCCCC)

The Caribbean Community Climate Change Centre coordinates the Caribbean region's response to climate change. Officially opened in August 2005, the Centre is the key node for information on climate change issues and on the region's response to managing and adapting to climate change in the Caribbean.

It is the official repository and clearing house for regional climate change data, providing climate change-related policy advice and guidelines to the Caribbean Community (CARICOM) Member States through the CARICOM Secretariat. In this role, the Centre is recognised by the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Environment Programme (UNEP), and other international agencies as the focal point for climate change issues in the Caribbean. It has also been recognised by the United Nations Institute for Training and Research (UNITAR) as a Centre of Excellence, one of an elite few.

#### Caribbean Institute for Meteorology and Hydrology (CIMH)

The Caribbean Institute for Meteorology and Hydrology (CIMH) is a training and research organisation formed by the amalgamation of the Caribbean Meteorological Institute (CMI) and Caribbean Operational Hydrological Institute (COHI). Responsibility for the operation of the Institute rests with the sixteen (16) Commonwealth Governments which comprise the CMO.

The role and mission of the CIMH is to improve the meteorological and hydrological services and to assist in promoting the awareness of the benefits of these services for the economic well-being of the CMO countries. This is achieved through training, research and investigations, and the provision of specialised services and advice.

The primary functions of the CIMH are to:

- Provide facilities for the training of various categories of meteorological and hydrological personnel;
- Operate as a centre of research in meteorology and hydrology and associated sciences;
- Operate as contractors and consultants on various meteorological and hydrological projects;
- Maintain a service for the upkeep, repair, and calibration of meteorological instruments;
- Provide advice to participating governments on meteorological and hydrological matters; and
- Collect, analyse, and publish meteorological and hydrological data.

#### The University of the West Indies, Seismic Research Centre (SRC)

The Seismic Research Centre (formerly the Seismic Research Unit) of the UWI grew out of a Colonial Development and Welfare (CDW) project established in 1952 with the objective of

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monitoring volcanic activity in the Lesser Antilles and of providing a trained group of scientists in the West Indies who could react quickly to volcanic emergencies. The work of the Centre is currently focused primarily on seismology, volcanology and outreach with a view towards improvement in our ability to provide accurate and up-to-date information.

### **Context & Constraints**

There is currently a close collaboration among regional agencies on the implementation of activities aimed at the reduction of disaster risks. Regional specialist agencies form part of the CDEMA Technical Advisory Committee (TAC) to provide technical guidance, where required, on various aspects of CDM implementation.

## **HFA Priority 4: indicators 8-9**

### **Regional indicator 8: DRR is an integral objective of regional policies and plan**

#### **Level of Progress achieved**

4: Substantial achievement attained but with recognized limitations in capacities and resources

#### **Means of verification**

No : In sub/regional environment plan

> St. George's Declaration on Environmental Sustainability in the OECS (2006)

[http://www.preventionweb.net/files/15775\\_stgeorgesdeclarationinoecs.pdf](http://www.preventionweb.net/files/15775_stgeorgesdeclarationinoecs.pdf) [PDF 192.35 KB]

No : In sub/regional climate change adaptation policy/plan

> Regional Climate Change Framework (2010)

[http://www.preventionweb.net/files/15775\\_regionalclimatechangeframework.pdf](http://www.preventionweb.net/files/15775_regionalclimatechangeframework.pdf) [PDF 1.43 MB]

#### **Description**

Comprehensive Disaster Management Strategy and Programming Framework 2007-2012

The Enhanced Comprehensive Disaster Management (CDM) Strategy and Programming Framework 2007-2012 has received high-level political support in the region which has greatly facilitated its implementation within the region. The Strategy and Framework has been:

- Approved by Heads of Government of 16 Participating States in June 2007.
- Endorsed by the CARICOM Council for Trade and Economic Development (COTED) in April 2008.
- Accepted by CARICOM as the region's platform for implementing the Hyogo Framework of Action.

The goal of the Strategy and Framework is the achievement of sustainable development in the region through the implementation of CDM. CDM is an approach to disaster management

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which:

- Recognizes that strengthening preparedness for better response is critical
- Considers all types of hazards
- Addresses all phases of the disaster management cycle, i.e. prevention, mitigation, preparedness, response, recovery and rehabilitation
- Promotes a “culture of safety”
- Encourages strategic partner alliances
- Advocates for empowering of sector partners to take responsibility for promoting and leading the advancement of CDM in their constituencies.

### **Context & Constraints**

The Enhanced CDM Strategy and Framework has not been formally adopted by non-CDEMA states within the Caribbean region.

### **Reference document:**

> (2006)

[http://www.preventionweb.net/files/15775\\_enhancedcomprehensivedisastermanage.docx](http://www.preventionweb.net/files/15775_enhancedcomprehensivedisastermanage.docx)  
[DOCX 126.15 KB]

**Regional indicator 9: Sub/regional infrastructure projects (viz. cross border transport network, dams etc) have processes to assess disaster risk impacts**

### **Level of Progress achieved**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Means of verification**

No : Standards and procedures for disaster risk impact assessment

### **Description**

In some of the Participating States (e.g. Anguilla, Antigua & Barbuda, Barbados, St. Kitts-Nevis, Saint Lucia), regulations are in place requiring the undertaking of Environmental Impact Assessment for large infrastructure projects, however, the assessment of disaster risks is generally not routinely undertaken as a part of these.

### **Context & Constraints**

There is generally a need within the sub-region for the integration of disaster risk considerations into the Physical Planning Process.

## **HFA Priority 5: indicators 10-14**

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## Regional indicator 10: Sub/regional training/ capacity building institutions exist to support capacity building on DRR at national/regional level

### Level of Progress achieved

4: Substantial achievement attained but with recognized limitations in capacities and resources

### Means of verification

No : Capacity building projects and programs

### Description

The University of the West Indies Disaster Risk Reduction Centre

The Disaster Risk Reduction Centre was established by the University of the West Indies in response to the long-recognised need for multidisciplinary training, research and technical expertise in disaster management and risk reduction in Caribbean communities. The Centre will complement the work of CDEMA.

The focus of the DRRC is both preventive, in the provision of technical, advisory and consultancy services to mitigate the risks of disasters, and palliative, in the rapid mobilisation of human resource capacity within the University, for in situ assistance and project implementation both before and after disasters.

