Climate Smart Community Disaster Management Programme

CDEMA
The Caribbean Disaster Emergency Managment Agency

financed by
Austrian Development Cooperation

COMPREHENSIVE DISASTER MANAGEMENT

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CLIMATE SMART COMMUNITY DISASTER MANAGEMENT PROGRAMME

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GLOSSARY

Adaptation
Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects (IPCC 2007a).

Adaptive capacity
The whole of the capabilities, resources and institutions of a country or region to implement effective adaptation measures (IPCC 2007a).

Capacity
The combination of all the strengths, attributes and resources available within a community, society or organisation that can be used to achieve agreed goals (UNISDR 2009a).

Capacity building
Efforts to develop the human skills or societal infrastructures within a community or organisation needed to reduce the level of risk. Capacity building also includes development of institutional, financial, political and other resources, such as technology at different levels and sectors of the society (UNISDR 2009a).

Climate
The average, or typical, weather conditions of a given area observed over a long period of time, usually 30 years or more. When scientists talk about climate, they're looking at averages of precipitation, temperature, humidity, sunshine, wind velocity, phenomena such as fog, frost, and hail storms, and other measures of the weather that occur over a long period in a particular place (NASA 2005).

Climate Variability
Fluctuation in climate over the short term. Departures from long term averages or trends (ACCC 2003).

Climate Change
A change in the components of climate (such as temperature, precipitation, atmospheric pressure, or winds) that persists for decades or longer arising from either natural causes or human activity (UNISDR 2009a). Climate change may be due to natural internal processes or external forcings (that is to say processes like the sun getting brighter or dimmer, volcanoes, changes in atmospheric composition) or to persistent anthropogenic (caused by human impact) changes in the composition of the atmosphere or in land use (IPCC 2007a).

Community-based adaptation
Community-based adaptation to climate change is a community-led process, based on communities' priorities, needs, knowledge, and capacities, which should empower people to plan for and cope with the impacts of climate change (Reid e*t al*. 2009).

Community Resilience
The capacity of a community to cope with stress, overcome adversity or adapt positively to change (Kaplan 1999).

Comprehensive Disaster Management
Comprehensive Disaster Management which includes attention to all phases of the Disaster Management Cycle – prevention, mitigation, preparedness and response, recovery and rehabilitation. It includes emphasis on reducing risk. This nomenclature is the term that reflects the global trend in the discipline for increased focus on risk management and the intense desire among disaster management Stakeholders in the Caribbean to accelerate initiatives in promoting disaster loss reduction. (CDEMA 2007) See also **Disaster Risk Reduction** below.

Coping Capacity
The means by which people or organisations use available resources and abilities to face adverse consequences that could lead to a disaster. In general, this involves managing resources, both in normal times as well as during crises or adverse conditions. The strengthening of coping capacities usually builds resilience to withstand the effects of natural and human-induced hazards (UNISDR 2009a).

Disaster
A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources (UNISDR 2009a).

Disaster Risk Management
The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster (UNISDR 2009a).

Disaster Risk Reduction
The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the underlying causes of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment and improved preparedness for adverse events (adapted from UNISDR 2009a, where more detailed explanations can be found).

Early Warning System
The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss (UNISDR 2009a).

Hazard
A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage (UNISDR 2009a).

Hydro-meteorological hazard
Process or phenomenon of atmospheric, hydrological or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage (UNISDR 2009a)

Hyogo Framework for Action
The Hyogo Framework for Action was adopted by 168 governments in January 2005. It is a global blueprint for disaster risk reduction efforts over the period 2005-2015. Its goal is to substantially reduce disaster losses by 2015 - in lives, and in the social, economic, and environmental assets of communities and countries. The Framework offers guiding principles, priorities for action, and practical means for achieving disaster resilience for vulnerable communities. (Provention Consortium)

Livelihoods
A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. (Chambers & Conway, 1991 quoted in UNISDR, UNDP India and IRP n.d.)

Mitigation of disasters (i.e. as used by the DRR community)
The lessening or limiting of the adverse impacts of hazards and related disasters (UNISDR 2009a). This is similar to what is called ‘adaptation’ by the climate change community.

Mitigation of climate change (i.e. as used by the climate change community)
A human intervention to reduce the sources or enhance the sinks of greenhouse gases. Examples include using fossil fuels more efficiently for industrial processes or electricity generation, switching to solar energy or wind power, improving the insulation of buildings, and expanding forests and other "sinks" to remove greater amounts of carbon dioxide from the atmosphere. (UNFCCC n.d.) T

Preparedness
Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations (UNISDR 2009a).

Prevention
The outright avoidance of adverse impacts of hazards and related disasters (UNISDR 2009a).

Recovery
The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors (UNISDR 2009a).

Response
The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected (UNISDR 2009a).

Resilience
Resilience means the ability to "spring back from" a shock. The resilience of a community in respect to potential hazard events is determined by the degree to which the community has the necessary resources and is capable of organizing itself both prior to and during times of need. (UNISDR 2009a).

Risk
The combination of the probability of an event and its negative consequences (UNISDR 2009a).

Vulnerability
The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. (UNISDR 2009a).

Weather
Short-term atmospheric conditions. Weather is measured by temperature, humidity, wind speed, atmospheric pressure, cloudiness and precipitation. In most places, weather can change from minute-to-minute, hour-to-hour, day-to-day, and season-to-season (adapted from NASA 2005)

ACRONYMS

CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
CBA	Community-based adaptation
CCA	Climate change adaptation
CCCCC	Caribbean Community Climate Change Centre
CCDM	Mainstreaming Climate Change into Disaster Risk Management for the Caribbean Region
CDEMA	Caribbean Disaster Emergency Management Agency
CDM	Comprehensive Disaster Management
CSCDM	Climate Smart Community Disaster Management
CSSSC	Civil Society Sector Sub-Committee
DRR	Disaster risk management
GCC	Global climate change
HFA	Hyogo Framework for Action
IPCC	Intergovernmental Panel on Climate Change
NDO	National Disaster Office
NGO	Non-governmental organisation
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
VCA	Vulnerability and capacity assessment (sometimes also referred to as vulnerability and adaptive capacity assessment)

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The Caribbean Disaster Emergency Management Agency is grateful to the consulting team of the Caribbean Natural Resources Institute (CANARI) who led the process in developing the Climate Smart Community Disaster Management (CSCDM) Programme.

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CDEMA also wishes to thank the Steering Committee of the Mainstreaming Climate Change into Disaster Risk Management for the Caribbean Region Project for the professional guidance provided, which included the International Federation of the Red Cross and Red Crescent Societies (IFRCS), the four CDEMA Sub-Regional Focal Points- Department of Emergency Management (DEM), Barbados, Office of Disaster Preparedness and Emergency Management, (ODPEM), Jamaica, National Office of Disaster Services (NODS), Antigua, Office of Disaster Preparedness and Management (ODPM), Trinidad, the Caribbean Community Centre for Climate Change (CCCCC), the Caribbean Policy Development Centre (CPDC), Chair of the Working Group for Climate Change and Disaster Management Working Group (CCDM- WG), the University of the West Indies, Centre for Resource Management and Environmental Studies (CERMES).

CDEMA also acknowledges the inputs of the two pilot community workshops held under the auspices of the Red Cross Societies and National Disaster Offices in Old Harbour Bay, Jamaica and Mayaro, Trinidad and Tobago. The detailed review and useful comments provided by the regional training of facilitators' workshop convened through the support of the Office of Disaster Preparedness and Management (ODPM), Trinidad and Tobago is especially acknowledged.

CDEMA also expresses its appreciation to the Austrian Development Agency for the financial support provided for the production of the Climate Smart Community Disaster Management Module and Handbooks.

EXECUTIVE SUMMARY

The Climate Smart Community Disaster Management (CSCDM) Programme is an initiative of the Caribbean Disaster Emergency Management Agency (CDEMA) to promote and build capacity for the inclusion of climate change considerations in community disaster management initiatives in the Caribbean. As such, it contributes to and complements the wider policy environment that guides climate change adaptation and disaster risk reduction in the region, including the United Nations *International Strategy for Disaster Reduction*; CDEMA's *Enhanced Comprehensive Disaster Management Strategy and Programme Framework 2007 – 2012*; and the, *Climate Change in the Caribbean: A Regional Framework for Achieving Development Resilient to Climate Change 2009-2015,* which is being implemented by the Caribbean Community Climate Change Centre (CCCCC). Specifically, the CSCDM Programme forms part of the *Mainstreaming Climate Change into Disaster Risk Management for the Caribbean Region (CCDM) Project*, which is being executed by CDEMA with funding from the Austrian Development Agency.

This CSCDM Programme document is designed primarily for use by National Disaster Offices (NDOs) and other national disaster risk reduction organisations involved in implementing disaster management initiatives at the community level in the Caribbean. It also contains material that will be of value to partner organisations at the community level. It is intended to build on and complement existing programmes and can be used both in situations where disaster risk reduction (DRR) efforts are already underway in a community and in cases where a new initiative is being designed.

The Programme document is divided into two parts: Part A, which considers the Programme context, rationale and enabling framework necessary for effective Programme implementation; and Part B, which outlines the seven key steps CDEMA recommends for implementing the Programme. Under each of these, there is an overview of the rationale for and scope of the step; a list of key tasks and responsibilities; a list of critical success factors; and a list of resources (including where possible examples of Caribbean CSCDM good practice though few have yet been identified). A full summary of all resources is also provided in Section 7: References and Resources.

The need to make DRR initiatives 'climate smart' is premised on the growing evidence that global climate change as a result of human activity is already affecting the Caribbean and is predicted to have even more serious consequences over the longer term. Climate change will disproportionately affect individuals and communities that are already vulnerable as a result of other factors, such as poverty or degraded environment. While the impacts of climate change on disaster risks are complex and still somewhat uncertain, it is clear that climate change tends to exacerbate disaster risk because it frequently compounds the existing vulnerabilities within a community.

It is therefore critical that community members be engaged in, and provided with technical and financial support for, DRR and CCA initiatives designed to reduce the

level of vulnerability. A participatory approach is therefore recommended at all stages of Programme implementation, recognising that community traditional knowledge and experience can bring new insights and useful capacities to the CSCDM Programme. Tips are also provided for making the CSCDM Programme gender sensitive and livelihoods oriented.

The seven recommended steps for implementing a comprehensive CSCDM Programme at the regional and national level are:

1. Build capacity to deliver the Programme at the national level (i.e. in the NDOs and other DRR agencies.
2. Identify vulnerable communities in each country and prioritise where to act.
3. Conduct (or review existing) vulnerability and adaptive capacity assessment (VCA) in the selected community or communities.
4. Build community capacity for climate change adaptation (in particular through facilitation of CDEMA's CSCDM Module and Handbooks).
5. Develop and implement a climate smart disaster management plan.
6. Promote and facilitate networking and information sharing at the regional, national and local levels.
7. Conduct participatory monitoring and evaluation.

However, the success of the CSCDM Programme will also depend on improving the enabling environment, including:

- development of a policy environment that actively promotes integrated DRR and CCA approaches and the opportunities these present for improving livelihoods;
- explicit integration of climate change into national disaster risk reduction programmes and vice-versa;
- an institutional mechanism to facilitate integrated implementation of the Programme by multiple departments and agencies, to share experiences and best practices, and to jointly monitor and evaluate outcomes;
- adequate funding to build the capacity of those charged with facilitating the CSCDM Programmes at the national level and resources to implement the Programme over a period of a minimum of three years in any given community (and possibly longer depending on the capacity at the outset and the scale of the problems). This is only likely to be feasible in practice if agencies are willing to pool resources.

Because of the level of uncertainty surrounding climate change, it is also important that the organisations involved in CSCDM develop a culture of flexibility and adaptive capacity and apply this as the monitor and evaluate their CSCDM projects.

The CSCDM Programme document is intended to be a 'living' document that can be amended and updated electronically to reflect new data, case studies of good practice and emerging challenges. As such, CDEMA encourages inputs and comments on the material and would be interested to hear about communities where a climate smart approach is being applied.

PART A

PROGRAMME CONTEXT, RATIONALE AND ENABLING FRAMEWORK

1) PROGRAMME CONTEXT

1.1. International

The concept of a Climate Smart Community Disaster Management (CSCDM) Programme for the Caribbean reflects and responds to a number of worldwide trends:

- growing consensus that global climate is changing as a result of human activity and is happening faster than was predicted even a few years ago. Consequently, the need for action on mitigating and adapting to climate change is urgent;
- recognition that climate change frequently increases disaster risk and exacerbates the underlying vulnerabilities;
- an upward curve in economic and livelihoods-related disaster losses with the majority being associated with extreme weather events (Mitchell and Ibrahim 2010);
- a conceptual shift from investment primarily in disaster relief to a wider focus on disaster risk management and disaster risk reduction;
- recognition that climate change will disproportionately affect individuals and communities that are already vulnerable as a result of other factors, such as poverty or degraded environment;
- acknowledgement that communities must therefore be at the forefront of climate change adaptation efforts and that this will require an enabling policy, fiscal and legislative framework and sustained, long-term, multi-sectoral and multi-faceted support in order to build the requisite capacity at the community level;
- identification of the positive livelihood opportunities that an integrated approach to disaster risk reduction and climate change adaptation can offer.

As such, the CSCDM Programme is consistent with and contributes to implementation of the recommendations of the United Nations International Strategy for Disaster Reduction (UNISDR) in support of the Bali Action Plan, which notes that "Disaster risk reduction is now a clearly identified element of the climate change agenda" and identifies the need for action in the areas of:

1. Better collaboration between climate change bodies, focal points and experts and their disaster risk reduction counterparts.
2. More accessible disaster risk reduction information and tools for climate change adaptation negotiators and managers.
3. Draft adaptation plans, drawing on the Hyogo Framework for Action (HFA) Priority 3[1].

