



Agence canadienne de
développement international
Canadian International
Development Agency



Organization of
American States



NATIONAL HAZARD MITIGATION POLICY FOR THE BVI

THE DEPARTMENT OF DISASTER MANAGEMENT

WITH SUPPORT FROM

THE CARIBBEAN DISASTER EMERGENCY
RESPONSE AGENCY (CDERA)

October 2003

Preface

This National Hazard Mitigation Policy for the BVI was adapted from a model National Hazard Mitigation Policy that was prepared as the result of a partnership between the Caribbean Disaster Emergency Response Agency (CDERA) through its Caribbean Hazard Mitigation Capacity Building Programme (CHAMP) and the Caribbean Development Bank (CDB) through its Disaster Mitigation Facility for the Caribbean (DMFC). The Policy was adopted for use in the BVI, a CDERA Participating country and CDB Borrowing Member Country (BMC).

In collaboration with the Organization of American States (OAS) and with support from the Canadian International Development Agency (CIDA), CDERA is seeking, through CHAMP, to enhance regional capacity to reduce vulnerability to the effects of natural hazards. This is being done through the adaptation of this model national hazard mitigation policy and implementation programmes, the wider use of hazard information in development decisions and the strengthening of safe building practices, building training and certification. CHAMP activities were carried out in the four pilot states of Belize, British Virgin Islands, Grenada and St. Lucia.

Through its Disaster Mitigation Facility for the Caribbean (DMFC), CDB, with support from the United States Agency for International Development (USAID) is seeking to strengthen regional capacity for disaster mitigation as a means of vulnerability reduction in CDB's BMCs (which include all CDERA member states). To achieve this aim, the DMFC will support the following: provide technical assistance to CDB's BMCs to implement functional disaster mitigation policies and practices; strengthen CDB's capacity to address disaster management issues through the integration disaster mitigation into all of CDB's policies, programmes and projects. DMFC activities will be implemented in all seventeen (17) of CDB's BMCs. The development and implementation of mitigation policies and plans will be conducted by CDB in the six DMFC primary core countries: Belize, Dominica, Grenada, Jamaica, St. Kitts Nevis and St. Lucia.

Alleyne Planning Associates prepared the policy document in collaboration with Lynette Atwell (Hazard Mitigation Planning Consultant). A local consultant working with a working committee drawn from the Hazard Mitigation Task Force facilitated the adaptation.

Table of Contents

GLOSSARY	ii
ACRONYMS AND ABBREVIATIONS	iii
1.0 BRITISH VIRGIN ISLANDS VULNERABILITY TO HAZARDS.....	2
Hazard Mitigation.....	3
Rationale for and Purpose of the Policy	4
2.0 POLICY CONTEXT.....	5
Challenges to the Implementation of Hazard Mitigation.....	5
<u>3.0 GUIDING PRINCIPLES OF THE NATIONAL HAZARD MITIGATION</u>	
<u>POLICY</u>	7
THE VALUE OF VULNERABILITY REDUCTION.....	7
An Integrated Approach to Hazard Risk Management and Development	
Planning	8
The Need for Effective Community Mobilization.....	9
The Need for Protection of the Environment	9
4.0 POLICY STATEMENT	10
Vision Statement	10
Policy Goals	10
Policy Objectives	10
5.0 POLICY STRATEGY	11
6.0 PRIORITY AREAS FOR ACTION	11
<u>7.0 STRATEGIC INTERVENTIONS: THE SPECIFIC TASKS INVOLVED IN</u>	
<u>THE ACHIEVEMENT OF THESE PRIORITIES ARE DETAILED BELOW:</u>.....	12