Caribbean Institute for Meteorology and Hydrology (CIMH)

The Caribbean Institute for Meteorology and Hydrology (CIMH) is a training and research organisation established to improve the meteorological and hydrological services and to assist in promoting the awareness of the benefits of these services for the economic well-being of the CMO countries. This is achieved through training, research and investigations, and the provision of specialised services and advice.

The primary functions of the CIMH are to:

- Provide facilities for the training of various categories of meteorological and hydrological personnel;

The University of the West Indies, Seismic Research Centre (SRC)

The Seismic Research Centre was established in 1952 to monitor volcanic activity in the Lesser Antilles and to provide a trained group of scientists in the West Indies who could react quickly to volcanic emergencies. The work of the Unit is currently focused primarily on seismology, volcanology and outreach with a view towards improvement in our ability to provide accurate and up-to-date information.

### Context & Constraints

No information currently available.

### Related links:

> <http://www.uwi.edu/default.aspx>; <http://www.cimh.edu.bb/>; <http://www.uwiseismic.com/>;

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<http://www.caribbeanclimate.bz>

## Regional indicator 11: Sub/regional response mechanism in place to address disaster preparedness, emergency relief and rehabilitation issues across border

### Level of Progress achieved

4: Substantial achievement attained but with recognized limitations in capacities and resources

### Means of verification

No : Sub/regional response plan

### Description

#### Regional Response Mechanism

The Regional Response Mechanism (RRM) is an arrangement established for coordination of disaster response among CDEMA Participating States, and Regional and International agencies. The RRM is coordinated by the CDEMA Coordinating Unit and ensures speedy response, and effective and efficient use and management of resources provided by countries and donor agencies for disaster response.

The levels of response for the RRM are:

- Level 1 - Local Incident - no external assistance required.
- Level 2 - Event does not overwhelm national capacity to respond but some external assistance required.
- Level 3 – Event overwhelms capacity of affected State to respond. Major external operation mounted.

#### Rapid Needs Assessment Team

The Rapid Needs Assessment Team (RNAT) is a core team of subject matter experts to support / validate damage assessment in affected states after a disaster. The RNAT is typically deployed in the field for 2 to 3 days after a disaster has struck. Logistical arrangements of the RNAT are supported by the United Nations Development Programme (UNDP) office for Barbados and the Eastern Caribbean.

Priority focus areas of the assessment by the RNAT are health facilities, damage assessment (infrastructure), housing and shelter, water & sanitation, transportation & telecommunication facilities.

#### Caribbean Disaster Relief Unit

The Caribbean Disaster Relief Unit (CDRU) is a mechanism which provides for the dispatching of Military/Police resources in an affected State. The CDRU consists of Command Element and Troops as necessary. The mission of the CDRU is to provide relief to any Caribbean country affected by a disaster. Its functions are to:

- Provide an On-Scene Commander and staff for all CARICOM military/police units;
- Provide controlling Headquarters for all incoming Forces;

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- Be responsible for coordinating disaster relief efforts;
  - Provide communications support to NEOC as necessary;
  - Support initial Damage Assessment; and
  - Provide a link between NEOC, CDEMA, ECDG.

### **Context & Constraints**

No information currently available.

### **Regional indicator 12: Sub/regional contingency mechanism exists to support countries in post disaster recovery**

#### **Level of Progress achieved**

4:Substantial achievement attained but with recognized limitations in capacities and resources

#### **Means of verification**

No : Sub/regional contingency plan

> Caribbean Development Bank Disaster Management Strategy and Operational Guidelines 2009 (2009) [http://www.preventionweb.net/files/15775\\_cdbdmstrategyguidelines2009.pdf](http://www.preventionweb.net/files/15775_cdbdmstrategyguidelines2009.pdf) [PDF 461.73 KB]

#### **Description**

Sub-Regional Focal Point Mechanism

Under Article XVI and in accordance with Article VIII (c) of the CDEMA Agreement, the CDEMA Council is empowered to: "...designate national disaster and disaster management organizations as Sub?Regional Disaster Emergency Response Operational Units with prior consent of the Governments of the Participating States." These Sub?Regional Disaster Emergency Response Operational Units are geographically formed groups for which response coordination support is provided by four island states also called Sub?regional Focal Points (SRFPs). In that context, it is anticipated that the SRFPs shall maintain a pool of resources that can be applied to emergency response and recovery for any one of the Participating States (PS) which fall in its geographic area. The SRFP shall also maintain a level of preparedness to facilitate timely response to any disaster occurring in its Participating States.

Four states: Jamaica, Antigua, Barbados and Trinidad and Tobago have been designated as SRFPs and coordinate response initiatives on behalf of CDEMA. The SRFP may be requested by the CDEMA CU to support the coordination of resources to the impacted PS and/or to monitor and guide the CDEMA PS within their sub?region.

In recognition of the potential catastrophic impacts of the increased intensity and frequency of meteorological hazards, the CDEMA CU with financing support from the Austrian Development Agency (ADA) and the ACP-EU Natural Disaster Facility, has been making efforts to strengthen the SRFPs. Specifically, the status of the coordination capacities of the SRFPs is being assessed, areas for strengthening identified; Sub-regional Operating Procedures

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developed and exercised; an annual SRFP Audit established and implemented; and response equipment procured and training undertaken in emergency response operations.

#### Eastern Caribbean Donor Group

The Eastern Caribbean Donor Group (ECDG) is a mechanism for cooperation by development partners operating in Barbados and the Eastern Caribbean and is comprised of four thematic areas: poverty, trade, governance, and environment, climate change and disaster management.

The ECDGDM facilitates an effective, timely and coordinated response operation, in the event of a rapid onset emergency and request from an affected Member State and in support of existing regional mechanism.

#### **Context & Constraints**

No information currently available.

#### **Regional indicator 13: Sub/regional catastrophe risk pooling facility available**

#### **Level of Progress achieved**

5: Comprehensive achievement with sustained commitment and capacities at all levels

#### **Means of verification**

No : Sub/regional catastrophe risk pooling facility

#### **Description**

The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is a risk pooling facility, owned, operated and registered in the Caribbean for Caribbean governments. It is designed to limit the financial impact of catastrophic hurricanes and earthquakes to Caribbean governments by quickly providing short term liquidity when a policy is triggered. It is the world's first and, to date, only regional fund utilising parametric insurance, giving Caribbean governments the unique opportunity to purchase earthquake and hurricane catastrophe coverage with lowest-possible pricing.