[1] Use knowledge, innovation, and education to build a culture of safety and resilience at all levels

1.2. Caribbean

In the Caribbean context, the CSCDM Programme forms part of the wider comprehensive disaster management (CDM) approach adopted by the Caribbean Disaster Emergency Management Agency (CDEMA). This is currently being implemented under the *Enhanced Comprehensive Disaster Management Strategy and Programme Framework 2007 – 2012.* The CSCDM Programme primarily supports Outcome 4: Enhanced Community Resilience in CDEMA Participating States[2] to Mitigate, Respond to and Recover from the Adverse Effects of Climate Variability and Change and Disasters. Within the CDEMA Work Programme, it contributes particularly to Key Result Area 3.3.1: Prevention, preparedness and response/mitigation in communities is enforced.

CDEMA is implementing a number of projects in support of these objectives. The CSCDM Programme is a component of the *Mainstreaming Climate Change into Disaster Risk Management for the Caribbean Region (CCDM) Project*, which is being executed by CDEMA with funding from the Austrian Development Agency. This is a two-year (2009-2011) project, which seeks to achieve three outcomes:

1. Improved coordination and collaboration between community disaster organisations and other research/data partners, including climate change entities, for undertaking comprehensive disaster risk management.
2. Enhanced community awareness and knowledge of disaster management and climate change procedures.
3. Enhanced preparedness and response capacity (technical and managerial) for sub-regional and local level management and response.

The CSCDM Programme also complements the approaches recommended in the Caribbean Community Climate Change Centre's (CCCCC) report *Climate Change in the Caribbean: A Regional Framework for Achieving Development Resilient to Climate Change 2009-2015*, which was approved in July 2009 by the Caribbean Community (CARICOM) Heads of Government, and for which an implementation strategy is currently being developed. This framework contains four key strategies and associated goals designed to significantly increase the resilience of the CARICOM economies:

1. Mainstreaming climate change adaptation strategies into the sustainable development agendas of CARICOM states.
2. Promoting actions to reduce greenhouse gas emissions through energy efficiency, conservation, and switching to renewable energy sources.
3. Encouraging action to reduce the vulnerability of natural and human systems in CARICOM countries to the impacts of a changing climate.
4. Promoting action to derive social, economic, and environmental benefits through the prudent management of standing forests in CARICOM countries.

[2] The 18 Participating States of CDEMA are Anguilla, Antigua & Barbuda, Commonwealth of the Bahamas, Barbados, Belize, Commonwealth of Dominica, Grenada, Republic of Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Republic of Trinidad and Tobago, Turksand Caicos Islands, the British Virgin Islands.

This document specifically notes that “citizens will also be expected to take full responsibility for availing themselves of appropriate information to guide decision-making on climate hazard risk management, whether at the individual, organisational, or community level” and that “government and the development partners agree on the need to strengthen those institutions with key disaster risk management responsibilities to provide adequate support on adaptive measures to stakeholder actors in the public and private sectors, and at the community level” (CCCCC 2009).

1.3. National

At the country level, international and regional policy on disaster management and climate change is implemented mainly by National Disaster Offices (NDOs) and the focal points for the United Nations Framework Convention on Climate Change (UNFCCC) respectively. Other implementing agencies may include local branches of international organisations, such as the Red Cross, Christian Aid or Oxfam. Support may also be provided by local government agencies. In some instances, countries have also developed national disaster risk reduction and climate change adaptation policies or incorporated these considerations into other policies. However, the draft Sub-Regional HFA Progress Review 2009-2011 (CDEMA 2010) notes that, while progress has been made, only seven of the 18 CDEMA participating states provided information for the review. Of these seven:

- two have Poverty Reduction Strategy Papers that include disaster risk reduction (DRR) initiatives;
- four have a Climate Change Policy and Strategy that includes DRR;
- four have included DRR in their development plans and strategies;
- two have national development plans that include elements of DRR;
- six have a specific allocation of funds for DRR in the national budget;
- five have operational national multi-stakeholder platforms; and
- two have designated legal responsibilities and made budget allocation for DRR at the local government level.

The CSCDM Programme therefore seeks to build on and complement existing international, regional and national DRR and climate change adaptation (CCA) initiatives to enhance communities’ resilience to climate change and hydrometeorological disasters. It does so by outlining the critical steps involved in CSCDM and identifying resources that may be of value to the agencies implementing the CSCDM Programme. It also highlights good practices, drawn from the DRR and CCA sectors and beyond, where possible drawing on Caribbean experience, though practical examples of sustained CSCDM in the region are currently limited (see Appendix 1 for list of initiatives identified in the English-speaking Caribbean).

It is also relevant to note that the IFRC internal mid-term review of the HFA globally supports the focus of the CSCDM Programme, identifying that the HFA “had provided strong guidance at the global, regional and national levels for developing policies and strategies. The most important achievements had been the agreement

of common policy frameworks, raising the profile of disaster risk reduction, increased awareness and knowledge, and more effective disaster preparedness."

However, the review "recommends for the remaining five years that coordination and planning at all levels must be strengthened and must follow common priorities and targets. There is need to provide practical support for disaster risk reduction for vulnerable people, including financing mechanisms that pool and guarantee long-term disaster risk reduction and climate change adaptation resources. Governments should contribute to enabling environments in terms of national budget allocation for local level risk reduction work.

Practitioners' culture should shift away from focusing on outputs to achieving demonstrable outcomes and impacts. A more proactive and participatory approach for sharing information, experiences and expertise should be supported. Finally, we need a larger pool of knowledgeable people with stronger professional skills across the disaster risk reduction and development spectra" (IFRC 2011).

Full details of the Programme are provided in Part A.

1.4. Resources cited in this section

Title	Summary Description
CDEMA. 2007. Enhanced Comprehensive Disaster Management Strategy and Programme Framework 2007 – 2012. CDEMA. Barbados. http://www.cdema.org/index.php?option=com_joomdoc&view=docman&gid=83&task=cat_view&Itemid=231	Revised programme framework for an enhanced approach to CDM in the Caribbean, emphasising disaster loss reduction through risk management. Identifies priority outcomes and associated outputs for the period 2007-2012.
CDEMA. Date. Mainstreaming Climate Change into Disaster Risk Management for the Caribbean Region (CCDM) Project, CDEMA, Lodge Hill, Barbados.	
CCCCC. 2009. Climate Change in the Caribbean: A Regional Framework for Achieving Development Resilient to Climate Change 2009-2015. CCCCC, Belmopan, Belize . http://www.caribbeanclimate.bz/index.php?Itemid=56&option=com_wrapper&view=wrapper	Outline of the main strategic priorities and actions for CARICOM states to increase their resilience to climate change.
UNISDR. 2009. Strategy to support the Bali Action Plan process. UNISDR, Geneva, Switzerland http://www.preventionweb.net/files/8381_8381ISDRstrategysupportBaliActionPlanprocess11.pdf	Identification of key actions needed by both the DRR and CC communities to support the implementation of the Bali Action Plan.

2) RATIONALE FOR CLIMATE SMART COMMUNITY DISASTER RISK REDUCTION IN THE CARIBBEAN

2.1. Global climate change threatens Caribbean development and livelihoods

Global climate change (GCC) is considered by many to be the most serious threat to sustainable development in the Caribbean. While Caribbean countries have made a negligible contribution to global greenhouse gas emissions (less than 1% from CARICOM member states), they are likely to be among those most severely affected (CCCCC 2009). The region is already experiencing the devastating economic and social costs associated with hurricanes, tropical storms and flooding, with 1995-2000 accounting for the highest recorded level of hurricane activity. Over the last three decades, the region has suffered direct and indirect losses estimated at between US$700 million and US$3.3 billion owing to natural disasters associated with extreme weather events (CCCCC 2009). Specifically, GCC is expected "to result in rising sea levels, together with the associated coastal erosion and salt water intrusion, an escalation in the frequency and intensity of tropical storms and hurricanes, and disruptions in rainfall and fresh-water supply threaten the very existence of the CARICOM countries" (CCCCC 2009).

Specific assessments on the impact of climate change on communities and community livelihoods in the Caribbean are limited although the literature is growing and confirms the consensus that traditional livelihoods in many Caribbean communities, and particularly coastal communities, are under threat from climate change. For example, under the Mainstreaming Adaptation to Climate Change project, CCCCC commissioned a series of vulnerability assessments of different sectors and resources, such as water resources in Belize, agriculture in Guyana and tourism in Barbados as well as a vulnerability assessment for the South Clarendon, Jamaica pilot project (see http://www.caribbeanclimate.bz/macc/macc.html).

Simpson *et al* 2011 assesses the impacts of climate change on the tourism sector, the most important economic sector for many Caribbean countries and communities. While it does not specifically ot address community livelihoods, it notes that "If Caribbean countries are unable to adapt to climate change due to lack of capacity or resources, they will experience direct and substantial economic and environmental negative impacts on tourism—their most important industry sector. This will not only affect national economic development and increase unemployment, it will have serious social and cultural consequences for communities." One indication of the impact on tourism that it cites is "Sea level rise of 1 meter is projected to put 266 out of 906 tourism resorts and 26 out of 73 airports in the Caribbean at risk of inundation. An estimated 49 percent of major tourism resorts in CARICOM would be damaged or destroyed by combined SLR and storm surge and SLR-enhanced erosion, as many lack extensive coastal protection in order to preserve aesthetics of natural beach areas and views to the sea". This would clearly have a severe impact on communities dependent on tourism. However the report also notes the need for further research and information gathering to fully assess the impact of climate change on tourism-based livelihoods.

CANARI 2010 examines both the potential negative impact of climate change on forest-based livelihoods and the scope for programmes that would both contribute to climate change mitigation and adaptation and improve livelihoods. It notes that "There have been no specific studies on the effects of climate change on forest-based livelihoods in any of the countries studied. It is reasonable to expect that the impacts being currently observed will be exacerbated as climate change continues. This is particularly so since most forests are already degraded as a result of other factors, thereby reducing their resilience to climate change. Climate change impacts include:

• loss of ecosystem services from degraded forests;
• the loss of subsistence materials (food, wood- fuel, medicines, construction material) from forest fires, storms, disease or drought;
• the loss of revenues from tourism, the sale of forest products and recreational services:
    - o when vast areas of dead or dying forests reduce scenic appeal;
    - o when access into forests is closed off or becomes difficult;
    - o when degraded forests are unable to support wildlife attractions; and
    - o when income opportunities are lost from the sale of forest products due to limited resources or poorer quality of forest products (for example, seeds for jewellerymaking being washed away in heavy rains, low plant productivity in drought conditions).

The International Community-University Research Alliance project, *Managing Adaptation to Environmental Change in Coastal Communities: Canada and the Caribbean,* links community members and university researchers from Canada with members of the Caribbean community in support of research on coastal adaptation to environmental change including the impacts of storm surge and sea-level rise on susceptible coastal communities. Of particular relevance is the work being conducted on the impacts of climate change on Belize Barrier Reef, Belize, Georgetown, Guyana, Grande Riviere, Trinidad and Tobago, and Bequia, Saint Vincent and the Grenadines.

2.2. Climate change and disasters are linked

The impacts of climate change on disaster risks are "profound, complex and somewhat uncertain" (Mitchell and Ibrahim 2009). On the one hand, climate hazards do not always cause disasters; it is the combination of an exposed, vulnerable and ill-prepared system (country, institution, community, household, ecosystem) with a hazard event that results in a disaster (IPCC, 2007). On the other hand, precisely because of these vulnerabilities, climate change is tending to exacerbate disaster risk because it:

- ***increases the frequency and intensity of some hazards and extreme events****,* so the coping and response mechanisms and economic planning for disasters based on past vulnerabilities may no longer be enough;
- ***changes average climatic conditions and climate variability***, which in turn affects underlying risk factors. In other words, the kind of weather that we get on a regular basis and consider 'normal' will be different (for example, hotter dry seasons, more intense rainfall in rainy seasons, and "no longer so cool"

Christmas seasons or nights). And the cyclical changes, such as El Niño years, will result in even greater divergence from 'normal' weather (for example droughts may be more intense and/or longer during an El Niño year);

- ***generates new threats*** which a country or community may have no experience of handling or may be exacerbating through inappropriate development planning or activities. For example, sea level rise will threaten communities that have not previously been at risk. Consequently, land use planning and building codes may have been developed that are inappropriate to the new scenario;
- ***increases community vulnerability to the natural hazards they normally experience***, particularly those that have arisen as a result of damage to the environment and ecosystems such as mangroves, reefs and forests. Climate change will also negatively affect the availability of water and food and many of the livelihood activities on which communities depend, such as farming, fishing and tourism.
- ***increases uncertainty***: scientists are increasingly able to predict what is likely to happen in the future as the earth continues to warm up. But the complexity of natural and physical systems, and people's interactions with them, mean that it is difficult to forecast with 100% certainty what future impacts will be. Current scientific data all point to the situation getting worse, given the current trend in emissions, but it is difficult to say exactly how much worse. Communities will therefore have to be prepared for the unexpected and recognise that the assumptions that they used to make about the future, and the types of things they did based on those assumptions, may no longer be valid.