7.01	Integration of hazard risk reduction into National Policy Frameworks	12
7.02	Development, implementation and enforcement of appropriate legislation and regulations to support hazard risk reduction activities.....	12
7.03	Creation of an integrated development framework which emphasizes hazard risk reduction and environmental protection.....	12
7.04	Capacity Building at community and national levels	12
7.05	Development and Dissemination of Information for Decision Making .	13
7.06	Sensitisation, Public Education and Outreach (PEO).....	13
7.07	Establishment of Private Sector NGO and CBO Partnerships	13
7.08	Improve Land Management and Development Control.....	14
7.10	Determination of the requirements for implementation of hazard risk reduction measures as identified in this policy.....	14

GLOSSARY

(Adapted primarily from 'Living with Risk' (preliminary version) prepared by the ISDR Secretariat, Geneva, July 2002)

CHEMICAL SPILL - Accidental release occurring during the production, transportation or handling of hazardous chemical substances

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

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 only 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 potential, origin, characteristics and behaviour.

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 or to limit 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 equation
 $Risk = Hazards \times Vulnerability$.

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.

TECHNOLOGICAL HAZARDS (MAN-MADE HAZARDS) – Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failures 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, economical, and environmental factors, which increase the susceptibility of a community to the impact of hazards.

ACRONYMS AND ABBREVIATIONS

ARPR	Annual Report and Policy Review
CARICOM	Caribbean Community
CDB	Caribbean Development Bank
CDB/BMCs	Caribbean Development Bank Borrowing Member Countries
CDERA	Caribbean Disaster Emergency Response Agency
CDERA/PS	Caribbean Disaster Emergency Response Agency/Participating States
CDM	Comprehensive Disaster Management
CDMS	Comprehensive Disaster Management Strategy
CEHO	Chief Environmental Health Officer
CF	Consolidated Fund
CFO	Chief Fire Officer
CHAMP	Caribbean Hazard Mitigation Capacity Building Programme
CoP	Commission of Police
CPACC	Caribbean Planning for Adaptation to Global Climate Change
DDM	Department of Disaster Management
DHI	Disaster Hazard Inspector
DHS	Director of Health Services
DM	Disaster Management
DMFC	Disaster Mitigation Facility for the Caribbean
DMS	Director of Marine Services
DP	Director of Planning
DPWD	Director of Public Works Department
EDF	Emergency Disaster Fund
EO	Executive Council
EOC	Emergency Operations Centres
FC	Fund Committee
HI	Hazard Inspector

IPCC	Inter-governmental Panel for Climate Change
IR	Intermediate Result
MACC	Mainstreaming Adaptation to Climate Change
MSM	Marine Shelter Master
MSO	Marine Shelter Officer
NAS	National Alert System
NDMC	National Disaster Management Council
NDMP	National Disaster Management Plan
NEBS	National Emergency Broadcast System
NEOC	National Emergency Operations Centres
NGO	Non-Governmental Organisation
NHRM	Natural Hazard Risk Management
NSS	National Siren System
OECS	Organisation of Eastern Caribbean States
PEO	Public Education and Outreach
OECS-ESDU	Organisation of Eastern Caribbean States - Environment and Sustainable Development Unit
SAPP	Specially Area Precautionary Plan
SL	Shelter List
SM	Shelter Manager
SIDS	Small Island Developing States
SIDS/POA	Small Island Developing States/Programme of Action
SVA	Specially Vulnerable Areas
THA	Threatened Hazard Alerts
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction

1.0 BRITISH VIRGIN ISLANDS VULNERABILITY TO HAZARDS

Overview

1.01 The BVI is comprised of a number of small islands with major urban developments along coastal areas, where the associated infrastructure and key economic sectors are located in areas that are highly vulnerable to the impacts of both natural and technological hazards. The past four decades saw increasing pressures being placed on the economic, social and environmental fabric of the BVI, as economic conditions expanded requiring that the economy become more competitive and with increased demands placed on its limited resource base. The BVI continues to experience a number of repeated losses from hurricanes and their associated effects. In addition the BVI is vulnerable to losses from flooding, landslides, high winds and earthquakes. Global concerns such as the vulnerability of the islands to climate change also mean that the BVI could be affected by increasing climate variability, damage to water resources, ecosystems, human settlements, agricultural systems, coastal resources, tourism infrastructure, critical infrastructure and human health.