CCRIF came about as the direct result of Caribbean governments' consideration of their exposure to catastrophe hazards, as vividly demonstrated in the summer of 2004 when Hurricane Ivan crossed the Caribbean Sea, causing major damage in Grenada, Jamaica and the Cayman Islands. At a special meeting of the heads of government of the members of the Caribbean Community (CARICOM), to consider actions after Ivan, a formal request was made to the World Bank to assist in development of a government insurance programme.

Sixteen governments are currently members of CCRIF: Anguilla, Antigua & Barbuda, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago and the Turks & Caicos Islands.

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On 19 August, 2009, CCRIF and CDEMA signed a Memorandum of Understanding (MOU) which formalised a partnership between the two agencies aimed at strengthening the region's resilience to disasters. Under the agreement, CDEMA and CCRIF will promote and introduce new initiatives to assist regional governments in understanding and financing catastrophe risk exposure and to promote the sharing of information on the hazards.

### **Context & Constraints**

#### d) Context and Constraints

- A number of storms have caused significant damage in the CDEMA Participating States. However, since the wind-related losses estimated via the parametric formulae in the CCRIF policies were below the trigger threshold, policies for those states were not triggered and therefore there was no payout.
- The high deductible of CCRIF policies means that it only covers major catastrophe events in which national economies are severely impacted.
- The concept of parametric is still somewhat poorly understood, so clients expect their 'insurance policy' to cover everything.
- Current absence of coverage for rainfall events – flood most frequently occurring hazard in the region.

#### **Related links:**

> <http://http://www.ccrif.org/publications/strategic-plan-2009-2012>

### **Regional indicator 14: Sub/regional information exchange mechanism in place for effective communication during trans-boundary disasters**

#### **Level of Progress achieved**

4: Substantial achievement attained but with recognized limitations in capacities and resources

#### **Means of verification**

No : Emergency communication protocols/plans

> Regional Coordination Centre Standard Operating Procedures (2010)

[http://www.preventionweb.net/files/15775\\_rccsop2010.doc](http://www.preventionweb.net/files/15775_rccsop2010.doc) [DOC 569.00 KB]

#### **Description**

The Regional Coordination Centre (RCC) is the central coordinating focal point within the CDEMA Coordinating Unit that is dedicated to the coordination and management of any regionally declared emergency or disaster event. The RCC is staffed by a core group of six (6) persons drawn from the general CDEMA CU staff and supplemented as necessary by volunteers. It is activated only when it is clear that an impact is imminent (Warning Issued) on a CDEMA PS, or an impact has occurred. This condition must be established through the relevant competent authority by hazard, or by an observed and officially reported actual event.

The RCC forms the nucleus of response activities and liaises directly with the national

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emergency operations centres (NEOCs) of the impacted Participating State(s) or other nationally declared coordinating mechanism, as well as with response and donor partners. The RCC works in support of national and other designated operations centres and as such will not, unless specifically requested to do so by an official source, act on behalf of or represent any national entity except to share information on damage, needs and response activities.

The RCC generates reports (Information Notes, Situation Reports etc) for sharing with the public, media and members of the Regional Response Mechanism.

### **Context & Constraints**

No information currently available.

## **Synthesis of national progress**

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### **Priority for action 1**

**Summary** (*from the National HFA Monitor*) 7 (out of 18) countries have completed their interim report

- 2 with PRSPs that include DRR initiatives
- 2 with CCA/ UNDAFs that include DRR elements
- 4 with climate change policy and strategy that include DRR
- 4 having included DRR in development plans and strategies
- 2 with DRR elements in their national development plan
- 6 with a specific allocation of funds for DRR in the national budget
- 5 with operational national multi stakeholder platforms
- 2 having legal responsibilities and budget allocation for DRR at the local government level

### **Description**

Core Indicator 1: National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels.

Three (3) states, Anguilla, Barbados and Saint Lucia, report that specific legislation regarding disaster risk reduction has been enacted, with associated policies provides for the decentralization of responsibilities and capacities. Two (2) other states Antigua and Barbuda and Virgin Islands, report that the CDM Strategy and Framework have been approved by Cabinet and forms the basis of the disaster management programme in those states. The other remaining states which submitted HFA reports for the current review period, St. Kitts-Nevis and Turks and Caicos Islands, report that disaster risk reduction considerations have been included to some extent in their National Physical Development Plans.

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Core Indicator 2: Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels.

The CDEMA Coordinating Unit engages with donor/development partners to access funding for the implementation of disaster risk reduction activities within the 18 Participating States.

Anguilla reports strong Government support in terms of allocation of resources for disaster risk reduction activities evidenced by the implementation of a number of plans and projects. Similarly, Virgin Islands reports that a dedicated budget is available to the Department of Disaster Management (DDM) for implementation of the Territory's disaster management plan. Additionally, each sector in that state has allocated funds towards implementation of DRR initiatives.

Antigua and Barbuda reports that much of the country's budget is still being allocated based on the traditional line items and in the absence of a clear disaster management policy this poses a major problem as Ministries are not able to implement any meaningful disaster mitigation programmes.

Barbados reports that the budget of the Department of Emergency Management (DEM) is dedicated to the administration of the department, and that limited funding is available for response, rehabilitation with financial commitments being given for recovery (reconstruction) following an impact.

Funding for the National Emergency Management Agency (NEMA) in St. Kitts-Nevis, the National Emergency Management Organisation (NEMO) in Saint Lucia, and the Department of Disaster Management in the Turks and Caicos Islands, is provided from the national budgets. Saint Lucia also indicates that support agencies have budgetary allocations that indirectly address some disaster risk reduction concerns.

Core indicator 3: Community Participation and decentralisation is ensured through the delegation of authority and resources to local levels.

Most of the CDEMA Participating States, due to their small size, do not have local government systems.

Anguilla reports an operational public outreach and education strategy throughout that state's communities.

Antigua and Barbuda reports that there is no budgetary allocation to community disaster management, however, there is a community disaster management programme in existence comprised of Volunteers and some government employees, civil society and the private sector.

In Barbados, District Emergency Organisations (DEOs) are delineated to provide national coverage for community involvement in disaster risk reduction. The DEOs have been in operation for more than 25 years, but require a major re-haul to bring administration and operations more in line with the CDM expanded mandate.

