



GRENADA NATIONAL HAZARD MITIGATION POLICY

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Acronyms and Abbreviations

CDB	Caribbean Development Bank
CDERA	Caribbean Disaster Emergency Response Agency
CHAMP	Caribbean Hazard Mitigation Capacity Building Programme, CDERA
CIDA	Canadian International Development Agency
CPACC	Caribbean Planning for Adaptation to Global Climate Change
DMFC	Disaster Mitigation Facility for the Caribbean, CDB
GOG	Government of Grenada
MTESP	Medium Term Economic Strategy Paper
NBSAP	National Biodiversity Strategy & Action Plan
NDO	National Disaster Office
NERO	National Emergency Relief Organization
NGO	Non-Governmental Organization
NHMC	National Hazard Mitigation Council
NHMP	National Hazard Mitigation Policy
NHRM	Natural Hazard Risk Management
NPDP	National Physical Development Plan
OAS	Organization of American States
OECS	Organization of Eastern Caribbean States
PDC	Policy Development Committee
SDC	Sustainable Development Council
SIDS	Small Island Developing States
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WB	The World Bank

GLOSSARY*

CLIMATIC CHANGE

Change observed in the climate on a global, regional or sub-regional scale caused by natural processes and/or human activity.

CULTURE

The customs, institutions, and achievements of a particular nation, people or group.

CUSTOM

A traditional and widely accepted way of behaving or doing something that is specific to a particular society, place or time.

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/society to cope using its own resources. Disasters are often classified according to their cause (natural or manmade).

HAZARD

A potentially damaging physical event, phenomenon and or human activity, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

HAZARD ANALYSIS/ASSESSMENT

Identification, study and monitoring of any hazard to determine its potentiality, origin, characteristics and behavior.

HAZARD MITIGATION

Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards. In climate change terminology, hazard mitigation is synonymous with adaptation to some degree. Climate change adaptation is an adjustment in natural or human systems in response to actual or expected climatic *stimuli* or their effects, which moderates harm or exploits beneficial opportunities.

HAZARD RISK MANAGEMENT

The systematic management of administrative decisions, organization, operational skills and responsibilities to apply policies, strategies and practices for hazard risk reduction.

HAZARD RISK REDUCTION

The development and application of policies, procedures and capacities by the society and communities to lessen the negative impacts of possible natural hazards and related environmental and technological disasters. This includes structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse impact of hazards, as well as the development of coping capabilities.

NATURAL HAZARD

Natural processes or phenomena occurring in the biosphere that may constitute a damaging event.

RISK

The probability of harmful consequences, or expected loss (of lives, people injured, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human induced hazards and vulnerable/capable conditions. Conventionally, risk is expressed by the equations $\text{Risk} = \text{Hazards} \times \text{Vulnerability/Capacity}$.

STAKEHOLDERS

Person or entity holding grants, concessions, or any other type of value that would be affected by a particular action or policy.

SUSTAINABLE DEVELOPMENT

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of “needs”, in particular the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and the future needs.

TECHNOLOGY HAZARDS (MAN-MADE HAZARDS)

Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failure or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

VULNERABILITY

A set of conditions and processes resulting from physical, social economic, and environmental factors, which increase the susceptibility of a community to the impact of hazards.

*[adapted primarily from “Living with Risk” (preliminary version) prepared by the ISDR Secretariat, Geneva, July 2002]

1.0 INTRODUCTION

Rationale and Purpose of the Policy

1.01 Grenada does not have a national policy to guide activities relating to the mitigation of natural and technological hazards. To this end, the Government of Grenada (GOG) with technical assistance from the Caribbean Development Bank (CDB) and the Caribbean Disaster Emergency Response Agency (CDERA) embarked on the elaboration of a National Hazard Mitigation Policy. This initiative was also supported by the United States Agency for International Development through its Office of Foreign Disaster Assistance, the Canadian International Development Agency and the Organisation of American States. The main purpose of the policy is to provide an integrated framework for the implementation of hazard mitigation measures on the national, sectoral and community levels in a structured, holistic and comprehensive manner.