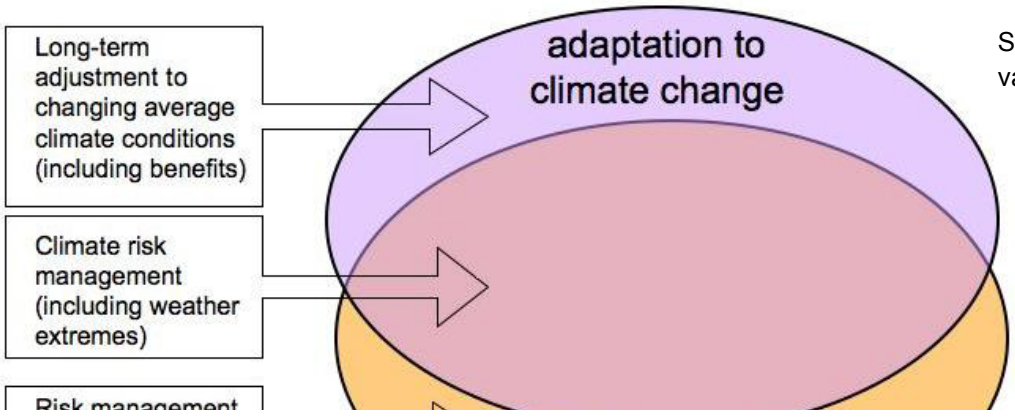
(Adapted from CSCDM Module, Unit 2)

2.3. Disaster risk reduction and climate change adaptation go hand in hand...but are are not identical.

DRR and CCA go hand in hand and have mutual benefits, with disaster risk reduction providing the first line of defence against climate change (Mitchell and van Aalst 2008). If DRR activities are scaled up, they will contribute significantly to CCA.

DRR and CCA share many characteristics as "both aim to reduce the impacts of shocks by anticipating risks and uncertainties and addressing vulnerabilities" (Mitchell *et al,* 2010). However, as illustrated by Figure 1 below, however, there are also important differences, with the main overlap between the two being the management of hydro-meteorological hazards.

Figure 1: Distinctions and Areas of Convergence between DRR and CCA



Source: Mitchell and van Aalst, 2008.

For those wishing to understand the differences in more detail, Mitchell *et al.* (2010) provides an updated analysis of the conceptual and practical differences between DRR and CCA and the areas of convergence, much of which is relevant and applicable to the Caribbean.

2.4. Consolidation of resources

Given that the region's capacity to manage disasters and adapt to climate change (in terms of its human, financial and technological resources) is limited, it clearly makes sense for there to be a concerted effort between the climate change, disaster management and community development sectors to address the need for climate change mitigation and adaption at the community level, to reduce the underlying vulnerabilities and to seek out the opportunities these present to improve livelihoods.

2.5. Resources cited in this section

Title	Summary Description
CANARI. 2010. Assessing the impacts of climate change on community-based sustainable use of forest resources in the Caribbean. UNDP CARUTA. Hastings Barbados. http://www.bb.undp.org/uploads/file/pdfs/poverty/CARUTA/CARUTA%20Project%20final%20report%2026%201%2010.pdf	Assessment of the impacts of climate change on forest-based livelihoods and identification of actions that could be taken to improve the policy environment and catalyse programmes that support both CCA and enhanced livelihoods.
CCCCC Mainstreaming Adaptation to Climate Change project http://www.caribbeanclimate.bz/macc/macc.html	2004-2007 project designed to mainstream climate change into sustainable development policies through: • Building capacity to identify climate change risks – Among other things, this included strengthening networks to monitor impacts on regional climate, downscaling global climate models, and developing impact scenarios; • Building capacity to reduce vulnerability to climate change; • Building capacity to effectively access and utilize resources to minimize the costs of climate change • Public education and outreach; and • Project management.
CCCCC. 2009. Climate Change in the Caribbean: A Regional Framework for Achieving Development Resilient to Climate Change 2009-2015. CCCCC, Belmopan, Belize. . http://www.caribbeanclimate.bz/index.php?Itemid=56&option=com_wrapper&view=wrapper	Outline of the main strategic priorities and actions for CARICOM states to increase their resilience to climate change.
CDEMA, 2011. Climate Smart Disaster Risk Management Module, including Facilitators and Participant's Handbooks	Training programme to be delivered in target communities over a period of 2-3 days to increase their understanding of the impacts of climate change in the Caribbean and the

Title	Summary Description
	linkages between climate change and disasters and DRR and CCA. Designed to build their capacity to incorporate climate change considerations in their disaster management plans and to communicate and advocate effectively.
IPCC. 2007. Fourth Assessment Synthesis Report, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf	Summary of the findings of the Fourth Assessment report including: • observed changes in climate and their effects on natural and human systems, regardless of their causes; • assessment of the causes of the observed changes; • projections of future climate change and related impacts under different scenarios; • adaptation and mitigation options over the next few decades and their interactions with sustainable development; • assessment of the relationship between adaptation and mitigation; • summary of the major robust findings and remaining key uncertainties in this assessment.
Mitchell, T and M., Ibrahim. 2010. Climate Smart Disaster Risk Management In Brief. Briefing paper. Institute of Development Studies, Brighton, UK http://community.eldis.org/.59e0d267/SCR%20DRM%20overview.pdf	Summarises progress and lessons learned to date on climate smart disaster risk management.
Mitchell, T., M van Aalst and P. Silva Villanueva. 2010. Assessing Progress on Integrating Disaster Risk Reduction and Climate Change Adaptation in Development Processes. Strengthening Climate Change Resilience Discussion Paper. Institute of Development Studies. Brighton, UK http://community.eldis.org/.59e0d267/Convergence.pdf	Analysis of the progress made on integrating DRR and CCA in development processes, highlighting increased momentum and some practical advances but also significant barriers to convergence in critical institutions at different scales.
Simpson, M, D. Scott and U.Trotz. 2011. Climate Change's Impact on the Caribbean's Ability to Sustain Tourism, Natural Assets and Livelihoods. Inter-American Development Bank Technical Notes DB-TN-238. Washington, USA http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=35769833 s	Summary of actual and projected impacts of climate change and related disasters on the tourism sector and the assets on which it depends. Includes recommendations for mainstreaming climate change into policy and decision-making and identifies further research that is needed for evidence-based policy.

2.6. Other relevant resources

Title	Summary Description
Gero, A., K. M´eheux, and D. Dominey-Howes. 2011. Integrating community based disaster risk reduction and climate change adaptation: examples from the Pacific. Nat. Hazards Earth Syst. Sci., 11, 101–113, 2011 http://www.nat-hazards-earth-syst-sci.net/11/101/2011/nhess-11-101-2011.pdf	Analyses three case studies to draw out elements of best practice to illustrate how DRR and CCA can be integrated for enhanced aid effectiveness. Also look at ways in which these two often overlapping fields can be better coordinated in ongoing and future projects
Few. R, H. Osbahr, L. M. Bouwer, D Viner, F Sperling. 2006. Linking Climate Change Adaptation and Disaster Risk Management for Sustainable Poverty Reduction. Vulnerability and Adaptation Resource Group (VARG). Washington D.C., USA. http://www.preventionweb.net/files/570_10367.pdf	Analyses the linkages between CCA, DRR and poverty reduction, grounding the findings in countries studies from Mexico, Kenya and Vietnam and exchange of experiences across those contexts to provide insights into how a more integrated approach to DRR and CCA can be built. Although risk assessments formed part of the studies, the main emphasis was placed on analysing the institutional capacity and constraints/opportunities within the policy process.
UNISDR Commission on Climate Change and Development. 2008a. Links between disaster risk reduction, development and climate change A briefing for Sweden's Commission on Climate Change and Development. UNISDR. Geneva, Switzerland. http://www.ccdcommission.org/Filer/pdf/pb_disaster_risk_reduction.pdf	Analyses the linkages between DRR, climate change and development in terms of political and institutional and investment and funding issues. Concludes with recommendations for climate change and development policy-makers, national policy makers, and international organizations and donors.
USAID. 2007. Adapting to Climate Change Variability and Change: A Guidance Manual for Development Planning	Makes the case for incorporation of climate change considerations in all aspects of development planning and suggests appropriate approaches.

3) THE ENABLING FRAMEWORK FOR EFFECTIVE CSCDM

3.1. The challenges

The main challenges that will be faced in implementing CSCDM Programme in the Caribbean are those identified by Mitchell *et al ((*2010) and validated and expanded on by CDEMA's Civil Society Sub-Committee Committee at its meeting on 28th January 2011:

- little political or financial incentive to invest resources to ensure something doesn't happen (prevention), compared with investing in visible and popular infrastructural or social programmes. This situation has been exacerbated by the fact that donors have historically given generously for humanitarian post-disaster recovery but comparatively little for reducing disaster risks. However, this may be offset to some extent by the greater international commitment of financing and

technical support to the most vulnerable developing countries, including those in the Caribbean;

- an institutional framework that is not conducive to collaborative, integrated programmes. For example, National Disaster Offices (NDOs) are typically housed under the Ministry of National Security whereas climate change mitigation and adaptation is usually assigned to the Ministry of the Environment. Moreover, there are even fewer linkages in terms of policy- and decision-making between CCA and DRR and the Ministries responsible for community development, poverty reduction and social development, community tourism etc. Consequently, some aspects of community capacity building are duplicated whilst others are not addressed at all and there is little peer exchange of best practices;
- in most countries, failure to date to integrate community level initiatives into the national framework or to provide information to communities about this framework;
- relatively low awareness in the DRR community at present of the likely impacts of climate change and the implications for disasters and disaster management;
- lack of climate change data at the appropriate scale for community planning;
- difficulty in providing the type of long-term sustained support that is needed to build a community's capacity given a donor funding landscape that promotes short-term projects; and
- unrealistic expectations of communities from agencies that have little past experience of working with them.

3.2. Enabling framework needed for implementing the CSCDM Programme

In order to improve the overall enabling environment and address the challenges highlighted above, there is a need for:

- a policy environment that actively promotes integrated DRR and CCA approaches and the opportunities these present for improving livelihoods;
- explicit integration of climate change into national disaster risk reduction programmes and vice-versa;
- an institutional mechanism to facilitate integrated implementation of the Programme by multiple departments and agencies, to share experiences and best practices, and to jointly monitor and evaluate outcomes;
- adequate funding to build the capacity of those charged with facilitating the CSCDM Programmes at the national level and resources to implement the Programme over a period of a minimum of three years in any given community (and possibly longer depending on the capacity at the outset and the scale of the problems). This is only likely to be feasible in practice if agencies are willing to pool resources;
- a commitment to participatory planning, implementation, and monitoring and evaluation of the Programme with all key stakeholders, at community and national level, to incorporate traditional knowledge and promote equity and buy-in at all levels.

- establishment of knowledge networks accessible by communities to provide up-to-date climate change data, share best practices and provide opportunities through social networking for communities to exchange experiences.

3.3. Resources cited in this section

Title	Summary Description
Mitchell, T., M van Aalst and P. Silva Villanueva. 2010. Assessing Progress on Integrating Disaster Risk Reduction and Climate Change Adaptation in Development Processes. Strengthening Climate Change Resilience Discussion Paper. Institute of Development Studies. Brighton, UK http://community.eldis.org/.59e0d267/Convergence.pdf	Analysis of the progress made on integrating DRR and CCA in development processes, highlighting increased momentum and some practical advances but also significant barriers to convergence in critical institutions at different scales.

PART B

THE CLIMATE SMART COMMUNITY DISASTER MANAGEMENT PROGRAMME

4) CLIMATE SMART COMMUNITY DISASTER MANAGEMENT PROGRAMME OVERVIEW

4.1. Programme Goal

Enhanced community resilience to climate change and disasters in the Caribbean.

4.2. Programme Objectives

a) To increase the awareness of all Caribbean CSCDM stakeholders of what global climate change is and how it is affecting, or may affect, hydrometeorological hazards in communities.
b) To enhance the understanding of all stakeholders of the linkages, synergies and differences between climate change adaptation and disaster risk reduction;
c) To outline the seven main components of a comprehensive CSCDM programme and the lead agencies that would implement each of these.
d) To identify the capacities needed - by individuals, communities and the organisations that support them - to increase the resilience of Caribbean communities to climate change and reduce the likelihood and scale of disasters.
e) To identify tools and methods that support CSCDM and assist in building the necessary capacity to implement the CSCDM Programme.

4.3. Target audience

This document is mainly intended to inform the work programmes of CDEMA and the national agencies working with communities on disaster risk reduction in CDEMA's 18 participating states, such as the NDOs, UNFCCC focal points and social and community development agencies. It is hoped that they will share the resources and approaches with their community partners, adapting them as needed to the local context. In such a rapidly developing field, it will also be important for both the regional and national implementing agencies to update the resource and reference lists with the latest climate change data and new CSCDM good practices as they emerge.

While the Programme has been developed specifically in the context of hydrometeorological hazards, many of the components and steps could also be applied to other types of natural hazards, such as earthquakes, volcanic eruptions and disease outbreaks.