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Virgin Islands reports a functional community preparedness programme in addition to other programmes taking place within other sectors that support the implementation of disaster risk reduction at the community level.

In St. Kitts-Nevis community participation is active and is encouraged. For the most part, however, funding is secured via project support and community fund raising initiatives.

In St. Lucia, Volunteers are the primary mechanism through which the community disaster management programme in that state is implemented. The NEMO organizational structure allows for the involvement of Community Development Officers as Ex-Officio members of the District Disaster Management Committees.

The Turks and Caicos Islands does not report the existence of any organized community disaster management programme.

Core indicator 4: A national multi sectoral platform for disaster risk reduction is functioning. The CDM Strategy and Programming Framework 2007-2012 provides a multi-sectoral platform for disaster risk reduction within the CDEMA participating states. The completion of the regional disaster management legislation and policy, which can then be adapted at the national level will provide the required support to the full functioning of the framework.

### **Context & Constraints**

The primary constraint indicated by reporting states is that the agencies responsible for disaster management must compete with other agencies for limited national resources based on national priorities. The majority of reporting states also cite staffing constraints of the disaster management agencies.

### **Priority for action 2**

**Summary** (from the *National HFA Monitor*) 7 (out of 18) countries have completed their interim report

- 4 carrying out multi-hazard risk assessment
- 3 with disaster loss databases
- 6 with national operational early warning systems in existence
- 6 participating in regional/ sub-regional DRR programmes and projects
- 4 with a system to systematically report, monitor and analyze disaster losses
- 4 with communication systems and protocols in place to disseminate early warning information

### **Description**

Core Indicator 1: National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.

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Anguilla reports that a pilot of the hazard, risk and vulnerability (HRV) assessment approach has been undertaken and it is anticipated a further two models will be tested before a final decision is taken to roll out an appropriate model in the community.

Antigua and Barbuda reports that a lack of finance, and the absence of clearer commitment to the risk reduction process is a hindrance to the undertaking of national and local risk assessments.

In Barbados, vulnerability assessments, hazard maps and risk assessments for critical infrastructure are not generally applied to be able to holistically inform development planning. However, site specific vulnerability assessments have been undertaken and hazard maps developed for the Scotland District area which constitutes 1/7 of the island's land mass that is prone to landslides and soil erosion.

St. Kitts-Nevis reports that multi-hazard post Hurricane Georges risk assessment for key sectors was undertaken in 2001, and now needs to be updated to be able to significantly influence development planning decisions. This will require significant financial resources and supporting expertise.

In Saint Lucia, some risk assessments have been conducted but not all hazards have been mapped for the country. Also the resolution (1:25,000) of some of the available maps may not be appropriate for the required level of decision-making.

An HVA was undertaken in the Turks and Caicos Islands in 2008, and portions of this have been adopted in the national framework, with specific to the use of rain fall flood maps to inform the Physical Planning Board.

The Virgin Islands reports that the methods to undertake a Hazard Vulnerability and Risk Assessment have been incorporated into the requirements for Environmental Impact Assessment (EIA). Further, development proposed within designated hazardous areas is required to complete a Hazard Assessment.

Core Indicator 2: Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.

Anguilla reports that a programme is currently in place to share risk information with large developers and this initiative is maturing.

In Antigua, a disaster loss data base is maintained by the National Office of Disaster Services (NODS), however more work is needed to mandate the use of this information into the development process.

In Barbados, some databases on hazards and vulnerabilities have been compiled by individual agencies and these have informed limited decision making within the specific ambit of the agencies managing them. Under the Emergency Management Act 2006, the DEM is able to access any available information for disaster risk reduction and disaster management purposes.

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St. Kitts-Nevis reports that a disaster loss database (mainly hard copy files) is maintained and disaster losses are reported, monitored and analysed. The reports generated are used for planning purposes.

In Saint Lucia, the Saint Lucia Met Service (SLMS) maintains an archive of weather data collected from multiple manned and automatic platforms in various time scales. Weather data is disseminated on various networks in accordance with established regulations.

The Turks and Caicos Islands report minor progress in this area, noting that there is a disconnect between any reports that are produced and their implications for various agencies, often resulting in reports not being fully utilized in the planning process.

In the Virgin Islands, an Information Management System (IMS) has been developed to monitor, evaluate and report on the CDM Strategy and Policy. The IMS also allows for the preparation of reports for submission to Cabinet, to CDEMA and other local, regional and international entities.

Core Indicator 3: Early warning systems are in place for all major hazards, with outreach to communities.

Anguilla reports that a robust backbone system is in place which has been tested and documented.

Antigua and Barbuda reports that the vast majority of persons living in disaster prone areas are usually targeted by the media houses, with strong support from the community and community leaders.

Hurricanes, and floods, are the main hazards to which Barbados is vulnerable and the Early Warning Systems (EWS) for these meteorological threats are well established. The Barbados Meteorological Services is the key warning agency which utilizes Doppler Radar Technology, satellite imagery and other technologies to provide forecasting. The Met Service then collaborates with the DEM and the Emergency Broadcast Agencies in timely dissemination of warnings to the public, through a series of bulletins, advisory, watches and warnings. An EWS for floods has been initiated in one of the flood prone communities in Barbados where the population has been severely impacted. Plans are in train to replicate this in other flood prone communities in support of other flood mitigation options. A draft warning protocol for tsunamis has been developed for Barbados, although the mass notification process is being further enhanced by the provision of sirens in key vulnerable locations and the incorporation of cellular technology.

St. Kitts-Nevis reports that risk prone communities receive timely and understandable warnings of impending predictable hazard events, such as hurricanes.

In Saint Lucia, a functional early warning system (EWS) is in place for weather related hazards and volcanoes down to the community level. A comprehensive multi-hazard EWS needs to be established in that state to address all deficiencies in current systems.

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In relation to the slow onset hazards, the Turks and Caicos Islands has a very good EWS as that state relays information from the Bahamas Meteorological Office to the general public. In relation to the slow onset hazards the TCI has a very good early warning system as we relay information from the Bahamas Meteorological Office to the General Public. Regarding rapid onset hazards such as Tsunamis, though information can be received very rapidly, its dissemination is very challenging.

In the Virgin Islands, an EWS is in place to warn the public of impending dangers as required by the Disaster Management Act. The system consists of state of the art technology managed by technically trained personnel and supported by the media through MOUs.