1.02 The policy seeks to mainstream hazard risk reduction into national development planning and decision making as a key strategy towards vulnerability reduction and emphasizes proactive approaches to hazard risk reduction through focusing on strengthening national capacity for hazard management and raising awareness on risk management approaches to natural and technological hazards among key stakeholders.

1.03 The elaboration of the policy is informed by previous and existing initiatives and provides the platform for the determination and subsequent implementation of national hazard mitigation plans and programmes.

2.0 BACKGROUND

Policy Context

2.01 Disaster management ranks among GOG's national priorities for economic and social development. The Medium Term Economic Strategy Paper (MTESP) 2000 – 2002 posits that reduction in vulnerability to natural hazards is an essential element in national development. To this end, the GOG has embarked on a series of initiatives aimed to minimize the loss of life, personal injury, loss of property and livelihoods as a result of natural and technological disasters.

These initiatives include the following:-

- ❖ Elaboration of Building Codes and Guidelines
- ❖ Enactment of the Physical Planning and Development Control Act
- ❖ Preparation of a National Physical Development Plan
- ❖ Development of Sectoral Plans and Programmes
- ❖ Institutional Strengthening and Capacity Building Plans and Programmes
- ❖ Vulnerability Reduction Plans and Programmes.

2.02 These initiatives are at various stages of implementation. The Building Codes and Guidelines have been passed in parliament and are now in the testing and evaluation stage. A new Physical Planning and Development Control Act has been enacted and regulations pursuant to the Act are being considered. A National Physical Development Plan has been completed to determine among other things the national development infrastructure. Implementation of the plan is ongoing. Various sectoral plans and programmes including the Forestry Policy and Action Plan, the Tourism Master Plan, the National Biodiversity Strategy and Action Plan, the National Housing Plan, the Education Sector Plan, the Agricultural Sector Plan and the Fisheries Management and Development Plan, the initial communication to the UNFCCC, the St. George's Declaration of Principles for Environmental Sustainability and the Comprehensive Disaster Management Framework and Strategy for the Caribbean have been completed and are being implemented. Capacity building and institutional strengthening initiatives consistent with these plans and programmes are also underway. The major initiatives in this category are the Public Sector Development and Modernization Programme, the Rural Enterprise Development Programme and the Poverty Eradication Programme.

2.03 A National Disaster Plan was developed in 1985 and revised in 1995 to incorporate hazard mitigation in sectoral planning and to coordinate the national effort for disaster management. To date however, much is left to be accomplished in terms of implementation of a holistic programme for hazard risk reduction and disaster management.

Overview

2.04 Grenada is vulnerable to several different types of natural and technological hazards. These hazards include floods, landslides, tsunamis, storm surges, earthquakes, hurricanes, volcanoes and fires. A particular hazard is Kick 'em Jenny, which is an active submarine volcano located approximately nine (9) kilometers off the north coast of Grenada and between the Islands of Grenada and Carriacou. Kick 'em Jenny is the most active volcano in the Eastern Caribbean having erupted at least twelve times since its discovery in 1939. Kick 'em Jenny lies approximately 180 meters below sea level, and the last recorded major activity was in 2001. Grenada experienced major fires in 1990 and 2002. Two major earthquakes were experienced in 1997 recording 5.7 and 5.9 on the Richter scale. The last recorded tsunamis activity was in 1867. Several incidents of major flooding, landslides, hurricanes and storm activity were experienced in the last ten years.

2.05 The effects of these disasters on the economy were particularly devastating and involved loss of lives and property, costly reconstruction, disruption in economic activity and loss of livelihoods.