4.4. Programme Components

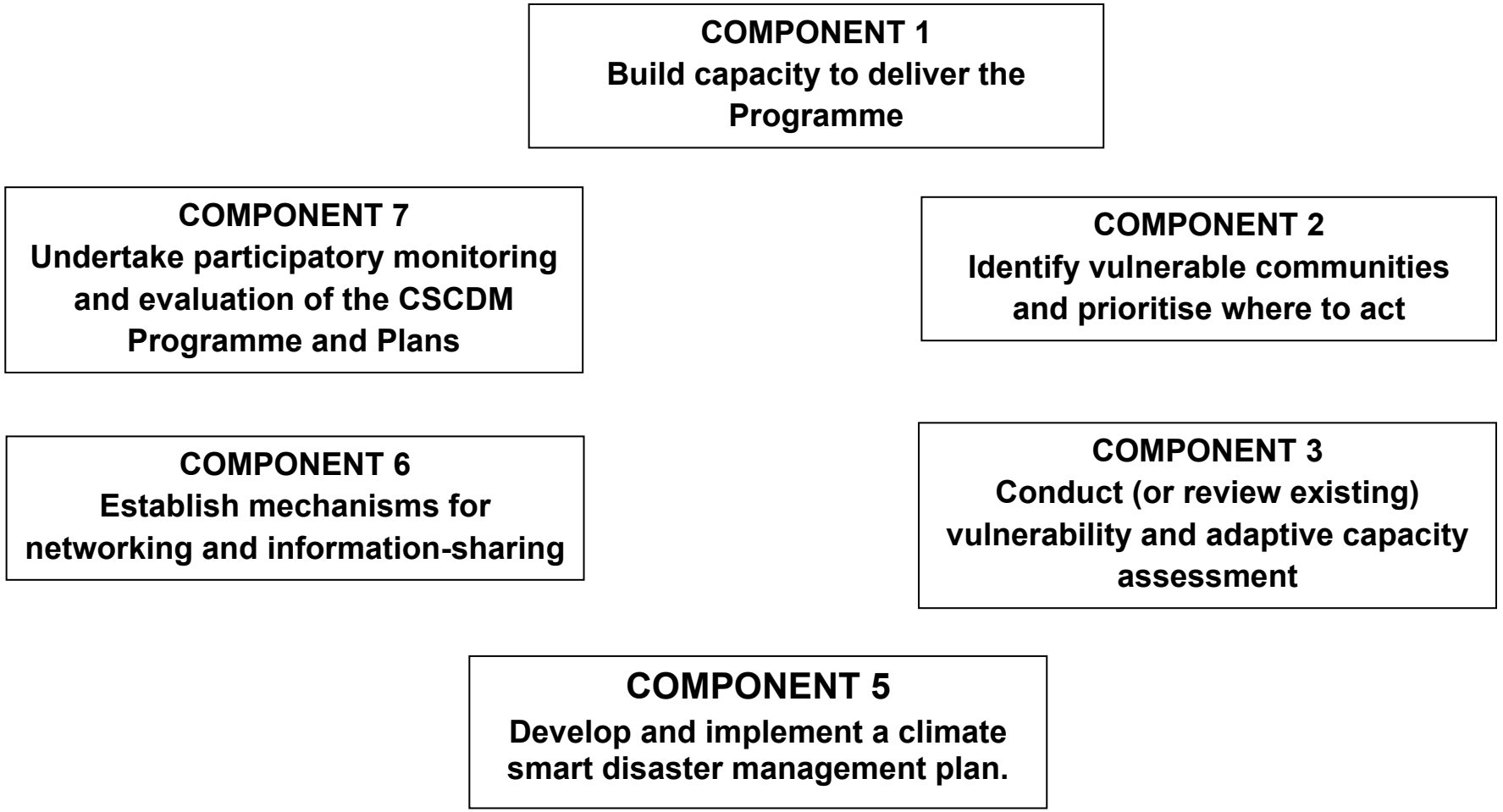
The CSCDM Programme consists of seven main components as outlined in Table 1 and Figure 1 below. While some components must precede those that follow, they will not necessarily be implemented strictly in sequence, since some factors may change during the course of implementation (for example, the respective levels of vulnerability of different communities). Other components may need to be implemented iteratively (for example, as new stakeholders are discovered or staff in implementing agencies change) or may result in identification of additional needs (for example, building community capacity in one area may highlight other capacity gaps). Some components, such as networking and information sharing and participatory monitoring and evaluation, need to be conducted throughout the implementation of the Programme.

Table 1: Breakdown of Programme components and stakeholder roles

Programme component	Lead agency	Supporting agencies	Target group
1. Build capacity to deliver Programme	CDEMA	CANARI and other organisations or individuals with skills in training of facilitators	NDOs and other DRR agencies operating at the national level Community development agencies
2. Identify vulnerable communities and prioritise where to act	NDOs and other DRR agencies operating[3] at the national level	Consult: Sub-national DRR agencies (e.g. local government) Other relevant agencies	Funding agencies Community-based organisations (CBOs) Community members
3. Conduct (or review existing) Vulnerability and Adaptive Capacity Assessment (VCA)	NDOs and other DRR agencies operating at the national and sub-national level	Consult: Other relevant government Ministries or agencies (e.g. social or community development, planning, statistical office) Local government	Community-based organisations (CBOs) Community members
4. Build community capacity for climate change adaptation (CSCDM Module and Handbooks)	NDOs and other national and sub-national DRR agencies	CANARI and other organisations or individuals with skills in training of facilitators	Community-based organisations (CBOs) Community members
5. Develop and implement a climate smart disaster management plan	NDOs and other national and sub-national DRR agencies in conjunction with identified partner CBO(s)	Involve: All key stakeholders	Beneficiaries: Community members
6. Networking and information sharing (regional, and national)	CDEMA, CCCCC and NDOs	Media List serv hosts Relevant web hubs	All identified target audiences at multiple levels
7. Participatory monitoring and evaluation	Lead implementing agency for the specific Programme	Involve all key stakeholders	Policy makers Funding agencies Other implementing agencies/partners

[3] For example, Red Cross, Christian Aid, Adventist Development and Relief Agency; local government agencies.

Figure 1: Components of CSCDM Programme



Note: Although the Programme components are numbered, implementation may not be strictly sequential since changes in communities' or organisations' circumstances may necessitate going back and reviewing/revising the outputs of an earlier activity.

Each component is covered in a separate section of this document with in each case:

- a brief overview of the component;
- key tasks and responsibilities;
- critical success factors; and
- a selection of resources relevant to that particular component, with a brief description[4].

4.5. Programme implementation

A lead agency is identified for each component of the Programme at either the regional or national level. However, the point at which the Programme is initiated in any given country or community will depend on the interventions that have already taken place, the existing capacity within the lead agency and the community, and the human, financial and technical resources available. For example, NDOs or other DRR organisations operating at the national or sub-national level may already have identified a number of communities as particularly vulnerable and have conducted vulnerability and capacity assessments (VCAs). However, these VCAs may need to be repeated or updated to take account of the actual and likely impacts of climate change. However, this cannot take place until these agencies have built their own understanding of climate change, its impact on disasters and the potential for exploiting synergies between DRR and CCA.

In general, implementing agencies are likely to find that they are already familiar with many of the CSCDM Programme approaches. What may be new is the 'climate smart' element of community disaster management. There is also a strong emphasis throughout the CSCDM Programme on the use of participatory tools and methods (see 4.6.3 below) as a means of enhancing effectiveness, efficiency, equity and community ownership, which may be unfamiliar to some implementing agencies.

4.6. Programme principles and best practices

In spite of the fact that, at the time of writing, there are few documented, tried and tested examples of CSCDM in the Caribbean, there are many established good practices from the DRR, CCA and community development sectors that can usefully be applied in the CSCDM Programme. The following have been specifically identified as relevant to all Programme components and, where appropriate, incorporated into the design of the CSCDM Module and Handbooks.

4.6.1. Making CSCDM gender sensitive

At the global level, it is recognised that women's unequal access to resources, legal protection, decision making and power, their reproductive burden, and their vulnerability to violence consistently renders them more vulnerable than men to the impacts of climate change and disasters. However, women are also playing a vital role in disaster management, for example by applying their skills and experience in building and maintaining local social networks (Oxfam 2010, UNISDR 2008b). While acute gender-specific disadvantages have not been identified for either sex in the Caribbean, gender issues still require consideration when implementing the

[4] The References and Resources list in Section 7 includes all the resources identified in the individual sections.

Programme. Understanding how gender relations shape women's and men's lives and the power structures in a community is therefore critical to effective CSCDM and should form part of the initial stakeholder analysis (see section 5.3). The specific considerations will vary from community to community and cannot be generalised. For example, Pelling 2010 notes that "Concerns for social equity, including those influenced by gender, youth and also ethnicity, were mainstreamed into project design and implementation. From a gender perspective, in practical terms, this meant encouraging involvement in local groups and activities for women in Haiti and men in Santo Domingo and Guyana."

4.6.2. Incorporation of livelihoods considerations into Programme implementation

Vulnerable communities often have high levels of poverty and limited access to some of the key livelihoods assets, such as physical infrastructure and good services for health, education and technology. This means that it is particularly important when engaging community members to ensure that the intervention does not adversely affect their ability to earn a living and support their families. For example, a training programme over several days means that participants cannot pursue their normal livelihood activities; consequently, a farmer or a fisher is at a disadvantage when compared to a local government employee who is paid to attend during his or her regular working hours. In many cases, this leads to unrepresentative attendance at community meetings unless stipends can be paid or the times and venues of the meetings altered to suit those who could not otherwise afford to attend. Detailed tips about incorporating such considerations into the planning of training sessions are provided in the CSCDM Facilitator's Handbook.

Similarly, when developing the community CSCDM Plan, activities should be prioritised that contribute both to increased resilience and improved livelihood assets, including opportunities to move out of poverty.

4.6.3. Fostering equitable and effective participation of all key stakeholders

Most literature on CSCDM now highlights the importance of engaging stakeholders at all stages of CSCDM implementation, noting the lessons and good practices that can be learned from participatory processes in the field of natural resource management (Bahadur *et al.* 2010). These have been pioneered in the Caribbean by the Caribbean Natural Resources Institute (CANARI) and documented in a series of guidelines (see resource list below) and case studies (see http://www.canari.org/publications.asp).

Advantages cited for the involvement of community stakeholders include more effective community engagement, ownership, participation and incorporation of local or traditional knowledge (Bahadur *et al.* 2010). The use of different forms of knowledge is in itself recognised as a key area of resilience "Community-based monitoring and indigenous observations are significant in this regard because they fill in the gaps of global science and provide insights regarding local impacts and adaptations. Bringing different kinds of knowledge together helps increase the capacity to learn (Berkes 2007:409 quoted in Bahadur *et al.* 2010).

However, systematic processes for stakeholder participation are necessary at all levels for effective CSCDM, not just at the level of the community itself. For example, Mitchell and Ibrahim note that "Dialogue and access to decision-making are critical at all levels – from the regional to the local. Creating spaces for a range of stakeholders to access information and participate in decision-making - from resource allocation to vulnerability mapping and policy/programme design – is critical if positive development outcomes are to be achieved in a changing climate. This requires partnership and confidence between stakeholders..." (Mitchell and Ibrahim 2010).

4.7. Resources cited in this section

Title	Summary Description
Bahadur A., M. Ibrahim and T. Tanner. 2010. The resilience renaissance: Unpacking of resilience for tackling climate change and disasters. Strengthening Climate Resilience Discussion Paper 1, Institute of Development Studies, Brighton, UK. http://community.eldis.org/.59e0d267/resilience-renaissance.pdf.	A review of academic conceptualisations of 'resilience'. Includes detailed analysis and summary of findings, including identification of the ten main characteristics of resilient systems.
Geoghegan, T., Y. Renard and N. Brown. 2004. Guidelines for Participatory Planning. CANARI Guidelines Series No. 4. CANARI, Laventille, Trinidad. Available on request from CANARI info@canari.org.	Highlights the differences between traditional and participatory planning and the steps involved in and competencies needed for effective participatory planning processes.
Krishnarayan, V., T. Geoghegan and Y. Renard. 2002. Assessing capacity for participatory natural resource management. CANARI Guidelines Series No. 3. CANARI, Laventille, Trinidad. Available on request from CANARI info@canari.org.	Outlines a conceptual framework for capacity building in the context of participatory processes.
Mitchell, T and M., Ibrahim. 2010. Climate Smart Disaster Risk Management In Brief. Briefing paper. Institute of Development Studies, Brighton, UK http://community.eldis.org/.59e0d267/SCR%20DRM%20overview.pdf	Summarises progress and lessons learned to date on climate smart disaster risk management.
Oxfam GB. 2010. Gender, Disaster Risk Reduction, and Climate Change Adaptation: A Learning Companion Oxfam Disaster Risk Reduction and Climate Change Adaptation Resources. Oxfam, Oxford, UK http://www.gdnonline.org/resources/OxfamGender&ARR.pdf	Designed to provide Oxfam programme staff with the basis for incorporating gender analysis and women's rights into DRR and CCA programming but contains useful approaches for implementers of similar programmes who are committed to strengthening women's rights and gender equality.

Title	Summary Description
Pelling, M. 2010. Review and Systematization of Disaster Preparedness Experiences in Urban Areas in the Caribbean Region. Oxford, UK. http://www.oxfamblogs.org/lac/wp-content/uploads/2010/10/review_completo_sept.pdf	An evaluation of and documentation of lessons learned from Oxfam's work in four urban areas in the Caribbean – two in Haiti and one each in Guyana and Dominican Republic.
Renard, Y. 2004. Guidelines for Stakeholder identification and analysis: a manual for Caribbean natural resource managers and planners. CANARI Guidelines Series No. 5. CANARI, Laventille, Trinidad. http://www.canari.org/docs/guidelines5.pdf	Documents the rationale for and steps involved in conducting systematic processes of stakeholder identification and analysis.
UNISDR. 2008b. Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change Adaptation: Good Practices and Lessons Learned. Available from http://www.unisdr.org/eng/about_isdr/isdr-publications/17-Gender_Perspectives_Integrating_DRR_CC/Gender_Perspectives_Integrating_DRR_CC_Good%20Practices.pdf	Highlights initiatives that have successfully used DRR as a tool to adapt to climate change and reduce risk and vulnerabilities in different parts of the world [but no examples from the Caribbean]. Good practices pay particular attention to women's needs and priorities

5) PROGRAMME COMPONENTS

5.1. Component 1: Building capacity to deliver the programme

Overview

In order for the CSCDM Programme to be incorporated into national planning processes and implemented at the community level, capacity needs to be built in the NDOs and partner DRR agencies operating at the national or sub-national level. Much has already been done in the area of DRR. CDEMA, though funding from various partners, has invested in capacity building for NDOs. A concerted effort is being undertaken to strengthen the national architecture for the delivery of disaster management programming through model products for adaptation and strengthening of plans and processes. This includes the development of:

1. A national CDM policy including:
    - model Disaster legislation and regulations;
    - a model Disaster Management Organisation;
    - multi –hazard contingency plans;
    - development of multi-year work programmes;
    - training in results-based management;
    - emergency operations centre enhancements; and
    - leadership training.
2. National CDM consultations.