Core Indicator 4: National and local risk assessments take account of regional/trans-boundary risks, with a view to regional cooperation on risk reduction.

The CDEMA Coordinating Unit promotes and facilitates the exchange of disaster risk reduction information and best practice, training, cooperation and collaboration among its members in the context of the Comprehensive Disaster Management Strategy and Framework. The Regional Security System (RSS) also coordinates security resources and provides an enhanced response capability in time of emergency/disaster.

Limited progress has generally been made at the national level with respect to the consideration of transboundary risks in national and local risk assessments.

### **Context & Constraints**

Generally, the Participating States recognize the importance of vulnerability assessments and hazard mapping and the significant impact that the data gathered from these may make to the development planning process, however, most states also indicate that the relevant agencies are faced with human capacity and other resource constraints which limit their capacity to undertake these.

With respect to EWS, there is generally a need for increasing the capacity of the states, with respect to training and equipment.

### **Priority for action 3**

**Summary** (from the *National HFA Monitor*) 7 (out of 18) countries have completed their interim report

- 3 with national disaster information system publicly available
- 5 having included DRR in the national educational curriculum
- 5 having included DRR in primary or secondary school curriculum
- Ø having professional DRR education programmes
- 2 having conducted studies on the economic costs and benefits of DRR
- 2 having included DRR in national research agenda
- 6 having a country wide public awareness strategy

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## Description

Core Indicator 1: Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)

All of the disaster management agencies of the reporting states have established, or are in the process of establishing a website which provide basic disaster management information to the public. Most also currently have, or are developing a documentation centre accessible to the general public. Additionally, dissemination of disaster management information through lectures to schools, community groups etc., as well as use of the mass media, are commonly used strategies amongst the states to reach a wide range of stakeholders.

Core Indicator 2: School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.

Most of the reporting states indicating that aspects of disaster risk reduction have been included in the school curriculum at least at the primary and secondary levels, as part of existing subjects, such as social studies, rather than as a stand alone subject. Barbados, Saint Lucia and St. Kitts-Nevis also report the availability of educational programmes on disaster risk reduction at the tertiary level.

Core Indicator 3: Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.

Generally states report minimal or introductory level progress in the undertaking of multi-risk assessments and cost-benefit analysis.

Core Indicator 4: Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.

Most of the reporting states indicate the existence of countrywide public awareness and education strategies aimed at providing information to the general public which will assist them in reducing their vulnerability to disasters. These generally include a number of methods such as use of the mass media and outreach programmes undertaken by volunteers. Public awareness strategies may or may not target specific communities.

## Context & Constraints

Funding for the implementation of public education and awareness strategies, as well as the achievement of real behavioural change as a result of such programmes are the most often cited constraints by states.

## Priority for action 4

**Summary** (from the *National HFA Monitor*) 7 (out of 18) countries have completed their interim report

- 5 with mechanisms in place to protect and restore regulatory ecosystems services
- 2 with social safety nets to increase the resilience of risk prone households and communities
- 3 taking measures to address gender based issues in recovery
- 4 investing in reducing the risk of vulnerable urban settlements
- 3 explicitly incorporating budget for DRR in post-disaster recovery programmes
- 3 taking account of the impacts of disaster risk in Environment Impact Assessment (EIA)

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## **Description**

Core Indicator 1: Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.

The CDM Strategy and Programming Framework includes various programmatic efforts that contribute to "focusing on risk reduction in the future from natural and man-made disasters" and "improving the coordination of disaster management, physical planning and environmental management to ensure that these considerations are incorporated in decision making in an integrated fashion". At the national level, the importance of the inclusion of disaster risk reduction and climate change adaptation considerations in environment planning and management is generally recognized among the reporting states, however, these are not always the integral objective of related policies and plans.

Core Indicator 2: Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.

In the majority of the reporting states, social safety nets exist and vulnerable populations are tracked to some extent by various agencies for the provision of different forms of assistance. In the case of Barbados, there is a dedicated effort at the national level to implement a poverty alleviation agenda aimed at targeting the most vulnerable in the community including components of disaster management and disaster risk reduction. The Virgin Islands has also developed a Welfare Policy, as well as a policy on disaster assistance.

Core Indicator 3: Economic and productive sectoral policies and plans have been implemented to reduce the vulnerability of economic activities.

Generally, progress in the reporting states on this indicator is low.

Anguilla reports that economic development plans are in the process of being developed for individual sectors.

Barbados reports that some progress has been made by the Ministry of Finance and Economic Affairs to formulate policies covering elements of economic activity to reduce disaster vulnerability in key economic sectors. Additionally disaster management and disaster risk reduction have been successfully mainstreamed in the Tourism Sector and the sector usually accesses incentives to reduce vulnerability.

The Virgin Islands CDM strategy notes the need for integration of CDM planning in the private sector, in particular the tourism, financial, banking and insurance sectors and supports the Government's belief that vulnerability to natural and man-made hazards stifles economic opportunities and entrepreneurship, making investment costlier.

Core Indicator 4: Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.

In most of the reporting states, building codes and zoning regulations are available and a

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development control authority is responsible for the policing and enforcement of development standards.

### **Context & Constraints**

Generally there is a need for incorporating disaster risk management into the environmental, social, economic/financial sectors with consideration given to incentives to support such efforts.

More stringent enforcement of the application of development standards is generally required.

### **Priority for action 5**

**Summary** (from the *National HFA Monitor*) 7 (out of 18) countries have completed their interim report

- 4 having national programmes or policies to make schools and health facilities safe in emergencies
- 3 conducting training and mock drills in school and hospitals for emergency preparedness
- 6 having contingency plans and procedures to deal with major disasters
- 5 having financial arrangements in place to deal with major disasters
- 5 having capacity in damage and loss assessment methodologies
- 4 having catastrophe insurance facilities in place

### **Description**

Core Indicator 1: Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.

A number of policies, plans and programmes related to disaster risk management are in place at the national level. Generally there is a need for enhancement of technical and institutional capacities for more effective implementation.

Core Indicator 2: Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes.

Disaster management plans are currently in place in all of the reporting states with periodic testing taking place. The CDEMA Coordinating Unit (CU), with support from the ACP-EU Natural Disaster Facility, has an ongoing initiative to update, enhance and exercise national disaster plans in the Participating States.

Core Indicator 3: Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.