2.06 The national capacity to address these various hazards remains weak despite the formulation of a National Disaster Plan in 1985 and the subsequent reorganization of the National Disaster Office. The espoused Government strategy to address disaster management included the following (GOG/World Bank Aide Memoire 1999):

- ❖ Implement mitigation and strengthening measures aimed at minimizing damage caused by disasters and reducing the disruption of economic activity in the event of emergencies.

- ❖ Establish sustainable procedures to ensure quick response in case of natural disasters.
- ❖ Define and implement a national hazard mitigation strategy based on strengthening institutional capacity to prepare for and respond to disaster emergencies, in particular through the strengthening of the National Disaster Office (NDO).

Three existing programmes are underway to promote Government's strategy, namely:

- ❖ Grenada Emergency Recovery and Disaster Management Project
- ❖ CDB's Disaster Mitigation Facility for the Caribbean
- ❖ CDERA's Caribbean Hazard Mitigation Capacity Building Programme.

2.07 A brief overview of these initiatives is attached as Annex 1. The completion of a National Hazard Mitigation Policy will facilitate efforts at achieving greater levels of coordination among these and future initiatives.

2.08 The hazard mitigation policy was developed in the context that hazard risk reduction is a national priority issue involving all sectors of the economy. The National Hazard Mitigation Council, established as a broad based unit to serve as an advisory body to the head of the National Disaster Programme has a broad mandate to coordinate and supervise the Government's programme for hazard risk reduction as well as supervision of the National Disaster Plan. Through this institution, it is expected that hazard risk reduction will be incorporated in the plans and programmes of all relevant agencies including civil society organizations and the implementation of hazard risk mitigation activities will be better coordinated.

Challenges

2.09 The hazard mitigation policy sets out the broad goals and guiding principles for hazard risk reduction and will inform the development and implementation of national hazard mitigation plans and programmes while seeking to integrate hazard mitigation into these plans and programmes.

2.10 The following are the challenges to the implementation of hazard risk reduction.

- ❖ The lack of adequate interagency coordination and cooperation
- ❖ Capacity and resource constraints
- ❖ Lack of awareness of hazard risk reduction and disaster management issues
- ❖ The lack of integration of hazard risk mitigation and management into the national and sectoral planning frameworks

- ❖ The strengthening of regulatory and reporting framework for hazard risk reduction and management
- ❖ The redefinition of roles with reference to hazard risk management
- ❖ Lack of commitment and low priority accorded to hazard risk reduction

3.0 GUIDING PRINCIPLES

3.01 The guiding principles underlying the elaboration of the national hazard mitigation policy are as follows:-

- ❖ A multisectoral and integrated approach to hazard risk management and development planning.
- ❖ The need for effective public education and public awareness programmes
- ❖ The need for community mobilization and active civil society involvement.
- ❖ The need for environmental protection and reduction in social and economic vulnerabilities

A Multisectoral and Integrated Approach to Hazard Risk Management and Development Planning

3.02 In the context of a small island developing state, and its particular unique vulnerabilities, a hazard risk reduction policy must be concerned with the capacity and resource constraints and the reality that there are competing uses for these resources.

3.03 To this end, the policy recognizes that a multisectoral and integrated approach will facilitate a more efficient use of these scarce resources. Due cognizance must be given to other initiatives at community, sectoral and national levels to promote complementary and synergetic relationships to avoid unnecessary overlaps and costs. To this end, the policy must promote innovation, creativity, accountability and public stewardship in the use and deployment of national resources.

The Need for Effective Education and Public Awareness Programme

3.04 The call for an effective public education and awareness programme underscores the need to build the necessary capacity for a sustained effort at hazard risk reduction.

3.05 National resilience to hazard risks requires a sustained programme of activities to educate, inform and support the local communities. The programmes must induce

behavioral changes aimed at strengthening the national social and physical infrastructure for hazard response and management. To a large extent public education and awareness and outreach programmes will promote the sense of urgency to action and ownership to hazard risk reduction initiative. This in turn will make for a more meaningful and sustainable development programme.