This component therefore focuses mainly on building the necessary skills, knowledge and attitudes to incorporate climate change considerations into existing community DRR and community development programmes. The main activity consists of training a group of facilitators in the CDEMA participating states to deliver the CSCDM Training Module (see Section 5.4) at the community level. The training of facilitators includes sensitising participants to climate change considerations and building their facilitation skills through practice in delivering different components of the Module. The training will be complemented by mechanisms for ongoing mentoring, coaching, learning and exchange of information and good practices.

This approach is premised on the assumption that basic skills in community disaster management are already in place or can be built through the use of resources listed under subsequent components. However, where this is not the case, CDEMA may need to build additional capacity, for example through training based on its Community Disaster Preparedness Training Manual (CDERA. n.d.) and training in facilitating participatory processes.

As noted in Section 3.2, the enabling environment for the CSCDM Programme also needs to be improved, which will require increased capacity in the following areas: policy design and influence; inter-agency and inter-sectoral collaboration; development of multi-stakeholder institutions; increased funding; and a world view that encompasses participatory processes. While these are not specifically addressed under this component, many of the resources highlighted here and elsewhere in the document can directly contribute to capacity building in these areas.

Key tasks and responsibilities

Task	Lead agency(ies)
1. Identify potential facilitators of the CSDCM Module in all CDEMA participating states.	CDEMA in conjunction with the NDOs
2. Identify facilitators with the capacity to deliver Training of Facilitators workshops based on the CSDCM Module and Handbooks.	CDEMA
3. Identify funding for and deliver Training of Facilitators workshops based on the CSDCM Module and Handbooks.	CDEMA
4. Deliver training of facilitator workshops.	CDEMA
5. Provide ongoing support to facilitators, for example, by developing mechanisms (e.g. website forum, Facebook etc.) for peer networking and sharing of best practices.	CDEMA
6. Adapt Training of Facilitators workshop materials as needed based on feedback.	CDEMA
7. Design exit strategy for CDEMA, transferring responsibility for training of facilitators to NDOs (though this need not preclude continuing regional-level collaboration).	CDEMA

Critical success factors and competencies

1. Establishment of a regional project steering committee for the implementation of the CSCDM Programme, with representation of all key stakeholder interests.
2. Establishment and maintenance of strategic partnerships (for example, between CDEMA and other regional agencies; between CDEMA and key service providers involved in training of facilitators; and between the NDOs for sharing of experiences);
3. Development of inter-agency coordination at the regional and national levels.
4. Establishment of realistic timeframes for implementation of the Programme.
5. Securing adequate financial resources for implementation of the Programme.
6. Development of strategies for skills transfer (e.g. to develop training of facilitators capacity at the national level; development of web-based tools for networking and sharing of information).
7. Successful exit strategy/transfer of responsibility for building and maintaining facilitator capacity to the national level.

Resources

Essential materials	Summary description
CDEMA, 2011. Climate Smart Disaster Risk Management Module, including Facilitators and Participant's Handbooks.	Training programme to be delivered in target communities over a period of 2-3 days (12-18 contact hours), which facilitates: • increased understanding by communities of the impacts of climate change in the Caribbean;

Essential materials	Summary description
	• increased understanding of the linkages between climate change and disasters and DRR and CCA; • adaptation of existing vulnerability and capacity assessment to incorporate impacts of climate change; • first steps in developing a community CCA plan; and • first steps in developing a communication plan.
CDEMA. n.d. Community Disaster Preparedness Training Manual for CDERA Participating States. CDEMA. Lodge Hill. Barbados	Training manual targeted at persons who educate and inform persons within local communities on their vulnerability to hazards and to improve communities' capacity to reduce this vulnerability.

Background resource materials	Summary description
Linkages between DRR and CCA	
Schipper E.L.F. 2009. *Meeting at the crossroads? Exploring the linkages between climate change adaptation and disaster risk reduction* in Climate and Development 1 (2009) 16-30. Earthscan, London, UK. http://unfccc.int/files/adaptation/nairobi_work_programme/partners_and_action_pledges/application/pdf/nwp_expert_lisa_schipper.pdf	Overview of the linkages between CCA and DRR and the opportunities for and challenges to integrated approaches.
UNISDR 2008c. Climate Change and Disaster Risk Reduction, Briefing Note 1. UNISDR, Geneva, Switzerland. http://www.unisdr.org/eng/risk-reduction/climate-change/docs/Climate-Change-DRR.pdf.	Outlines the nature and significance of climate change for disaster risk, as well as the main perspectives and approaches of disaster risk reduction and how they can support adaptation strategies.
UNISDR 2009b. Adaptation to Climate Change by Reducing Disaster Risks: Country Practices and Lessons, Briefing Note 2. Geneva, Switzerland. http://unisdr.org/preventionweb/files/11775_UNISDRBriefingAdaptationtoClimateCh.pdf	Documents case studies of recent experience in eight countries where national and local governments and civil society participants have worked to strengthen their disaster risk reduction and adaptation actions.
UNISDR. 2010. Strengthening climate change adaptation through effective disaster risk reduction. Briefing Note 3. UNISDR. Geneva, Switzerland. Available at http://preventionweb.net/files/16861_ccbriefingnote3.pdf	Highlights that climate change adaptation relies on the reduction and management of climate-related disaster risks and why both need to become central to development planning and investment. It incorporates evidence that illustrates how climate risks are constructed and which risks can be reduced cost effectively.
Lessons from the Caribbean	
Brown.N. and J. Ogilvie. 2009. Building Disaster Resilient Communities in Jamaica: Emerging Lessons. Paper presented at he	Draws lessons from the practical application of the community resilience approach in Jamaica through the Building Disaster

4th Caribbean Conference on Comprehensive Disaster Management Montego Bay, Jamaica.	Resilient Communities Project. These point to the usefulness and relevance of conceptualising building community disaster resilience as a process and not merely an outcome.
Other useful resources	
Bread for All. 2009. Climate proofing tool. Strengthening local adaptation and mitigation capacities in community-level development projects. Working Paper, Version 3. http://www.proventionconsortium.org/themes/default/pdfs/CRA/HEKS-CPT_EnglishV3.pdf	Tool to assist coordinators of community-level projects to climate-proof their activities. Specifically, it helps users to: • understand how climate risks affect local livelihoods in their project area; • learn how their beneficiaries deal with current climate hazards; • evaluate how their projects affect local livelihood resources that are vulnerable to climate risks and/or relevant to cope with those risks; • identify how their projects affect greenhouse gas emissions and thereby contribute to climate change; • adjust existing projects or formulate new activities designed to strengthen their beneficiaries' adaptive capacities in dealing with climate risks; and • consider measures to improve a projects' impact on the global climate.
IIED. 2009. Participatory Learning and Action 60: Community-based adaptation to climate change. IIED. London, UK. Available at http://pubs.iied.org/pdfs/14573IIED.pdf	• Overview of the status of and good practices in CCA including an overview; reflections on o participatory processes and practices; o participatory tool-based case studies; and o participatory tools.

5.2. Component 2: Identify vulnerable communities and prioritise where to act

Overview

Given the scale and gravity of the challenges posed by climate change and the limited human and financial resources available to address them, it is important to systematically identify the communities most at risk in order to prioritise where to act first. This is an exercise that needs to be done on a regular basis as levels of vulnerability may alter, for example, as a result of hurricane damage, changes in the economy or the availability of new data on likely climate change impacts.

Since it is unlikely that full vulnerability and capacity assessments (see Section 5. 3) will have been conducted in all communities at this stage, this component is likely to involve analysis of existing data, such as poverty statistics, post-disaster reports, mapping of the low-lying communities most at risk from sea level rise and storm surges etc. The availability of data is likely to vary from country to country but in all

cases the analysis will benefit from inter-agency coordination and collaboration. It is also recommended that data are collected directly from, discussed with and validated by the communities in question, as part of the commitment to stakeholder participation at all stages of CSCDM and the development of the necessary relationships of mutual trust and respect.

The criteria used to prioritise the communities will vary but are likely to include

- Frequency of events in the community;
- Magnitude/extent of the event (physical, social, economic);
- Potential impacts (threat to life, health, disruption of services, physical, social, economic);
- Demographics;
- Availability/non-availability of community resources; and
- Specific potential exposure to climate change related hazards

A scoring/ranking matrix will assist in making the process of community selection transparent.

Key tasks and responsibilities

Task	**Lead agency(ies)**
1) National mapping of vulnerable communities, including review of existing vulnerability assessments.	NDOs and other DRR and community development agencies operating at the national level.
2) Identify criteria for prioritising communities	
3) Assessment of the institutional and policy landscape including consultation with sub-national DRR agencies and other relevant agencies.	

Critical success factors and competencies

1) Access to and ability to interpret relevant data.
2) Ability to make linkages with other national plans and agencies.
3) Facilitation of participatory community data collection, analysis and validation.

Resources

The majority of resources on conducting vulnerability assessments are listed in Section 5.3 below. This list relates mainly to analyses of and suggestions for the process of prioritisation.

Resources	**Summary description**
CARE 2010. Policy Position Paper on Adaption. CARE USA. Atlanta, USA. http://www.careclimatechange.org/files/policy/Adaptation_Policy_Brief.pdf	Makes the case and suggests methodologies for systematic identification and prioritisation of especially vulnerable communities, populations and people, which take into account gender considerations.
CDEMA. Vulnerable Community Selection Survey. CDEMA,	
Harmeling, S., C. Bals, M. Windfuhr and T. Hirsch. 2008. Making the Adaptation Fund Work for the Most Vulnerable People. Brot für die Welt. Stuttgart. Germany.	Highlights the inadequacy of most current assessments of who are the most vulnerable groups and makes recommendations for improved methodologies.

Resources	Summary description
http://www.brot-fuer-die-welt.de/downloads/fachinformationen/adaptation-fund_engl.pdf	

5.3 Component 3: Conduct (or review existing) Vulnerability and Adaptive Capacity Assessment

Overview

A vulnerability and adaptive capacity assessment (VCA) is a prerequisite for effective CSCDM. It is "a method of investigation into the risks that people face in their locality, their vulnerability to those risks and their capacity to cope with and recover from disasters" (IFRC 2008a). In the context of CSCDM, the VCA must incorporate an assessment of the risks related to climate change and include an analysis of capacities to manage under conditions of uncertainty. Consequently, some DRR agencies may need to start VCAs from scratch whereas others will just need to review and revise existing VCAs to incorporate climate change considerations.

Many approaches to community-based disaster risk reduction have not included a comprehensive assessment and subsequent consideration of the underlying causes of vulnerability. Without this information, it is likely that interventions will have little success in the long term.

VCAs should be conducted in a participatory way throughout, recognising that "In order to plan effective adaptation actions, scientific climate change analysis is vital for broad context. However, at the local level, the most relevant information and knowledge often already exists or can be generated through local stakeholders' own analysis. Local knowledge also has a credible authority for informing and influencing policy" (Chambers in Dazé *et al.* 2009a). They should also build on and complement existing processes that may have been initiated by other agencies.

In some instances, the initial analyses of and interactions with the community may indicate that a VCA is not an appropriate intervention at that time. For example, community members may need to prioritise their livelihoods, particularly during a post-disaster or recession period. In other cases, there may be a need to build or strengthen the governance systems of community partner organisations before they can act effectively. At times, levels of conflict within the community (for example over land use) may be so high that this needs to be managed before the VCA can go ahead.

Key tasks and responsibilities

The VCA itself will consist of many different tasks and phases (e.g. planning, implementation/data gathering, analysis and capacity building) as outlined in the resources listed below. These have not been broken down in detail here, where the focus is on the preparatory activities needed to ensure that the VCA is conducted in an effective and participatory manner and processes that are needed in order to build community ownership of the process.

Task	Lead agency(ies)
1) Conduct a stakeholder identification and analysis.	Initiated by the agency leading the VCA process in the community, e.g. NDO or other

Task	Lead agency(ies)
	DRR agency and conducted in conjunction with community groups/members that have already been identified. Needs to be reviewed regularly as new stakeholders or conflicts emerge, resource use changes etc.
2) Mobilise stakeholders.	Initiated by the agency leading the VCA process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members that have already been identified as potential partners. May require a variety of meetings at different times and venues to ensure inclusion.
3) Conduct VCA.	Initiated by the agency leading the VCA process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members that have been identified as partners.
4) Share and validate findings with the wider community.	Initiated by the agency leading the VCA process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members that have been identified as partners.

Critical success factors and competencies

1) Access to relevant data.
2) Willingness or capacity of the community to participate.
3) Facilitators skilled in conducting VCAs, including interpretation and analysis of the data.
4) Facilitators or community members with the capacity to present the VCA findings to the community in an accessible manner.
5) Ongoing community access to and 'ownership' of the findings.
6) Capacity to update the VCA when circumstances change (e.g. more up-to-date climate data, community affected by a hurricane, high levels of emigration after a disaster etc.).