Most of the reporting states have national emergency/contingency funds which are available in the event of an emergency. CDEMA also maintains a standing Emergency Fund which is available to support emergency response to States severely impacted by hazards.

Core Indicator 4: Procedures are in place to exchange relevant information during hazard

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events and disasters, and to undertake post-event reviews.  
All of the reporting states have arrangements and procedures in place to undertake damage assessment and needs analysis post event.

### **Context & Constraints**

National level capacities for disaster response need to be enhanced through increased availability of financial resources, training and greater political support.

## **Regional projects & initiatives**

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### **Haiti Technical Assistance Programme**

**Start Date:** 29 Jan 2010

**End Date:** 29 Jul 2010

**Related to theme:** Capacity Development; Complex Emergency; Recovery;

**Region:** Americas;

**Country:** Haiti;

#### **Description of the project/initiative:**

While CDEMA's Participating States, particularly those on the northern rim of the Caribbean Plate have experienced seismic impacts of varied intensity, the January 12, 2010 earthquake in Haiti was by far the most devastating to date. CDEMA's involvement and partnership in the rebuilding process has focused on capacity building at both the national and community levels through assistance from the Australian Agency for International Development (AusAID) and other international partners. A financial contribution in the amount of AU \$1 million in support of provision of relief assistance to Haiti was provided through the CDEMA CU. Additionally, funds provided by AusAID under this agreement was used to support overseas development assistance eligible project activities including deployment of response personnel, provision of emergency supplies, operational support and capacity building.

In mid-2010, AusAID provided a second grant of AU \$1 million to support disaster risk reduction initiatives within the PS aimed primarily at enhancing the leadership capacity of DRR leaders within the states, and enhancing the level of preparedness of the states for the earthquake, tsunami and flood hazards.

Further, a longer term cooperation programme between CDEMA and AusAID is in the process of being developed. This cooperation programme will focus on the integration of DRR and CCA initiatives in the education sector; and provision of technical capacity and financial support to the PS for implementation of DRR initiatives.

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**Total Costs (in USD):** 999,336.16

**Implementing agencies:**

Caribbean Disaster Emergency Management Agency (CDEMA)

**Funding source/agency:**

Australian Agency for International Development (AusAID)

**Contact Person:**

Jeremy Collymore, Executive Director, CDEMA

**Mainstreaming Climate Change into Disaster Risk Management for the Caribbean Project**

**Start Date:** 30 Nov 2008

**End Date:** 30 May 2011

**Related to theme:** Climate Change; Disaster Risk Management; Vulnerable Populations;

**Region:** Americas;

**Country:** Anguilla; Antigua and Barbuda; Bahamas; Barbados; Belize; British Virgin Islands; Dominica; Grenada; Guyana; Haiti; Jamaica; Montserrat; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Turks and Caicos Islands;

**Description of the project/initiative:**

With the onset of climate change and its many potentially crippling effects to sectors throughout the Caribbean, it is imperative that a programmatic approach to address these adverse effects is formulated. CDEMA has therefore partnered with the Austrian Development Agency (ADA) to implement the Mainstreaming Climate Change into Disaster Risk Management for the Caribbean Region project. This project is valued at 689,425 Euro and is expected to be implemented in the Region over a two year period, ending November 30th, 2010.

This project will aid in the reduction of risks created by climate change and disasters, by strengthening capacity throughout the region and promoting community resilience. The project directly supports the CDM Strategy and Programming Framework, Priority Outcome four (4) which promotes the enhancement of community resilience to PS to mitigate and respond to the adverse effects of climate change and disasters. The project targets groups that are particularly vulnerable to climate change and disaster utilizing gender-sensitive and participatory methods.

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A number of regional institutions, including the Caribbean Community Climate Change Centre (CCCCC), the Caribbean Institute of Meteorology and Hydrology (CIMH), the International Federation of the Red Cross and Red Crescent Societies (IFRCS) and the Caribbean Policy Development Centre (CPDC) will be key partners in the implementation of the project.

**Total Costs (in USD):** 923,047.99

**Implementing agencies:**

Caribbean Disaster Emergency Management Agency (CDEMA)  
Caribbean Community Climate Change Centre (CCCCC)  
Caribbean Institute of Meteorology and Hydrology (CIMH)  
International Federation of the Red Cross and Red Crescent Societies (IFRCS)  
Caribbean Policy Development Centre (CPDC)

**Funding source/agency:**

Austrian Agency for International Development

**Contact Person:**

Jeremy Collymore, Executive Director, CDEMA

**Institutional Support and Capacity Building for Disaster Management in the Caribbean Project**

**Start Date:** 01 Aug 2007

**End Date:** 30 May 2011

**Related to theme:** Capacity Development; Disaster Risk Management; Early Warning; Governance; Information Management;

**Region:** Americas;

**Country:** Anguilla; Antigua and Barbuda; Bahamas; Barbados; Belize; British Virgin Islands; Dominica; Dominican Republic; Grenada; Guyana; Haiti; Jamaica; Montserrat; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Turks and Caicos Islands;

**Description of the project/initiative:**

Disaster preparedness and prevention is part of the European Commission's (EC) core mandate. The Caribbean Forum of African, Caribbean and Pacific States (CARIFORUM) secured a 3.4 million Euro grant under the 9th European Development Fund (EDF) to support the region's disaster preparedness programme, particularly through a programme entitled the

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Institutional Support and Capacity Building for Disaster Management in the Caribbean Project. The EC's contribution is aimed at increasing the region's capacity in the management of natural and man-made disasters, with an emphasis on risk reduction, preparedness, early warning, prevention and mitigation. The Grant will support the development and implementation of the region's strategy for Comprehensive Disaster Management. Emphasis will be placed on institutional strengthening, local capacity building, regional dissemination of best practices, training and awareness raising, and the incorporation of hazard information into development planning and decision-making. The three (3) year project which commenced in August 2007, is in its final year of implementation, and is scheduled to end in May 2011.