1.02 Apart from natural hazards, the BVI is also susceptible to a number of technological hazards. These include large-scale fires from industrial sites, chemical spills, aircraft accidents, accidents involving the transportation of toxic and hazardous materials on land and sea, large-scale marine and on-land transportation accidents. Vulnerability to some of these hazards occurs by virtue of being located along several shipping routes. With most of the development in the territory located in coastal areas these types of events can have adverse impacts on people, the environment and major economic sectors, including the tourism industry, which is a major economic sector in the BVI. The BVI also has to interpret vulnerability in its widest sense, to include not only the well-known threats of natural and technological hazards but also the implications of globalisation, the vulnerability of its shipping routes, and non-traditional threats.

1.03 One such non-traditional threat is climate variability and change. Evidence that this phenomenon is making the region more vulnerable to natural disasters is mounting steadily as variability in world climate manifest themselves in extreme weather events. It is being increasingly recognized that greater and more rapid climate variability will pose greater challenges to adaptation and greater risks of damages. The effects of these events are often exacerbated by human factors such as the location of settlements in hazardous areas, environmental degradation, poorly constructed infrastructure, poorly planned development and poorly constructed housing. Also, there are low levels of preparation for emergencies and significant, long-term but less abrupt changes in physical and biological systems. Given the small size of the Territory, the impact of a major event can affect the entire country. In many instances, damage suffered can equal or exceed the country's Gross Domestic Product (GDP).

1.04 With increasing frequency, countries like the BVI face situations in which scarce resources earmarked for development projects have to be diverted to relief and reconstruction following disasters, resulting in impeded economic growth. This is true despite BVI having created a Disaster Fund to which contributions are made every year. Disasters also directly impact on the foreign exchange earning capacity of the countries/territories, at times when extra resources are needed to finance imports of food, energy, and inputs for the agricultural, marine and other productive industries.

1.05 Current economic conditions require that the BVI broaden and deepen its narrow resource base, while remaining cost competitive. All of the above are significant threats to the *sustainable* economic development of the territory. To meet the challenge of this new competitive environment, the territory must do all that it can to encourage investment in competitive enterprises, and to maintain the social gains made in the past. This will include steps to reduce risks to existing and proposed investments and the social and physical infrastructure on which it depends.

1.06 There is growing recognition of the economic and social costs incurred as a result of repeated damage from natural hazard events, and the threat of technological hazards, as well as the increasing awareness that global concerns such as climate change will impact on the entire territory. As a result, mitigation issues have recently been moving onto the policy agenda. This awareness is neither sufficiently heightened nor is it articulated in development decisions. There has been increasing recognition of the role that hazard mitigation can play in the achievement of sustainable development. It is now necessary to articulate policies that reflect the need for hazard mitigation to factor in the development of a rational framework, within which the BVI's overall development objectives can be pursued. This policy represents a commitment on the part of the BVI government to national vulnerability reduction.

Hazard Mitigation

1.07 Hazard mitigation is defined as structural and non-structural measures taken to limit the adverse impact of natural hazards, environmental degradation and technological hazards. This definition distinguishes between actions that have a long-term impact and those that are associated with preparedness for, immediate response to, and short-term recovery from a specific event. With respect to climate change, this definition of hazard mitigation may be equated to climate change adaptation. Adaptation has the potential to reduce adverse effects of climate change and can produce immediate ancillary benefits, but it will not prevent all damages.

1.08 Hazard mitigation measures can take the form of structural interventions, such as the building of sea defences, or non-structural measures, such as the preparation of physical development plans with appropriate land use zoning and the exploration of alternative fresh water resource options to counter a gradual depletion of existing sources. These measures should seek to address both sudden catastrophic events, due to a range of natural processes and human actions, as well as those events that may be slow and

cumulative over time but equally deleterious in effect including those caused by climate change.