Resources, tools and good-practices

There are numerous resources relating to VCAs. The list below therefore focuses mainly on those that specifically incorporate climate change considerations and/or have been applied in the Caribbean.

Resources	Summary
VCA tools and methods that specifically incorporate climate change considerations	
Dazé, A., K. Ambrose and C. Ehrhart. 2009a. Climate vulnerability and capacity analysis handbook**.** CARE International. London, UK. http://www.careclimatechange.org/cvca/CARE_CVCAHandbook.pdf	Methodology for conducting a climate smart VCA, with a strong emphasis on the value of local knowledge and the use of participatory processes.

Resources	Summary
Dazé, A., K. Ambrose and C. Ehrhart. 2009b. Review of Community Based Vulnerability Assessment Methods and Tools. CARE International. London, UK. http://www.climatenepal.org.np/main/downloadFile.php?fn=4uxal4y8aa9.pdf&ft=application/pdf&d=publication	Review and analysis of existing participatory and community based vulnerability assessment frameworks, methodologies and tools that deal with vulnerability and adaptation to climate change. Includes recommendations on how a VCA can draw from approaches drawn from other disciplines.
IFRC. 2010. How can climate change be considered in Vulnerability and Capacity Assessment - A summary for practitioners. IFRC. Geneva, Switzerland. http://www.climatecentre.org/downloads/File/VCA%20guidance/VCA&CC_forpractitioners_Oct2010.pdf	Aims to provide inspiration for DRR practitioners to consider climate change within their work with communities, building on IFRC VCA methodologies (see below).
Simpson, M. C. and J.F. Clarke. (2010) Assessing Climate Change Impacts and Adaptive Capacity in Community Livelihoods, Gender, Poverty and Development; A Caribbean Risk Atlas. UK Department of International Development (DFID) Report. Barbados and London. For further information, contact admin@caribsave.org	The approach uses a livelihood approach. Households within vulnerable communities are interviewed to determine their access to the five livelihood assets (financial, physical, natural, social and human). Livelihood strategies (combinations of assets) are evaluated to determine the adaptive capacity of households and consequently communities. Additionally, mapping exercises and focus groups are used to determine the context of the community's exposure to hazards in order to make an inference about vulnerability. Data are disaggregated by gender.
Pulwarty, R and N. Hutchinson. 2008. Vulnerability and Capacity Assessment Methodology: A guidance manual for the conduct and mainstreaming of climate change vulnerability and capacity assessments in the Caribbean Region. CCCCC. Belmopan, Belize. http://www.caribbeanclimate.bz/macc/macc.html	Manual outlining the process (i.e. the types of information that should be gathered, how to manage relevant stakeholder processes) providing some of the tools that can be used to analyse the information gathered to develop usable products for decision making.
Other VCA tools and methods	
IFRC. 2008a. What is VCA? An introduction to vulnerability and capacity assessment, 2nd. ed. IFRC. Geneva, Switzerland. http://www.ifrc.org/Global/Publications/disasters/vca/whats-vca-en.pdf	A simple and practical guide for National Society staff and volunteers who wish to undertake a local-level VCA, as part of their community programming strategy. It contains data gathering and analytical tools based on participatory methods.
IFRC. 2008b. How to do a VCA: A practical step-by-step guide for Red Cross Red Crescent staff and volunteers, 2nd. ed. IFRC. Geneva, Switzerland. http://www.ifrc.org/Global/Publications/disasters/vca/how-to-do-vca-en.pdf	A simple and practical guide for National Society staff and volunteers who wish to undertake a local-level VCA, as part of their community programming strategy. It contains data gathering and analytical tools based on participatory methods.

Resources	Summary
IFRC. 2008c. VCA Toolbox with reference sheets. IFRC. Geneva, Switzerland. http://www.ifrc.org/Global/Publications/disasters/vca/vca-toolbox-en.pdf.	Practical tools and reference sheets/ templates for implementing VCA using the methodologies outlined in IFRC 2008b.
IFRC 2008d. VCA Training guide: Classroom training and learning by doing. IFRC. Geneva, Switzerland. http://www.ifrc.org/Global/Publications/disasters/vca/vca-training-guide-en.pdf	Guide for VCA facilitators to train those who will be conducting the VCAs in communities.
Provention Consortium. 2007. Community Risk Assessment Toolkit. Provention Consortium.Geneva, Switzerland. http://www.proventionconsortium.org/?pageid=39	Four part electronic toolkit comprising: • a collection of methodologies and case studies; • a search tool; • a glossary; • additional links to community based DRM materials.
Tools and methods for participatory processes	
Geoghegan, T., Y. Renard and N. Brown. 2004. Guidelines for Participatory Planning. CANARI Guidelines Series No. 4. CANARI, Laventille, Trinidad. Available on request from CANARI info@canari.org	Highlights the differences between traditional and participatory planning and the steps involved in and competencies needed for effective participatory planning processes.
Krishnarayan, V., T. Geoghegan and Y. Renard. 2002. Assessing capacity for participatory natural resource management. CANARI Guidelines Series No. 3. CANARI, Laventille, Trinidad. Available on request from CANARI info@canari.org.	Outlines a conceptual framework for capacity analysis and capacity building in the context of participatory processes.
Krishnarayan, V. 2005. Understanding and managing natural resource conflicts. CANARI Guidelines Series No. 6. CANARI, Laventille, Trinidad. http://www.canari.org/docs/guidelines6.pdf	Provides insight into the underlying causes of conflicts around natural resource use and management and practical guidance on how to manage them.
Renard, Y. 2004. Guidelines for Stakeholder identification and analysis: a manual for Caribbean natural resource managers and planners. CANARI Guidelines Series No. 5. CANARI, Laventille, Trinidad. http://www.canari.org/docs/guidelines5.pdf	Documents the rationale for and steps involved in conducting systematic processes of stakeholder identification and analysis.

5.4 Component 4: Build community capacity for CSCDM

Overview

This component focuses on building the capacity of vulnerable Caribbean communities to increase their resilience to climate change and to reduce the impacts of climate-related disasters, by providing practical, action-oriented tools and methods

that they can use to understand their climate risk and vulnerability and develop and implement strategies for reducing them.

The core of Component 4 is the CDEMA CSCDM Module and the associated Facilitator's and Participant's Handbooks. These are complemented by a series of eight short video clips covering different aspects of CSCDM. The Module is designed to be delivered in communities that have already begun the process of community DRR, including completion of a VCA and developing a community disaster management plan. However, the material could also be incorporated into the design of a more integrated CSCDM process in communities where no DRR planning has yet taken place. The Module is intended to be delivered over 2-3 days or a series of shorter sessions if that is more convenient to the community.

The Module outlines what climate change is and how it is likely to affect the Caribbean, the specific country and community. It explores the linkages, synergies and differences between CCA and DRR and lays the groundwork for developing a CCA plan and communication strategy. It is designed to be experiential and interactive, and uses a wide range of training methodologies to appeal to different learning preferences. It also contains tips for facilitators in terms of preparation and delivery.

The design of the Module is premised on the assumption that certain critical capacities are already in place at the community level, such as the ability to act collaboratively, preferably through one or more community groups with good governance structures and systems. However the VCA may find that this is not the case and may also surface additional needs, which must be addressed for effective CSCDM. In many instances, NDOs and other national DRR agencies will not themselves possess the necessary skills to build these capacities, which again emphasises the need for them to collaborate with agencies and non-governmental organisations (NGOs) involved in community and civil society organisational development.

Other complementary resources are listed below that may be of interest to those facilitating the capacity building and, in some cases, the communities themselves.

Key tasks and responsibilities

Task	**Lead agency(ies)**
1) Review and update the stakeholder identification and analysis.	Initiated by the agency leading the CSCDM process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members who have already been identified.
2) Develop criteria for selection of workshop participants to include but not be limited to gender and other equity considerations and capacity to participate and apply learning.	Initiated by the agency leading the CSCDM process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members who have already been identified as potential partners.
3) Mobilise stakeholders for the workshop.	Initiated by the agency leading the CSCDM

	process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members who have already been identified as potential partners.
4) Facilitate and evaluate workshop.	Initiated by the agency leading the CSCDM process in the community, e.g. NDO or other DRR agency but may be facilitated by an external facilitator if the skills do not exist in-house.
5) Produce workshop report and ensure that copies of all key outputs (e.g. revised VCA, draft CSCDM and communications plan) are provided to the community in an accessible format.	Lead agency or contracted facilitator.
6) Share lessons learned, recommendations etc with wider facilitator group via CDEMA-generated Web portal.	Lead agency or contracted facilitator.

Critical success factors and competencies

1) Willingness or capacity of the community to participate.
2) Community partner agency has transparent and effective governance structure, financial and administrative systems and credibility within the community (or is willing to have its capacity built in this area, for example, through community or social development agencies or other NGOs);
3) Facilitators with experience of facilitation at the community level and trained to deliver the Module.
4) Availability of relevant data.
5) Facilitator/lead agency ability to contextualise climate change adaptation in livelihoods/socio-economic issues and to identify win-win opportunities.
6) Availability of case studies and models, preferably from the country or other Caribbean countries (enhances participants' sense of being empowered to act if "other people like us" have already done something similar).
7) Ability of lead agency to provide or catalyse ongoing support in the post-workshop implementation phase.

Resources, tools and good-practices

Resources	**Summary**
CDEMA, 2011. Climate Smart Disaster Risk Management Module, including Facilitators and Participant's Handbooks.	Training programme to be delivered in target communities over a period of 2-3 days to increase their understanding of the impacts of climate change in the Caribbean and the linkages between climate change and disasters and DRR and CCA. Designed to build their capacity to incorporate climate change considerations in their disaster management plans and to communicate and advocate effectively.

Brown, N.A. 2009. Addressing Climate Change in the Caribbean: A Toolkit for Communities. Christian Aid. Kingston, Jamaica http://www.canari.org/documents/CAtoolkitEnglish.pdf	Helps community organisations develop responses to climate change. It aims to give community leaders and members a general understanding of climate change and provide some ideas for action.
CANARI. 2009. Communicating climate change: A toolbox for local organisations in the Caribbean. CANARI, Laventille, Trinidad. http://www.canari.org/documents/CommunicatingclimatechangeAtoolboxforlocalorgansationspdf.pdf	Toolbox designed to help local (non-governmental, community-based, and grassroots) organisations become more effective in telling their climate change stories and making their voices heard in lobbying and advocating for the policies, laws and other actions necessary to mitigate and adapt to climate change at the international, regional, national and local levels. It provides a range of tools and approaches for effective communication about issues relating to climate change. The focus is on tools and approaches that are low-cost and easy to put into practice. It also includes suggestions on making effective use of the increasingly-affordable and accessible communication technologies that are available, such as email, the Internet, and video recorders.
CDERA. n.d. Community Disaster Preparedness Training Manual for CDERA Participating States. CDEMA. Lodge Hill. Barbados	Training manual targeted at persons who educate and inform persons within local communities on their vulnerability to hazards and to improve communities' capacity to reduce this vulnerability.
IUCN and UNDP. 2009. Training manual on gender and climate change. IUCN. Gland, Switzerland. http://www.generoyambiente.org/archivos-de-usuario/File/ecosistemas_especificos.pdf	Practical manual from enabling the facilitator to choose topics and exercises appropriate to the target group and the length of the training. Modules include: • gender and gender mainstreaming; • international law instruments as a framework for mainstreaming gender in climate change; • overview of gender issues and climate change; • gender mainstreaming in adaptation, mitigation actions, gender-sensitive strategies on technology development and transfer to support actions on mitigation and adaptation.

Audiovisual resources	**Summary**
Buccoo Reef Trust. 2009a. Islands on the Edge. Buccoo Reef Trust, Carnbee, Tobago. http://www.youtube.com/watch?v=k2Z-t5U-NpA and http://www.youtube.com/watch?v=_XDpdMftd10&feature=related	Documentary film that looks at what climate change means for the Caribbean communities, using footage from the region and interviews with experts and civil society.
Buccoo Reef Trust. 2009b.The Burning	Explains the threats of climate change and

Audiovisual resources	Summary
Agenda. Buccoo Reef Trust. Carnbee, Tobago. http://www.youtube.com/watch?v=tRHqWUhtlvY, http://www.buccooreeftrust.org/multimedia/videos/viewvideo/2/buccoo-reef-trust/the-burning-agenda-part-2mov and http://www.youtube.com/watch?v=UxdXIIWS_fU	the opportunities for the region to engage with the issues. Includes interviews with regional political leaders, scientists and farmers.
CDEMA 2011 Climate Smart Disaster Risk Management Video series 1. People like us can do something about climate change 2. Hydro-meteorological hazards of the Caribbean and what communities are doing about them 3. Climate change impacts and their consequences for human well-being 4. Common climate change misconceptions 5. What other communities have already done to adapt to climate change 6. What does a resilient community look like? 7. How the Voices for Climate Change project/video was developed and has been used in communities 8. Tips for talking climate change	A series of video clips which can be shown individually (as is the case in delivery of the Module) or together as a longer public education and outreach tool.
Panos Caribbean and Jamaica National Environmental Education Committee. 2009. Voices for Climate Change video. Panos Caribbean. Kingston, Jamaica. http://www.youtube.com/watch?v=M-5NGTSzTJs	VOICES for Climate Change is a joint project of the National Environmental Education Committee and Panos Caribbean: The project is a national climate change communication strategy which uses the expertise, talent, influence and voices of established performing artistes as well as new, upcoming talent in the industry to educate and spread awareness on climate change issues and promote environmentally friendly behaviour. This music video is one of the productions of the project and includes established artistes such as Tony Rebel, Queen Ifrica, One Third, as well as Digicel Rising Stars winners and outstanding contestants, Lloyd Lovindeer, Omari, Amique and other performing artistes.