The Need for Community Mobilization and Active Civil Society Involvement

3.06 Achieving sustainable development requires partnership between Government and civil society.

3.07 This partnership must enable the full and effective participation and involvement of civil society including the private sector, NGOs and CBOs in planning and implementation of various initiatives at hazard risk reduction. Effective mechanisms must be developed so that these initiatives promote ownership and involvement by all sectors of the society.

3.08 Hazard risk reduction activities must elicit a sense of commitment at individual and community levels to engagement for the benefit of the society as a whole. This can only occur through a policy which promotes partnership, diversity, inclusiveness, trust and compassion. All sectors of society must feel a sense of belonging to the national effort at hazard risk reduction.

The Need for Environmental Protection and Reduction in Social and Economic Vulnerabilities

3.09 Subsequent to the completion of various assessments reports including assessment on poverty, biological diversity and climate change, there was a national call for renewed and dedicated efforts aimed at the eradication of poverty and environmental protection, since the fundamental linkage between environmental degradation and social and economic deprivation was evident in these reports and especially when considering issues of waste management, pollution and unsustainable use of biological diversity.

3.10 The relationship was also evident through the impact of continuous development, especially on the coastal areas and the degradation of coastal habitats through destruction in mangroves and wet lands and sand mining activities, where it was clearly demonstrated that environmental decay was exacerbating the poverty condition.

3.11 Hazard risk reduction activities pursuant to the determined policy must be implemented giving total cognizance to the need to protect the environment and the same time to facilitate the creation of viable and sustainable use initiatives for social and economic advancement.

4.0 POLICY STATEMENT

4.01 The National Hazard Mitigation Policy for Grenada draws on a number of relevant initiatives and has as its major focus the achievement of sustainability. The policy will lay the foundations for a sustainable comprehensive strategy and action plan for hazard risk reduction and disaster management. Emphasis will be placed on building national capacities to reduce vulnerability and to involve all stakeholders in hazard risk reduction activities. This policy statement comprises a vision statement, policy goals and objectives.

Vision Statement

4.02 Development of a holistic national hazard mitigation culture which positively impacts on social and economic advancement and environmental protection

Policy Goals

4.03 The main goals of the policy are:

1. To achieve sustainable development through the reduction of social, economic and environmental vulnerabilities to natural and technological hazards.
2. To have hazard risk reduction incorporated as part of the custom of the entire society.

Policy Objectives

4.04 This policy has the following objectives:

Goal 1

- ❖ To strengthen the regulatory framework for hazard risk reduction and mitigation including the development of appropriate legislation.
- ❖ To strengthen the institutional capacity to mitigate against the impacts of natural and technological (man-made) hazards.
- ❖ To reduce susceptibility to hazards in high risk areas.
- ❖ To reduce the vulnerability of the poor to hazards.
- ❖ To protect and enhance the environment as a component of hazard risk management.
- ❖ To achieve hazard mitigation targets through the provision of adequate resources.

- ❖ To empower communities through capacity building programmes to effectively manage hazard risks.

Goal 2

- ❖ To institutionalize hazard risk methodologies in planning and execution of development activities.
- ❖ To eliminate conflicts and duplication of effort and to utilize appropriate technologies for hazard risk reduction.
- ❖ To develop appropriate mechanisms for coordination, cooperation, collaboration and sustained involvement in hazard risk reduction activities at all levels.
- ❖ To promote education and exchange of information among key players involved in hazard risk management.
- ❖ To increase public understanding, support, and demand for hazard risk reduction.

5.0 POLICY STRATEGY

5.01 The policy posits that it is necessary to develop a holistic framework for integrating hazard risk reduction methodologies into every day activities as a necessary condition for achieving sustainable development. In particular it calls for hazard risk reduction to be incorporated in development planning, project formulation and implementation at all levels of the society.

5.02 It will also require the execution of a sustained programme of activities aimed at capacity building and increasing national resilience to hazard risks.