1.09 Implementation of hazard mitigation is inherently a multi-sectoral activity. As mitigating the impacts of hazards means making choices with respect to development, it requires considerable inter-agency co-ordination, the involvement of the private sector and the cooperation and support of civil society. In the implementation of mitigation activities, agencies and citizens will need to act in concert to identify and utilize integrated mechanisms to reduce potential damage to the built environment, make appropriate land use choices, protect the natural environment, implement building standards, adopt and enforce building codes, retrofit, repair and reconstruct existing development.

1.10 In carrying out hazard mitigation activities the intent is to focus on actions that produce sustained benefits over time. One of the principal benefits of mitigation is that current moneys spent on mitigation activities will significantly reduce human suffering, infrastructural damage and the demand for large sums of money in the future when extreme natural or man-made events occur. Expenditure on mitigation activities can reduce the economic impacts on the economy which occur when there are hazard events.

1.11 Effective formulation and implementation of hazard mitigation activities relies to a large extent on coordination and collaboration among agencies. In a broader risk reduction framework, it is essential that linkages between hazard mitigation and other policies, particularly those related to disaster and environmental management, are understood and integrated into any hazard mitigation policy that is to be developed. This is particularly relevant since the countries of the region are signatories to several agreements, and there have been a number of recent initiatives in the development of regional positions on issues related to hazards and risk management.

Rationale for and Purpose of the Policy

1.12 A BVI national policy on hazard mitigation is necessary to provide a framework for the integration of hazard mitigation into all policies, programmes, plans and ongoing activities at national and community levels. It sets out the broad goals and guiding principles for hazard risk reduction, and thus informs the development of national hazard mitigation plans. This is necessary, as in the absence of well-articulated policies there is the real risk that the resources of the territory may not be utilized as effectively as they should be in the implementation of programmes, projects and ongoing activities.

1.13 In keeping with the position articulated in the BVI and the regional Comprehensive Disaster Management (CDM) Strategy and Results Framework, this policy addresses one aspect of CDM, that is mitigation, and is not meant to deal with preparedness and response activities. Other aspects of disaster management must also be implemented alongside this policy, as effective preparedness and response programs must be in place for any mitigation programme to be effective.

2.0 POLICY CONTEXT

2.01 The principles underlying the National Hazard Mitigation policy are not at all new to the BVI. There exist a number of national and regional mandates whose framework support the objectives of vulnerability reduction. The national hazard mitigation policy should be closely integrated with these existing mandates. At the national level these include The Building Ordinance (Cap 234), the Land Development Control Ordinance (Cap 241), The Telecommunications Act (Cap 171), The Mitigation and Development Planning Framework 2002, National Integrated Development Strategy (1999) and Disaster Management Act, 2003. The BVI is unique in the region in having the last three instruments with all of them passing through the approval process.

2.02 The regional level mandates include the Strategy and Results Framework for Comprehensive Disaster Management in the Caribbean (2001), St. George's Declaration of Principles for Environmental Sustainability in the Organization of Eastern Caribbean States (2001), CPACC Policy Framework for Integrated Adaptation Planning and Management (2001); CDERA Model Disaster Management Legislation (1996); The Programme of Action for the Sustainable Development of Small Island Developing States (SIDS/POA) (1994) and The Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartegena Convention, Adopted 1983, In Force 1986).

2.03 While there is a growing recognition of the need for hazard risk reduction and the implementation of mitigation measures in the territory and the region, often the linkages between existing hazard vulnerability and their sources in physical, social, economic and environmental factors are not clear or obvious to those affected. In addition, development agencies are understaffed, operate under outdated legislation, and in some instances have had limited exposure to the need for or the requirements of risk reduction. These constraints indicate that a determined effort will have to be made to support the development agencies in implementing this hazard mitigation policy. Given that the BVI is part of the global economy and the fact that tourism is one of the major sectors, the Territory is vulnerable to an outbreak of infectious diseases (such as SARS) in any part of the world. In addition, there is very little technical or other resource to provide quarantine services for disease affecting large populations

Challenges to the Implementation of Hazard Mitigation

2.03 The essential challenge is that hazard risk reduction must become an everyday requirement at every level of the society, which means that all stakeholders must be aware of the need for it, and make hazard risk reduction a part of their daily routines.