5.5 Component 5: Develop and implement a climate smart disaster management plan.

Overview

The community CSCDM Plan is the document that guides the community and its partners on the actions needed to improve community resilience to climate change,

enhance existing disaster management strategies and capitalise on related livelihood activities. It should be a relatively long-term (3-5 years), strategic, integrated and proactive. Proactive adaptation (i.e. planned in advance) is usually more effective and less expensive than responding after change has occurred (reactive adaptation). Proactive adaptation can provide immediate benefits because measures designed to address future impacts of climate change can also help a community to deal with more immediate weather events and to develop strategies that enhance rather than destroy livelihoods.

In Unit 4 of the CSCDM Module, communities begin to incorporate climate change considerations into their existing disaster management and other relevant development plans. In Unit 5, they start to develop a communication strategy encompassing both public education and outreach and advocacy. Component 5.5 of the Programme builds on this by completing the planning and prioritisation of actions and moving into the implementation phase. As before, it is important that both the planning and implementation are done in a participatory way to make the best use of collective capacity and increase long-term ownership and sustainability.

Although detailed tasks are outlined below, it is important that the plan be reviewed regularly and adapted in the light of unanticipated events, new data on climate change and its impacts on the community, emergence of relevant good practices, availability of new funding, identification of new capacity gaps etc (see also Section 5.7).

Similarly, while some actions are likely to be common to most CSCDM Plans (for example, development of early warning systems, reinforcement of structures to withstand hurricane and storm damage), it is important that each plan be tailored to the specific community, the projected climate change scenarios (for the country, region or community, depending on what is available) and the likely impacts of climate change in that location. This should include modelling of impacts under different climate change scenarios, which can be revised and refined as more data becomes available at appropriate scales (even country-specific data is rarely available at present, let alone parish- or community-specific).

The extent of the work that will be needed to make an existing DRR plan climate smart will depend on a number of factors:

a) The degree to which the existing plan has incorporated the recommended CSCDM principles and proceses (such as equitable stakeholder participation and gender equity and whether a relationship has been established with a credible and well-managed community-based organisation etc). For example, in Harbour Bay, Jamaica, where the Module was piloted, much of the groundwork had already been done and strong relationships of trust built, so the adaptation of the plan will be a relatively easy exercise. In the other pilot community, Mayaro, Trinidad, the situation is similar, except that the workshop clearly highlighted the absence in most of the participating communities of strong community-based organisations, which needs to be addressed for effective implementation of the CSCDM Plan. However, in cases where the planning and recommendations to date have been largely by consultants or government agencies and are not specific to a particular community (e,g the UNDP and CDEMA District Plans for

Grenada), it would make sense to work through each of the steps in the CSCDM Programme before completing specific community plans.

b) When the plan was done: if the existing DRR plan is several years old, it will be necessary to review and revise the earlier stakeholder identification and analysis as well as the VCA and the capacities, as outlined in the CSCDM Module (see Section 5.4). This will also provide an opportunity to evaluate the results of actions taken to date and alter the plan in relation to those findings too.

c) Whether there have been changes in the community since the plan was drafted that would affect its content or implementation. These could range from natural disasters to changes in the socio-economic climate to emergence or disappearance of strong civil society organisations that can act as implementing partners.

Task	**Lead agency(ies)**
Planning phase	
1) Complete the updating of the existing community DRR/DM plan, based on the climate impacts and vulnerabilities identified in the capacity building workshop and the Module and Handbooks on which it is based (see Section 4).	Initiated by the agency leading the CSCDM process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members.
2) Complete the process of identifying and documenting existing community resources and capacities for climate change adaptation (based on the VCA and additional capacities and resources identified in the capacity building workshop and the Module and Handbooks on which it is based (see Section 4).	
3) Complete coping strategies table.	
4) Complete communication strategy.	
5) Identify and list CCA and DRR actions and develop criteria to prioritise these, including those relating to enhanced livelihoods.	
6) Identify detailed activities for each action (what, why, by when and resources available).	
Implementation phase	
7) Identify resource needs (by comparing resources that already exist with those identified in the plan).	Initiated by the agency leading the CSCDM process in the community, e.g. NDO or other DRR agency and conducted in conjunction with community groups/members.
8) Identify potential sources of support and strategy for getting resources by compiling a table under the headings Resource needed; Potential source(s); Strategy for getting resources; and	

Task	Lead agency(ies)
Alliances.	
9) Build capacity at the community level for accessing resources and developing strategic alliances.	
10) Implement actions according to the plan.	Lead implementing organisation will vary according to the action.
11) Develop a monitoring and evaluation framework for individual actions and the overall plan (see Section 5.7).	Initiated by the agency leading the CSCDM process in the community, e.g. NDO or other DRR agency and supported by project leaders for individual actions.
12) Report and share experiences with other CSCDM stakeholders.	Organisation leading on the implementation of the communication strategy.

Critical success factors and competencies

1) Establishment of realistic timeframes and expectations for development and implementation of the plan.
2) Community support for and eventual ownership of the plan and its results.
3) The plan contributes to the development or enhancement of sustainable livelihoods in the community.
4) Clear allocation of roles and responsibilities.
5) Assessment of the sustainability of proposed actions (e.g. beyond initial project time frames and/or once lead agency leaves the community or funding ends).
6) Access to resources (financial, people with appropriate skills, equipment etc.).
7) Community capacity in key areas such as project management, fundraising, financial management and conflict management.
8) An advocacy community including advocacy intermediaries.

Resources, tools and good practices

Resources	Summary
Christian Aid (Caribbean). 2009. Addressing Climate Change in the Caribbean: A Toolkit for Communities. Christian Aid. Kingston, Jamaica. http://www.canari.org/documents/CAtoolkitEnglish.pdf	Helps community organisations develop responses to climate change. It aims to give community leaders and members a general understanding of climate change and provide some ideas for action.
Sea Grant Marine Advisory Programme, University of Alaska Fairbanks, 2010.Climate Change Adaptation Planning Manual For Alaskans and Alaskan Communities. Fairbanks, Alaska.	This manual or "adaptation planning tool" is written for extension professionals, community organisers, local planning officials, teachers or anyone else whose task is to help individuals, families, businesses, communities, and local governments do any or all of the following: think through the meaning of climate change on the local scale, to assess vulnerabilities, to devise strategies for improving resilience, to locate tools and resources that will help, and to develop and implement plans for adaptation. It explains a series of steps and questions that lead the user through the planning process. Although designed for Alaska, it contains approaches that are adaptable to the Caribbean.

Examples of community level disaster plans (without consideration of climate change)	
UNDP 2009. Community Disaster Committee Model Plan	Although these plans do not specifically take account of climate and are not particularly participatory in their approach, some of the methodologies and institutional structures may also be applicable to CSCDM planning.
CDERA. n.d. Model Plan for the District Disaster Committees in Grenada. CDERA. Lodge Hill, Barbados.	

5.6 Component 6: Establish mechanisms for networking and information-sharing

Overview

The field of CSCDM in the Caribbean is relatively new, so there is much to be gained from providing opportunities for practitioners, policy- and decision-makers and community stakeholders to network and share findings, good practices and other information at the national and regional level. Since opportunities to meet face-to-face are limited and costly, this will mainly involve exchanges using electronic media such as Skype, Facebook, Twitter, web-based discussion forums, email groups etc. This could best be achieved by using existing knowledge network nodes and web portals, and specifically the websites of CDEMA, CCCCC and the NGOs. The sites could also link to other sites with relevant data.

Inter-agency and inter-sectoral cooperation at both the regional and national levels could be improved through:

- transfer of knowledge, technology and expertise to enhance capacity building for CSCDM;
- sharing of research findings, lessons learned and good practices; and
- compilation of information on hydro-meteorological hazards and impact for all scales of disasters in a way that can inform sustainable development and disaster risk reduction.

Communities and their partners also need to have access to up-to-date climate change information, so an information-sharing mechanism is need that provides communities with the latest scientific information in a manner they can understand and utilise including refined models and projections for their geographic region. This could form part of the proposed CCCCC web database but specifically adapted (in terms of language, bandwidth needed etc.) to be accessible to community members.

Key tasks and responsibilities

Task	**Lead agency(ies)**
1) Review existing regional networks and websites to determine which if any could act as host of regional CSCDM network.	CDEMA/CSSSC Chairs.
2) Review existing national networks and websites to determine which if any could act as host of national CSCDM network.	NDOs.

Task	Lead agency(ies)
3) Identify potential partner organisations/strategic alliances and establish MOUs for data and information sharing, as necessary.	CDEMA/NDOs.
4) Organise meetings of relevant sub-committees such as CSSSC and Technical Advisory Committee to refine the design of this component based on the analysis under Tasks 1) and 2).	CDEMA.
5) Implement the strategy, including fundraising for 6).	CDEMA/CCCCC/NDOs.
6) Maintain the websites and networks, host regular electronic discussion forums etc.	CDEMA/CCCCC/NDOs.

Critical success factors

1) Willingness of agencies working in the field of DRR and CCA to collaborate, share information and pool human and financial resources.
2) Availability of people with the capacity to 'translate' scientific information in such a way that it becomes accessible to the lay person (e.g. community members, decision- and policy makers in other sectors).
3) Long-term availability of financial and human resources to maintain the networking and information sharing mechanisms.

Resources, tools and good practices

Resources	Summary
Caribbean Disaster Information Network (CARDIN) http://www.mona.uwi.edu/cardin/	Caribbean Disaster Information Network (CARDIN) is a network of institutions across the Caribbean whose purpose is to strengthen the capacity of the Caribbean community to collect, archive, and disseminate data related to disaster preparedness planning. CARDIN publishes a quarterly newsletter and various publications on disaster preparedness (such as a bibliography, a manual, and reports), many of which are available for download at http://www.mona.uwi.edu/cardin/.

5.7 Component 7: Undertake participatory monitoring and evaluation of the CSCDM Programme and Plans

Overview

All programmes and projects need to have a monitoring and evaluation (M&E) component but it is even more important in the context of managing the high degree of uncertainty within which CSCDM initiatives are being implemented. "These uncertainties create challenges for M&E, particularly around setting baselines, indicators, and targets. Conventional approaches to M&E are based on assumptions that the project conditions are static, fixing baselines and indicators at the outset of the planning cycle. "Progress" against a fixed baseline is usually measured in terms of "gains" against a fixed indicator. However, where climate change or changes in

vulnerability contexts mean it is increasingly difficult to achieve gains over time, "progress" might instead mean no gains are made during the programme cycle, but losses are reduced. Further, returning to 'baseline' conditions for building the resilience of the poor and vulnerable implies maintaining the conditions of poverty and marginalization that drive vulnerability in the first place, because baselines and indicators are set in a development deficit situation." (CARE 2011).

The UNDP community-based adaptation programme (CBA) also notes that" key considerations in M&E for CSCDM include:

- Grounding M&E in the local context: M&E for CBA should avoid overly rigid frameworks, recognizing community heterogeneity and maintaining local relevance
- Capturing global lessons from local projects: CBA projects are highly contextualized, but lessons generated should be relevant to stakeholders globally
- Incorporation of both quantitative and qualitative indicators: to ground projects in tangible changes that can be objectively evaluated, and to capture lessons and case studies for global dissemination" UNDP website http://www.undp-adaptation.org/projects/websites/index.php?option=com_content&task=view&id=344

In order to achieve both upward and downward accountability for the CSCDM Programme, the M&E needs be participatory and implemented at three levels:

1. **Regional** (Caribbean): monitor the implementation and periodically evaluate the results of the overall CSCDM Programme and its contribution to the wider objectives of the Enhanced CDM Strategy and Programme Framework 2007 – 2012 and the Regional Framework for Achieving Development Resilient to Climate Change 2009-2015. This could be done through existing CDEMA committees, such as the CSSSC, or a new CSCDM Programme M&E committee ("the Guardians of Monitoring and Reporting").
2. **National**: monitor the implementation and periodically evaluate the results of the CSCDM Programme at the national level, and notably its contribution to national DRR and CCA objectives and the regional programmes cited above. This could be achieved by a standing multi-stakeholder committee comprising the NDO, the UNFCCC focal point and other DDR and CCA actors, including community representatives. The CSSSC has also recommended that an annual Community Stakeholders Forum be held where community project implementing teams and their national partners can share and discuss results and lessons learned.
3. **Community:** to monitor implementation and periodically evaluate the results of the community plan. In this case, the CSSSC recommended that a Project Steering Committee be established at the design stage, which would also perform the monitoring and evaluation function.

The CSSSC has recommended that the Programme Monitoring Framework include results (both outcomes and outputs); indicators; sources of data; targets; responsibilities and costs.

Task	Lead agency(ies)
Regional	
1) Establish CSCDM Programme M&E committee or M&E responsibility within an existing committee. The existing standing committees may provide the basis for this.	CDEMA.
2) Establish a Programme Monitoring and Evaluation Framework that responds to the key considerations noted above.	M&E Committee.
3) Establish a standard reporting format that can be applied at all three levels	M&E Committee.
4) Map the processes for reporting M&E findings up and down the different levels (community, national, regional and international).	CDEMA/M&E Committee.
5) Report on a regular basis to international, national and community stakeholders.	CDEMA/M&E Committee.
National	
1) Identify key CSCDM stakeholders and establish multi-stakeholder national M&E committee.	NDO.
2) Apply the Programme M&E framework to the national CSCDM programme.	Project steering committee.
3) Report according to standard reporting format.	
4) Convene annual stakeholder forum[5].	NDO, in partnership with other national DRR agencies.
Community	
1) Establish multi-stakeholder project steering committee (at design stage).	Lead implementing agency.
2) Apply the Programme M&E framework to the community project.	Project steering committee.
3) Report according to standard reporting format.	Project steering committee.
4) Input into annual stakeholder forum.	Project steering committee.