**Total Costs (in USD):** 4,557,424.13

**Implementing agencies:**

Caribbean Disaster Emergency Management Agency (CDEMA)

**Funding source/agency:**

European Commission

**Contact Person:**

Caribbean Disaster Emergency Management Agency (CDEMA)

**Disaster Risks Management Sub-Regional Programme**

**Start Date:** 15 Nov 2009

**End Date:** 15 Nov 2011

**Related to theme:** Community-based DRR; Disaster Risk Management;

**Region:** Americas;

**Country:** Antigua and Barbuda; Bahamas; Barbados; Belize; British Virgin Islands; Dominica; Grenada; Guyana; Haiti; Jamaica; Montserrat; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Turks and Caicos Islands;

**Description of the project/initiative:**

Through the ACP-EU Natural Disaster Facility, CDEMA has received support to the tune of 1,868,000.00 Euros for the Disaster Risks Management Sub-Regional Programme which is a two (2) year programme scheduled to be completed in November, 2011. Project beneficiaries include the National Disaster Offices (NDOs) within the CDEMA PS in undertaking planning and institutional arrangements for building more resilient communities. Governments of PS of CDEMA will ultimately benefit from improved capacity for making planning arrangements and better prepared and more resilient communities in the face of future disasters.

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**Total Costs (in USD):** 2,508,189.65

**Implementing agencies:**

Caribbean Disaster Emergency Management Agency (CDEMA)

**Funding source/agency:**

ACP-EU Natural Disaster Facility

**Contact Person:**

Jeremy Collymore, Executive Director

**Disaster Risk Management Strategy and Plan of Action for the Tourism Sector in the Caribbean**

**Start Date:** 01 Jan 2007

**End Date:** 30 Dec 2009

**Related to theme:** Disaster Risk Management;

**Region:** Americas;

**Country:** -- not complete --

**Description of the project/initiative:**

Between January 2007 and December 2009, the Inter-American Development Bank (IDB) provided support under its Regional Public Goods (RPG) initiative to the CDEMA Participating States, through a project entitled Development of a Disaster Risk Management Strategy and Action Plan for the Tourism Sector in the Caribbean. The RPG initiative complements traditional technical assistance by providing a development tool specifically to fill a gap of instruments to promote policy reform for development at the regional level. It focuses on policy-based consensus building interventions with the objective of enabling the environment to enhance competitiveness and foster sustainability of cooperative outcomes.

The objective of the RPG project which was executed by the CDEMA CU was the development and adoption of a Regional Public Good that is a regional risk management framework for the tourism sector in the Caribbean that contributes to the overall goal of reducing the vulnerability of the tourism sector to natural hazards. To fulfill this objective, the project financed two components which provided for the development of a regional disaster risk management strategy for sustainable tourism including the formulation of standards for vulnerability assessments and risk mapping applied to the tourism sector; and institutional strengthening of CDEMA, the Caribbean Tourism Organization (CTO) and other stakeholders in disaster risk management for sustainable tourism. IDB support for this initiative was US\$800,000.00.

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**Total Costs (in USD):** \$800,000

**Implementing agencies:**

Caribbean Disaster Emergency Management Agency (CDEMA)  
Caribbean Tourism Organisation (CTO)

**Funding source/agency:**

Inter-American Development Bank

**Contact Person:**

Jeremy Collymore, Executive Director, CDEMA

**Caribbean Disaster Management Project**

**Start Date:** 01 Apr 2009

**End Date:** 30 Dec 2011

**Related to theme:** Capacity Development; Community-based DRR; Early Warning; Risk Identification & Assessment;

**Region:** Americas;

**Country:** Belize; Dominica; Grenada; Guyana; Saint Lucia;

**Description of the project/initiative:**

The Caribbean Disaster Management (CADM) Project Phase II is being implemented under the CARICOM/Japan Technical Cooperation Agreement through the CDEMA and with the support of the Japan International Cooperation Agency (JICA). The project is expected to build capacity and strengthen institutional mechanisms to mitigate damages in the CDEMA Participating States particularly for the flood hazard. Floods have been identified as the most common and frequent event that impact the eighteen (18) PS of CDEMA.

During the period 2002-2006, significant achievements of the first phase of the CADM Project included the establishment of a regional team of experts drawn from regional institutions to undertake Flood Hazard Mapping and Community Disaster Planning; the institution of a framework for the standardization of methodologies for Flood Hazard Mapping and Community Disaster Planning; and the building of capacities through technology transfer, knowledge enhancement and equipment.

Phase II is an expansion of the CADM Project being implemented over a three (3) year period, starting April 2009 and ending December 2011. CADM Phase II will utilize the mechanism, processes and products previously established to prepare Flood Hazard Maps and community-based disaster management plans.

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The Project will benefit from the technical expertise of a number of regional institutions which include the University of the West Indies (UWI) through the Disaster Risk Reduction Centre, the Caribbean Institute of Meteorology and Hydrology (CIMH) and the University of Guyana as well as national level Community Based Organizations Organizations. This Project is being piloted in five States, namely, Belize, Dominica, Grenada, Guyana and Saint Lucia.

**Total Costs (in USD):** -- not complete --

**Implementing agencies:**

Japan International Cooperation Agency (JICA)  
Caribbean Disaster Emergency Management Agency (CDEMA)  
University of the West Indies Disaster Risk Reduction Centre (DRRC)  
Caribbean Institute of Meteorology and Hydrology (CIMH)  
University of Guyana

**Funding source/agency:**

CARICOM/Japan Technical Cooperation Agreement

**Contact Person:**

-- not complete --

**Comprehensive Disaster Management Harmonised Implementation Programme Phase I**

**Start Date:** 01 Apr 2008

**End Date:** 31 Mar 2013

**Related to theme:** Capacity Development; Community-based DRR; Disaster Risk Management; Education & School Safety; Governance; Risk Identification & Assessment; Social Impacts & Resilience; Structural Safety;

**Region:** Americas;

**Country:** Anguilla; Antigua and Barbuda; Barbados; Belize; British Virgin Islands; Dominica; Grenada; Guyana; Haiti; Jamaica; Montserrat; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Turks and Caicos Islands;

**Description of the project/initiative:**

Several donor/development partners provide support to CDEMA for the development and implementation of disaster risk reduction initiatives in the Participating States.

The Comprehensive Disaster Management Harmonized Implementation Programme (Phase 1)

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is a five year programme aimed at enhancing institutional support and community resilience to mitigate and respond to and recover from the adverse affects of climate variability and change and disasters. The programme is unique as it promotes a multi-donor harmonized approach for the support of the enhanced Comprehensive Disaster Management (CDM) Strategy.

The proposed programme is a direct contribution to the Canadian International Development Agency (CIDA) Caribbean Disaster Risk Management Program (CDRMP) 2008-2012; the United Kingdom Department for International Development (DFID) Draft Regional Assistance Plan for the Caribbean 2007-2010 and the enhanced CDM Strategy and Programming Framework 2007-2012.