2.04 In reviewing the territory's policies and studies related to hazard mitigation, a number of issues emerge, which could impede the sustainability of a national hazard

mitigation policy. These include limited technical and financial resources; weak institutional and legislative frameworks for risk reduction; the low priority given to reducing vulnerability in advance of disasters; the limited acceptance of responsibility for existing vulnerabilities; and the limited involvement of communities and civil society in the development and implementation of policies, plans and programmes. Awareness of each of these challenges must inform the development of hazard risk management policies, plans and actions.

2.05 Implementation of the BVI's Mitigation and Development Planning Framework and risk reduction programmes require adequate resources. Currently, the financing of risk reduction activities in general and of sectoral budgets in particular, is insufficient; the technical capacity for designing, implementing, monitoring and reviewing national risk reduction programmes is limited;

2.06 The information needed to prioritize and implement mitigation activities is often lacking, incomplete or inaccessible. Scientific monitoring and research of hazardous phenomenon serve two purposes in Disaster Management. The first is to provide early warning of impending natural disasters or information regarding an ongoing natural disaster. The second is to build up an archive of information, which can be used to improve basic scientific understanding of local hazardous phenomena, which in turn leads to more effective mitigation. There is a need to upgrade hazard-monitoring services available in the BVI.

2.07 Appropriate institutional and legislative frameworks and administrative and regulatory systems for hazard risk management must be strengthened. At the institutional level, institutional links and administrative systems must be further developed to support the multi-sectoral activities required for hazard risk reduction. Legislative frameworks must be updated to provide mandates for hazard mitigation and strengthen the regulatory and enforcement mechanisms in the territory. To make these changes, the existing priority given to disaster management at the political level and the level of awareness, understanding and acceptance of the need for hazard risk reduction will need to be maintained and raised.

2.08 Currently there is some responsibility or accountability for the large contributions that individual and communal decisions and actions make towards existing and future vulnerability to natural and technological hazards. More meaningful stakeholder participation must be built into the development and implementation of hazard mitigation policies, programs and actions. Such participation will build understanding of the implications of development decisions for hazard vulnerability and will continue to build support for the implementation of risk reduction programmes.

3.0 GUIDING PRINCIPLES OF THE NATIONAL HAZARD MITIGATION POLICY

3.01 Given past experience and lessons learned from past events, the development of the policy is guided by four principles. These are:

- The value of vulnerability reduction.
- An integrated approach to hazard risk management and sustainable development planning.
- The need for effective community mobilization.
- The need for protection of the environment

The Value of Vulnerability Reduction

3.02 Vulnerability represents the conditions and processes, which increase the susceptibility of a community to the impact of hazards. In the context of climate change, vulnerability is described as the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Therefore, in defining any policy for hazard mitigation it is necessary to ensure that vulnerability is reduced, since hazard events cannot be eliminated.

The sources of vulnerability in the territory are varied and complex and are related to:

- Population growth.
- Movement of people.
- Physical characteristics.
- Resource distribution
- Inappropriate land use.
- Poorly planned development.
- Openness of borders
- Damage to the environment, in many instances caused by continued population pressures that have encouraged large numbers of people to occupy marginal lands such as coastal areas, flood plains and steep slopes.
- A growing rate of poverty, concentrated among vulnerable groups such as women and children.

3.03 Vulnerability can be reduced by the avoidance of hazard prone areas and the proper design, construction and maintenance of buildings and infrastructure and environmental impact assessments. This however will require change of attitudes, as well as the strengthening of both institutional as well as technical capacities. We face a development dilemma because our land resources are limited and in some cases we are forced to build on vulnerable sites – coastal areas, ridges and windward slopes. These areas are prone to damage during natural disasters. If we continue to build in these areas we must ensure that we adhere to strict mitigation

measures and land use regulations to protect any investment that may be assigned to these areas.