Critical success factors

All levels

1) Commitment to and capacity to apply participatory M&E tools and methods.
2) Adaptive capacity within the M&E institution to respond appropriately to the findings of the M&E process.
3) Adequate human and financial resources.
4) Capacity to communicate findings of M&E processes in an accessible manner to diverse target audiences.

[5] Note: this will also contribute to achieving the objectives of Component 6.

Resources, tools and good-practices

Resources	Summary
CARE. 2011, Background paper prepared for the Experts Workshop on Participatory Monitoring and Evaluation for Community-based and Local Adaptation. CARE UK, London, UK. http://www.climatecentre.org/downloads/File/Newsletter/Background%20paper%20to%20PME%20for%20CBA%20Workshop.pdf	The paper reviews the state of knowledge and experiences of M&E for community-based CCA to date, and highlights some of the key conceptual and methodological challenges that participants will address during the meeting. It also provides a review of tools and methods being used for community based CCA.
Insight. n.d. Participatory Video for Monitoring & Evaluation Case Study: Community-Based Adaptation in Africa. Insight. Oxford. UK. http://insightshare.org/resources/case-study/community-based-adaptation	Illustration of the use of participatory video for monitoring CSCDM programmes.
ProVention Consortium. 2007. Tools for Mainstreaming Disaster Risk Reduction: Evaluating Disaster Risk Reduction Initiatives: Guidance Note 13. ProVention Consortium, Geneva Switzerland. http://www.proventionconsortium.org/themes/default/pdfs/tools_for_mainstreaming_GN13.pdf	This guidance note is an introduction to evaluating disaster risk reduction. It sets out the main steps in planning evaluations, collecting and analysing data, and using the results; and it discusses issues associated with these activities. It is part of Tools for Mainstreaming Disaster Risk Reduction, a series of 14 guidance notes for use by development organisations in adapting programming, project appraisal and evaluation tools to mainstream disaster risk reduction into their development work in hazard-prone countries. The series is also of relevance to stakeholders involved in climate change adaptation.
ProVention Consortium webpage on monitoring an evaluation. http://www.proventionconsortium.org/?pageid=62	Webpage dedicated to different aspects of DRR, including CCA, providing a range of tools and methods and case studies.
Frankel-Reed. J. and N. Brooks 2008. UNDP Proposed Framework for Monitoring Adaptation to Climate Change. UNDP. New York, USA.	A draft monitoring framework for climate change adaptation initiatives designed to respond to the many unique challenges that climate change adaptation presents for monitoring. This framework focuses on two of these challenges; first, that climate change adaptation cuts across numerous development objectives; and second, that adaptation is not simply an outcome, but rather a diverse suite of ongoing processes that enable the achievement of development objectives under changing conditions. Accordingly, the framework categorizes adaptation interventions in six thematic areas (food security/agriculture, water resources management, disaster risk management, coastal zone development, natural resource

Resources	Summary
	management, and public health) and proposes standard indicators and units for adaptation initiatives across five adaptation 'processes' (capacity building, information management, policymaking and planning, decision-making for investment, and risk-reduction practices/resource management/livelihoods).

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Appendix 1: Community Disaster Management and Climate Change Initiatives in the English-speaking Caribbean

Activity title	Beneficiary community(ies) and country	Key components and outputs	Implemented by	Date of implementation	Comments on best-practice(s)
Caribbean Disaster Management Project (CADM)	1. Mesopotamia, St. Vincent and the Grenadines 2. San Juan, Trinidad 3. Speightstown, Barbados	1. Assessment of the current status of Community Disaster Management 2. Preparation of Community Disaster Management plans incorporating hazard maps 3. Preparation of a manual for Community Disaster Management planning (flood)	CDEMA	2002 - 2005	• Community involvement in developing the tool they would use to reduce their vulnerability to flooding
Disaster Management and Mitigation Project	St. Kitts and Nevis	1. Enable the Federal Government and the NIA to more accurately assess the impact of natural disasters on the economy, and therefore the livelihood of its citizens, in addition to providing baseline data and useful information for future events. 2. Regularize planning processes by providing standards, regulations and guidelines. 3. Provide training in a number of areas, including total impact assessment (natural hazard, environmental and economic), and in planning development and control. 4. Provide information to the	The OAS	Launched June 2010	• No direct community beneficiaries but a programme was developed for schools

Activity title	Beneficiary community(ies) and country	Key components and outputs	Implemented by	Date of implementation	Comments on best-practice(s)
		general public on all selected aspects relating to physical and economic planning, and disaster management. 5. Provide equipment for use in various training programmes, and for use in disaster management situations. Provide a significantly enhanced Disaster Management plan, structure, policies, and processes for the benefit of all stakeholders. 6. Ensure that mitigation planning is integrated into all essential aspects of the institutional framework, resulting in risk reduction measures. 7. Develop additional mechanisms to prepare for and recover from disasters which affect the tourism infrastructure and product. 8. Develop school-based disaster programmes accessible to students, creating greater awareness and education.			
Caribbean Disaster Management Strategic Framework	16 National Societies supported by the Federation within the Caribbean region	Provides a structured approach for building the capacity of the Red Cross societies in the Caribbean[6] to prepare for, mitigate and respond to disasters, while at the same time	The International Federation of Red Cross and Red Crescent Societies (IFRCS)	2009 - 2014	

[6] The framework focuses on the 16 National Societies supported by the Federation within the Caribbean region; however, it is a tool that can also be used by the British and Dutch Overseas Branches, and French and USA Overseas Territories.

Activity title	Beneficiary community(ies) and country	Key components and outputs	Implemented by	Date of implementation	Comments on best-practice(s)
		strengthening links with government and regional disaster management agencies.			
PFCC Preparedness for Climate Change Caribbean Disaster Management Strategic Framework)	Red Cross societies in: Antigua & Barbuda, Jamaica, Guyana, Grenada, St. Kitts & Nevis, Trinidad & Tobago, Saint Lucia, St. Vincent & the Grenadines, Belize, Suriname, Dominica.	PfCC is intended to be a quick and "light" introduction that helps Red Cross Societies understand the risks to communities and identify priority areas for attention and communities at risk. The PfCC informs general planning and existing programme areas such as DM, DP/DRR, health and care, etc. The idea is not to establish a new area of work but rather to find out where plans and programmes s may need to be adjusted or scaled up in light of changing risks.	The International Federation of Red Cross and Red Crescent Societies (IFRCS)	2009 - 2010	• Strengthening the capacity of local level entities • Community participation • Upscaling of community programmes into national disaster response • Institutional strengthening and capacity building at community level •
Community-based Disaster Management	Completed in: Antigua & Barbuda, Jamaica, Guyana, Grenada, St. Kitts & Nevis, Trinidad & Tobago. To be completed in: Saint Lucia, St. Vincent & the Grenadines, Belize, Suriname, Dominica	Community-based disaster preparedness training; guidelines for vulnerability and capacity assessment (VCA) to build safer, more resilient communities	The International Federation of Red Cross and Red Crescent Societies (IFRCS)		• Participatory approach to vulnerability and capacity assessment • Micro-mitigation projects to reduce community vulnerability
Reforestation project	Grande Riviere, Trinidad	This community is currently implementing a community reforestation project. The project came about because the residents depend on the forest for their livelihood and reforestation is a way of addressing the problem	Trinidad & Tobago Red Cross Society, the Ministry of Agriculture-Forestry Division and the Grande Riviere Tourism	current	• Project conceptualised and driven by community

Activity title	Beneficiary community(ies) and country	Key components and outputs	Implemented by	Date of implementation	Comments on best-practice(s)
		of bush fires and landslides, which threaten their existence.	Development Organization		
Workshop: Climate Change Adaptation, Development and Disaster Reduction: ***Strengthening Community Resilience in the Caribbean***.	Port of Spain, Trinidad	The main aims of the workshop were to engage concerned partners on these issues and involve the communities themselves in addressing the consequences of climate change, specifically in the areas of human development and livelihood and to identify adaptation strategies to deal with the impact of climate change in vulnerable communities.	ProVention Consortium, in collaboration with the International Federation's Caribbean Regional Representation Office.		
Community Disaster Preparedness Programmes	La Pastora, Bourg Mulatresse, La Canoa, Debe, Penal and Barrackpore in Trinidad	The objective is to help people in communities prone to street and flash flooding, among other vulnerabilities, to help themselves in the event of a natural disaster. Communities will benefit from training in first aid, injury prevention, community mobilisation and disease prevention, among others.	The European Commission Humanitarian Office and the Finnish Red Cross	December 2009 – January 2012	• Capacity built in practical and necessary areas (e.g. first aid) within communities to help themselves.
Disaster Preparedness and Mitigation Community Outreach	Piggotts, Yorks, Bathlodge/Cashew Hill area, and Barbuda , Antigua and Barbuda	This project assisted the communities in generating mappings and data collection information on hazardous areas within their own communities	Antigua and Barbuda Red Cross	2006 (6 months)	• Community involvement in developing the tool they would use to reduce their vulnerability to hazards
Belize Red Cross Strategic Plan 2006-2010	15 communities in Belize	Includes gender-sensitive activities which strive to empower the most vulnerable individuals and communities in Belize, and which	Belize Red Cross		• Inclusion of gender considerations in disaster risk

Activity title	Beneficiary community(ies) and country	Key components and outputs	Implemented by	Date of implementation	Comments on best-practice(s)
		focuses on 3 Core areas – values, disaster management, health and care in the community. VCA methodology is being used to improve disaster management capabilities			reduction • VCA methodology
Belize Community Risk Assessment and Action Planning project	Ladyville, sub-urban area of Belize City, and Caledonia, Belize	Multi-hazard analysis, community based Vulnerability and Capacity Assessment	ProVention	2005	• Community involvement in developing the tool they would use to reduce their vulnerability to hazards
"Community Based Disaster Management (CDM) in the Caribbean" regional workshop	farmers	The main objective of the workshop was to identify a plan of action that farmers can adopt to minimize the risks of Natural disasters to their resources.	Caribbean Farmers' Associations Network (CaFAN)	April 20-23, 2009	
CARIBSAVE Livelihoods, Gender, Poverty and Development: Community Vulnerability and Adaptive Capacity Assessments	At least one community in 15 Caribbean countries	The methodology uses a participatory approach to assess the adaptive capacity and consequently the vulnerability of communities. Livelihood assets and strategies at the level of the household are examined to determine the underlying cause of vulnerabilities.	The CARIBSAVE Partnership	2010 - 2010	• Using a livelihoods approach to determining the underlying causes of vulnerability by examining livelihood assets and strategies.
Building Disaster Resilient Communities (BDRC) project	Vulnerable communities in Jamaica (to date, the Project has been implemented in 14 communities in 11	Overall goal is to ensure that communities island-wide are resilient to natural disasters and work well and closely with local and central government agencies and	Office of Disaster Preparedness and Emergency Management	November 2008 – September 2011	• Working with and through local government and parish structures (Parish Disaster

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	parishes).	actors in a networked system to take sustainable long-term hazard prevention measures. Project interventions include: • training selected vulnerable communities in disaster mitigation and emergency response; • supporting communities to develop emergency response and mitigation teams and plans; • stimulating community-level mitigation by providing support for community projects identified through the training and disaster plan development processes; and • supporting sustainable partnerships in disaster mitigation and emergency response at community, parish and national levels.			Committees, standing committees with disaster management responsibility in the local authorities) • Engagement and dialogue and stakeholder definition of problems and their solutions • Working with and through existing community structures to form the nucleus of a local disaster risk reduction and response capacity.
ICURA Managing Adaptation to Environmental Change in Coastal Communities: Canada and the Caribbean.	(In the Caribbean) • Grande Riviere, Trinidad • Bequia, Saint Vincent and the Grenadines • Georgetown, Guyana • Belize Barrier Reef, Belize	Objectives are 1. Identify the short and long term vulnerabilities for each coastal community due to sea level rise, storm surge and severe storm events by developing and cataloguing risks. 2. Mobilize knowledge and innovation to mitigate coastal community risks through workshops, data and research collaboration, and linkages within the Canada-Caribbean communities	Canadian Fisheries, Oceans, and Aquaculture Management (C-FOAM) Research Group at the Telfer School of Management of the University of Ottawa together with colleagues at the Sir Arthur Lewis Institute of Social	2009-2014	

Activity title	Beneficiary community(ies) and country	Key components and outputs	Implemented by	Date of implementation	Comments on best-practice(s)
		and among the academic participants. 3. Build capacity through the training of graduate and undergraduate students in the universities, and local participants and decision-makers in the communities re coastal environmental impacts by regular exposure to workshops, seminars, and local field work and reports to the community. 4. Develop impact scenarios, and prepare adaptation action plans using university resources in partnership with the priorities and concerns of the local community government, services, and community members. Key outputs: • Creation and Communication of Knowledge • Co-Learning • Decision Support Tools • Monitoring and Evaluation Indicators • Training • Community Adaptation Action Plans • Governance Institutional Advice	and Economic Studies (SALISES), The University of the West Indies, St Augustine Campus, Trinidad and Tobago.		