The programme is directly aligned to Priority Outcomes 1 and 4 of the enhanced CDM Strategy and Programming Framework. In this regard, the programme's objectives are:

1. Enhanced institutional support for CDM Program implementation at national and regional levels.
2. Enhanced community resilience in CDERA states/ territories to mitigate respond to and recover from the adverse effects of climate variability and change and disasters.

**Total Costs (in USD):** \$11,706,192

**Implementing agencies:**

Caribbean Disaster Emergency Response Agency (CDEMA)  
Secretariat of the Organization of Eastern Caribbean States (OECS)

**Funding source/agency:**

The core funding agencies for the programme are the Canadian International Development Agency (CIDA) and the UK Department for International Development. Complementary contributions are provided by donor partners contributing to a larger initiative such a

**Contact Person:**

Jeremy Collymore, Executive Director, CDEMA

**Caribbean Risk Management Initiative**

**Start Date:**

**End Date:**

**Related to theme:** -- not complete --

**Region:** -- not complete --

**Country:** -- not complete --

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**Description of the project/initiative:**

The Caribbean Risk Management Initiative (CRMI) is an umbrella programme designed to build capacity across the Caribbean region for the management of climate-related risk. The CRMI is led by the Cuba and Barbados/OECS UNDP Country Offices, in close collaboration with partners and other UNDP Country Offices in the region.

Responding to identified priorities in the UNDP Strategic Plan 2008 - 2011, CRMI works towards strengthening regional and national capacities to manage and mitigate the risks of disasters and aims to strengthen regional capacity to adapt to climate change. A regional initiative, CRMI is designed to facilitate the development of policies and mechanisms for improved management, recovery and development in Small Island Developing States in support of the Mauritius Strategy and the RBLAC Regional Program Document (RPD 2008-2011). Another key strategy of this program is the documentation and dissemination of best practices and lessons learned in different aspects related to disaster risk management and adaptation to climate change, as well as early recovery in small island developing states (SIDS).

**Total Costs (in USD):** -- not complete --

**Implementing agencies:**

United Nations Development Program

**Funding source/agency:**

United Nations Development Program

**Contact Person:**

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**Gaps and challenges**

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During 2010, the CDEMA CU convened a Work Programme Development Committee to review gaps and priorities in the CU's programming for the purpose of developing the CU Work Programme for the period September 1, 2010 to August 31, 2012. Discussions of the Committee were informed by the following:

1. Priorities identified by the CDEMA Participating States
2. Gaps emerging from the 2006 CDERA Audit Analysis
3. Gap Analysis of the CDERA/CDEMA 2007 – 2010 Work Programme
4. Analysis of CDEMA PS Country Work Programmes
5. ICT Work Programme Priorities

Gaps and priorities identified as a result of the review process are as indicated below.

5.1 Priority for Action 1: Ensure that Disaster Reduction is a National and Local Priority with a

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### Strong Institutional Basis for Implementation

- i. Institutional strengthening, including a revisit of the staffing complement of National Disaster Offices (NDOs);
- ii. Capacity enhancement of NDOs:
  - o Enhancement of disaster management skills through training in areas such as shelter management, exercise design, resource mobilization, results based management (RBM)etc.;
  - o ICT enhancement and technical assistance.
- iii. Support to development of multi-year country programmes;
- iv. Coordination and response:
  - o Enhancement of Emergency Operations Centres (EOCs);
  - o Updating or development of plans and procedures;
  - o Warehouse enhancement and training;
  - o Strengthening of emergency communications systems.

### 5.2 Priority for Action 2: Identify, Assess and Monitor Disaster Risks and Enhance Early Warning

- i. Improvement of regional and national early warning systems.

### 5.3 Priority for Action 3: Use Knowledge, Innovation and Education to Build a Culture of Safety and Resilience at all Levels

- i. Development of CDM related public education and awareness programmes, tools and products for the general public and for key sectors.
- ii. Enhancement of CDM knowledge among Government, Cabinet and Permanent Secretaries of CDEMA PS;
- iii. Advancement of CDM mainstreaming in sectors.

### 5.4 Priority for Action 4: Reduce the Underlying Risk Factors

- i. Hazard risk mapping of vulnerable areas.

### 5.5 Priority for Action 5: Strengthen Disaster Preparedness for Effective Response at all Levels

- i. Enhancement of shelters – inspection teams; location consideration;
- ii. Business continuity planning;
- iii. Strengthening of community awareness and participation.

## Recommendations

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### 6.1 Priority for Action 1: Ensure that Disaster Reduction is a National and Local Priority with a Strong Institutional Basis for Implementation

- i. Effective policy tools for the analysis and evaluation of hazards and improved planning for effective preparedness and recovery developed and enhanced in the region.

### 6.2 Priority for Action 2: Identify, Assess and Monitor Disaster Risks and Enhance Early Warning

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- i. Regional understanding of and commitment to implementation of comprehensive multi-hazard national risk profiles for the CARIFORUM states developed.
  - ii. Up-to-date data on hazards and vulnerabilities within urban areas of the CARIFORUM states developed and maintained and integrated into urban development planning and decision-making.
  - iii. Critical infrastructure that reduces risk to disasters, and takes into account the effects of climate change, enhanced and maintained.
  - iv. Early warning system capacities in urban areas enhanced, taking into account the potential impacts of climate change.

#### 6.3 Priority for Action 3: Use Knowledge, Innovation and Education to Build a Culture of Safety and Resilience at all Levels

- i. ICT systems and practices in CARIFORUM states improved.

#### 6.4 Priority for Action 4: Reduce the Underlying Risk Factors

- i. Up-to-date data on hazards and vulnerabilities within the CARIFORUM states developed and maintained and integrated into development planning and decision-making.

#### 6.5 Priority for Action 5: Strengthen Disaster Preparedness for Effective Response at all Levels

- i. Technical staffing complement of the CDEMA CU enhanced in priority areas.
- ii. Community and/or sector level interventions which strengthen national coordination and collaboration mechanisms of the NDO supported.
- iii. National warehouses upgraded/established.
- iv. Emergency communications networks established/upgraded within the CARIFORUM states.
- v. Best practices for Recovery and Rehabilitation identified, and gaps assessed.