3.04 While disasters are by definition devastating events, lessons learned and incorporated into post disaster recovery can often present opportunities for future vulnerability reduction. The destruction of unsafe infrastructure and buildings can provide opportunities for rebuilding with better standards, or for relocation if a site was particularly vulnerable. Damage to buildings may highlight structural weaknesses, which could be rectified and may serve to improve planning and building regulations.

3.05 The reduction of vulnerability can minimize damage and losses from hazards. Relatively small investments in mitigation measures can reduce the recurrent losses caused by disasters. This is particularly relevant to the BVI where there is often only a limited number of critical facilities (e.g. one general hospital). The reduction in costs of disasters to the society through concerted efforts at vulnerability reduction can in turn lead to a more stable social and economic environment. This stability can encourage development and give people some sense of control over their own well-being.

3.06 In order to be successful in the reduction of vulnerability, it is necessary for hazard risk reduction measures to be built into existing and ongoing development programmes at all stages of the development process. Awareness of these issues should be second nature to all stakeholders in the development process. This will need to be complemented by the necessary authority, regulations, guidelines and checklists if vulnerability reduction is to be integrated into development planning.

An Integrated Approach to Hazard Risk Management and Sustainable Development Planning

3.07 An integrated approach to hazard risk management is essential in order to reduce costs and any overlaps in the legal and administration frameworks governing hazard mitigation actions. In the BVI, natural and technological hazards compete for slender resources with a number of other pressing socio-economic concerns such as poverty alleviation, unemployment, improvement of housing, improvement of education and health care facilities. Under these circumstances, it is important to recognise that institutional frameworks exist and within which hazard mitigation activities must fit. Of particular significance is the existing national development planning process, which provides a dynamic framework for vulnerability reduction and for the implementation of hazard mitigation actions at the various levels of strategic planning.

3.08 Mitigation plans and frameworks must also recognize and integrate successful mitigation measures that are currently in place. For example, it is important that hazard mitigation measures address existing climate change adaptation policies, education policies and public health policies. The projected impacts of climate change will not necessarily manifest themselves as sudden catastrophic events in the same way as some other natural and technological hazards. Consequently, hazard risk reduction must be able to adapt over time to anticipated climate change. In the context of the uncertainties associated with the projection of future climate change, at scales appropriate to small

islands, there is further uncertainty with respect to the lead-time needed for assessing and implementing adaptation. This situation underscores the need for intersectoral linkages to promote hazard risk reduction.

3.09 An integrated approach to hazard risk management will need new methods for dealing with crosscutting development issues. One of the main areas that will have to be addressed is the reduction of conflicts in policy development. This will require sectors to work together and to understand the need to harmonize their respective plans and policies in keeping with territorial objectives and priorities. Stakeholders must also be included, as part of this process and government must provide the necessary resources, coordination and support to encourage participation in the decision-making process.

The Need for Effective Community Mobilization

3.10 To ensure that everyone contributes to the achievement of sustainable development it is necessary to establish effective mechanisms for the involvement of all communities in hazard risk reduction. During hazard events, impacts are rarely evenly spread across the affected country or area, with individual communities suffering greater effects than the country as a whole. At times, selected communities are inaccessible for days after a hazard event. This underscores the need to build community resilience to the impacts of hazards. Consequently, capacity must be built at the community level to understand the range of hazards that could affect each community and to reduce their vulnerability to those hazards. This allows community groups to play a role in protecting themselves from the impacts of hazards and at the same time have some control over their own destinies. High priority must also be given to increasing the awareness of all levels of the population of the options and mechanisms available for hazard mitigation and vulnerability reduction.