6.0 PRIORITY AREAS FOR ACTION

6.01 Based on current hazard vulnerabilities, and the urgent need to address same, in the context resource limitations, the following priorities have been identified:

- ❖ Development of a time- phased action plan for hazard risk reduction.
- ❖ Integration of hazard risk reduction into national policy frameworks
- ❖ Creation of an integrated development framework, which emphasizes hazard risk reduction and environmental protection.
- ❖ Capacity building and institutional strengthening at community and national levels.

- ❖ Implementation of a programme for sensitization, public education and outreach and information sharing at all levels.
- ❖ Development, implementation and enforcement of appropriate legislation and regulation to support hazard risk reduction.
- ❖ Development and implementation of appropriate economic programmes for hazard risk reduction.

7.0 STRATEGIC INTERVENTIONS

7.01 The strategic interventions required to address the above are as follows:

7.02 Development of a time-phased action plan for hazard risk reduction

- ❖ Conduct needs assessment for programme implementation
- ❖ Conduct a logical framework analysis and prepare a detail log frame including timetable, resources, responsibilities, output determination and measurements
- ❖ Prepare monitoring and evaluation indicators and instruments.

7.03 Integration of hazard risk reduction into national policy frameworks

- ❖ Identify inherent links between risk reduction and existing policies in related fields.
- ❖ Ensure coherence between these policies and sub-regional, regional and international commitments
- ❖ Develop instruments to facilitate the adoption of hazard risk management by all stakeholders including government, private sector and communities.
- ❖ Incorporate hazard risk reduction into national and sectoral plans and programmes.

7.04 Creation of an integrated development framework, which emphasizes hazard risk reduction and environmental protection

- ❖ Conduct hazard vulnerability and risk assessment studies and apply them to integrated development planning and hazard risk reduction measures.
- ❖ Integrate environmental policies into the national development planning processes.

- ❖ Strengthen cultural and traditional systems that improve the resilience of local communities to disaster events.
- ❖ Develop and strengthen national and sectoral disaster management plans, with emphasis on inter-sectoral collaboration.
- ❖ Promote poverty reduction through hazard risk reduction and environmental protection.

7.05 Capacity building and institutional strengthening at community and national levels

- ❖ Identify and review the capacity of all stakeholders for hazard risk reduction.
- ❖ Strengthen and empower national disaster institutions, other government agencies, the private sector and civil society to routinely implement hazard risk reduction measures.
- ❖ Develop technical capability for undertaking hazard risk assessments, as needed, for executing risk reduction measures.
- ❖ Develop specialized training programmes for technical and professional levels in hazard assessment and risk reduction.

7.06 Implementation of a programme for sensitization, public education and outreach and information sharing at all levels

- ❖ Sensitize key decision makers about the requirements and benefits of hazard risk reduction.
- ❖ Develop community hazard risk reduction training programmes.
- ❖ Develop tailored programmes including curricula at all levels in hazard risk reduction.
- ❖ Develop and implement public awareness programmes on policies and laws related to hazard risk reduction.
- ❖ Develop inventory of existing hazard information and research.
- ❖ Develop repositories/lead agencies for information.

- ❖ Identify baseline data for hazard risk assessment and reduction and make data/information easily accessible to all users.

7.07 Development, implementation and enforcement of appropriate legislation and regulation to support hazard risk reduction

- ❖ Review, update and coordinate all existing legal instruments that have implications for hazard risk management.
- ❖ Develop regulations and standards to implement legislation.
- ❖ Identify and build capacity and administrative mechanisms to implement laws, regulations and standards.

7.08 Development and implementation of appropriate economic programmes for hazard risk reduction

- ❖ Develop incentives based schemes for hazard risk reduction
- ❖ Source and make available appropriate financial resources for hazard risk management
- ❖ Integrate hazard risk reduction in economic and social development initiatives.