3.11 In addition to implementing local-level hazard mitigation activities, communities must be actively involved in national-level mitigation plans and programmes. Community groups represent valuable constituents for support and cooperation in achieving success in the implementation of risk reduction activities. Involving the community through the building of partnerships is the most effective means of implementing measures to reduce the impacts of hazards. Partnerships will therefore have to be built among the public sector, the private sector and the various communities.

The Need for Protection of the Environment

3.12 Our ability to alter our environment and tailor it to our needs has increased, and with it, our sensitivity to the cost of environmental degradation. When hazard risk reduction options are considered, care must be taken to avoid harming natural resources and processes as much as possible. Hazard mitigation activities that degrade the environment are not viable long-term solutions to hazard risk. Fortunately, pursuing hazard risk reduction frequently also presents opportunities to conserve resources and enhance the quality of the environment.

3.13 Experience has taught us, generally, which geographic areas are subject to hazards. Assessments such as the Hazard and Risk Assessment Project (HRAP), 1997 and vulnerability studies on critical facilities have been completed and give us a clear indication of the type and severity of hazards that can impact the BVI. However, a clear understanding of the type and extent of risk and of the potential impacts of hazards on communities is critical to making decisions about which hazard mitigation measures should be undertaken. Conducting risk assessments of prevalent hazards and monitoring of hazards can provide this understanding. Such risk assessments must take place in a manner that is meaningful to those who are required to act.

4.0 POLICY STATEMENT

4.01 The hazard mitigation policy draws on the Disaster Management Act, 2003 and a number of other initiatives, which focus on the achievement of sustainability. A sustainable development focus implies a commitment to a broader and more long-term development process. This requires that emphasis be placed on developing communities, building capabilities to reduce vulnerability, creating an expanded information base, providing up-to-date scientific information, gathering local knowledge and expertise as well as involving all levels of the society. This policy statement comprises a vision statement, policy goals and objectives.

Vision Statement

4.02 A BVI Society that is resilient to natural and man-made hazards, through integrated hazard risk reduction practices.

Policy Goals

4.03 The main goals of the policy are:

- i) To contribute to sustainable development through the reduction of the vulnerability of society to natural and man-made hazards.
- ii) To have hazard risk reduction incorporated as a part of everyday activity by the entire society.

Policy Objectives

4.04 This policy will achieve the following objectives:

- To develop an integrated framework to address hazard risk reduction at all levels.
- To strengthen the appropriate legislative and regulatory framework in support of hazard risk reduction.

- To strengthen the capacities of institutions and individuals involved in hazard risk reduction.
- To promote collaboration and coordination among agencies to harmonize activities towards achieving common objectives for hazard risk reduction.
- To educate and empower communities to manage hazard risk.
- To protect and enhance the environment as a component of hazard risk management.
- To protect the major economic sectors and supporting infrastructure systems from the effects of hazards
- To reduce the risk for loss of life and personal injury from the impacts of natural hazards

5.0 POLICY STRATEGY

5.01 The main pillar upon which the policy is built is the belief that sustainable development cannot be achieved without mainstreaming hazard risk reduction. The strategy emerging from this belief is the continued incorporation of hazard risk reduction in development planning, project formulation and implementation of both government and private sector projects. It will also require that the ordinary citizen continue and increase the pursuit of hazard risk reduction in the community in which he/she lives.

6.0 PRIORITY AREAS FOR ACTION

6.01 A number of priority areas for action have been identified. It will be necessary to provide financial, human and technical resources for these programmes and projects. Some component of the funds required will have to be budgeted and made available at the national level. Given the intersectoral nature of the hazard mitigation activities proposed, some of the costs of projects could be shared by agencies.

The priority areas identified are:

- i) Integration of hazard risk reduction into national policy frameworks.
- ii) Development, implementation and enforcement of appropriate legislation and regulations to support hazard risk reduction.
- iii) Implement and strengthen an integrated development framework, which emphasizes hazard risk reduction and environmental protection.
- iv) Capacity building at community and national levels.
- v) Research to inform decision-making.
- vi) Public Education Outreach and Sensitization at all levels.
- vii) Establishment of Private Sector, Non Governmental Organizations, Volunteer Organizations and Community Based Organization Partnerships
- viii) Improve Land Management and Development Control
- ix) Determination of the requirements for implementation of hazard risk reduction measures, as identified in this policy.

7.0 STRATEGIC INTERVENTIONS: the specific tasks involved in the achievement of these priorities are detailed below:

7.01 Integration of hazard risk reduction into National Policy Frameworks

- Support the principle of vulnerability reduction in the NIDS
- Identify inherent links between hazard risk reduction and existing policies in related fields.
- Ensure coherence between this policy and sub-regional, regional and international commitments.
- Develop instruments at the sectoral and national levels to facilitate the adoption of hazard risk management by all stakeholders.
- Incorporate hazard risk reduction into sectoral policies.

7.02 Development, implementation and enforcement of appropriate legislation and regulations to support hazard risk reduction activities

- Review, update and coordinate all existing legal instruments that have implications for hazard risk management.
- Develop regulations and standards to implement legislation.
- Develop incentive-based regulatory frameworks.
- Identify and build local capacity and administrative mechanisms to implement laws, regulations and standards.
- Develop and implement strategic land use planning
- Adopt and enforce building codes and regulations.
- Provide funding for mitigation activities

7.03 Strengthen the integrated development framework which emphasizes hazard risk reduction and environmental protection

- Update 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.

7.04 Capacity Building at community and national levels

- Identify and review the capacity of all stakeholders for hazard risk reduction.

- Strengthen and empower national disaster institutions, including 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.
- Mobilize stakeholders to reduce their vulnerability.
- Strengthen the mechanism for providing loans/incentives to farmers for livestock housing.
- Strengthen mechanisms for quarantine of animals and plants.

7.05 Research to inform decision making

- Develop the inventory of existing hazard information. Develop repositories/lead agencies for information.
- Make data/information easily accessible to all users.
- Identify baseline data for hazard risk assessment and reduction (where data exist; where investment is necessary).
- Research, monitoring and assessment should be a priority and an ongoing activity.

7.06 Public Education Outreach (PEO) and Sensitisation

- Develop and implement public awareness programmes on policies and laws related to hazard risk reduction.
- Sensitize key decision makers including the political directorate about the requirements and benefits of hazard risk reduction.
- Develop specialized training programmes for technical and professional levels in hazard assessment and risk reduction.
- Develop community hazard risk reduction training programmes, some of which should be designed for special interest groups.
- Develop curricula at all levels in hazard risk reduction.
- Develop specific sensitisation and education interventions for each sector.
- Develop built-in assessment instruments to assess and evaluate the impact of PEO programmes.
- Sensitize stakeholders on their roles and responsibilities in hazard risk management.

7.07 Establishment of Private Sector Non Governmental Organizations, Volunteer Organizations and Community Based Organization Partnerships

- Develop relationships between the private sector, Non Governmental Organizations (NGO) and Community Based Organizations (CBO) and Voluntary Organizations (VO).

- Encourage the private sector, particularly the financial institutions to actively promote vulnerability reduction.

7.08 Improve Land Management and Development Control

- Prepare and update national and local land use plans of the Territory to include appropriate land use control mechanisms.
- Prepare and update plans for Specially Vulnerable Areas, which will inform the Territory's land use plans.
- Prepare and update a comprehensive environmental plan to inform the national developmental plans for the Territory.
- Review and strengthen flood control mechanisms/programmes.
- Strengthen the programme for coastal protection including prioritisation of areas for development.
- Strengthen the national erosion control programme for hillside development.

7.09 Determination of the requirements for implementation of hazard risk reduction measures as identified in this policy

- Review and update a detailed, practical mitigation plan involving all stakeholders.
- Upgrade and strengthen organizational structures for plan implementation with appropriate resource allocation.
- Review and upgrade the responsibility matrix as set out in the Disaster Management Act 2003.
- Develop and implement monitoring and evaluation for policy implementation processes.