ANNEX 1

Current Initiatives

Grenada Emergency Recovery & Disaster Management Project

The Government of Grenada and the World Bank has recently signed a US \$ 11.1M cooperation agreement on emergency recovery and disaster management aimed at reducing vulnerability to natural disaster and prevention of catastrophic losses in the economy. The project objectives include the following:

- ❖ Strengthening the national capacity for disaster planning, management & coordination.
- ❖ Financing investments to protect critical public infrastructure and lifeline facilities for population in high risk areas.
- ❖ Mobilizing communities for community-based hazard reduction activities.
- ❖ Introducing financial instruments to allow quick reconstruction following catastrophic events.
- ❖ Fostering private-public partnership in reducing vulnerability to natural disasters.

The project activities include the following:-

- ❖ Strengthening National Disaster Relief Organization and the National Disaster Office and refurbishing the Emergency Operations Center
- ❖ Developing a country wide emergency communications system.
- ❖ Institutionalizing disaster management planning and environmental protection, particularly through hazard and analysis and vulnerability mapping.
- ❖ Physical investment to protect and mitigate against landslides, floods and storm surges.
- ❖ Strengthening human resources capacity and processing of necessary disaster equipment and loss reduction materials.
- ❖ Developing and implementing a shelter retrofitting programme.

Disaster Mitigation Facility for the Caribbean

Grenada is a beneficiary under the CDB initiative: Disaster Mitigation Facility for the Caribbean. The US \$3.4 million project has as its strategic objectives to strengthen CDB's institutional capacity for natural hazard risk management and to assist CDB's borrowing member countries with the adoption and institutionalization of successful disaster mitigation policies and practices. Consistent with this objective the projects aims to achieve the following:-

- ❖ Incorporation of disaster mitigation into the project cycle at CDB
- ❖ Increased leverage of support for hazard mitigation
- ❖ Completion and legislation of natural management/mitigation policies and plans
- ❖ Increased institutional capacity for natural hazard mitigation in CDB borrowing member countries
- ❖ Increased development of hazard mitigation tools and practices
- ❖ Increased stakeholder involvement in natural hazard mitigation

The key activities for the above are as follows:-

- ❖ Development of guidelines for the integration of natural hazards into environmental impact assessment
- ❖ Development of a model national hazard mitigation policy
- ❖ Development of national, sectoral, and/or community level hazard mitigation plans in the six primary core partner countries and integration into development planning
- ❖ Implementation of Comprehensive Disaster Management (CDM) at the national level
- ❖ Standardization of methodologies for hazard mapping and vulnerability assessment
- ❖ Support for teaching, research and delivery of technical services in natural hazard risk management at tertiary education institutions
- ❖ Updating the Caribbean Uniform Building Code (CUBiC)
- ❖ Community vulnerability reduction programmes in CDB's Basic Needs Trust Fund (BNTF) communities

Caribbean Hazard Mitigation Capacity Building Programme (CHAMP)

Grenada stands to benefit from the Caribbean Hazard Mitigation Capacity Building Programme, which is a three (3) year CDN\$2.3 million project designed to strengthen the capacity of regional Governments to incorporate hazard vulnerability reduction strategies into development planning. Grenada is one of the four (4) States to pilot the programme which began in 2002. The stated objective is to develop comprehensive natural hazard vulnerability reduction initiatives through the development of national hazard mitigation policies, creation of appropriate policy implementation programmes through comprehensive hazard mitigation frameworks and the development and implementation of safer building training and certification programmes.

The project activities include the following:-

- ❖ Development of a model hazard mitigation policy
- ❖ Adaptation of the policy at the national level
- ❖ Legislative review and institutional analysis for mitigation planning
- ❖ National-level data collection and hazard mapping
- ❖ Vulnerability assessment
- ❖ Mitigation plan development
- ❖ A review of existing capacity, standards, training and constrains
- ❖ The development of curriculum and certification programme
- ❖ Community level training programmes and certification
- ❖ Public education and outreach

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